Structured Diabetes Education for Diabetes Management and Prevention

Melanie Davies CBE
Professor of Diabetes Medicine
Outline

• Definitions of Structured Self-Management Education

• Example of an evidence based programme in Diabetes Management

• Example of an evidence based programme in Diabetes Prevention

• Summary
The Chronic Care Model

Health System
- Self management support
- Delivery system design
- Decision support
- Clinical Information system

- Informed activated patient
- Prepared Proactive Practice Team
The Chronic Care Model

Health System
- Self management support
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- Decision support
- Clinical Information system
- Informed activated patient
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Wagner EH 1998 Effective Clinical Practice 1:2-4
Structured education—what are the benefits

‘the quality of diabetes care has, in general, remained poor. The widespread failure to acknowledge the impact of patient education appears to evolve as the primary reason for this unsatisfactory situation’

Potential Benefits are to improve outcomes through:

- Addressing the individual’s health beliefs
- Optimizing metabolic control and addressing cardiovascular risk factors
- Facilitating behaviour change
- Improving quality of life and reducing depression

An effective programme will also enhance the relationship between the person with diabetes and their healthcare professionals

Structured education—what are the benefits

‘the quality of diabetes care has, in general, remained poor. The widespread failure to acknowledge the impact of patient education appears to evolve as the primary reason for this unsatisfactory situation’¹.

Potential Benefits are to improve outcomes through:
- Addressing the individual’s health beliefs
- Optimizing metabolic control and addressing cardiovascular risk factors
- Facilitating behaviour change
- Improving quality of life and reducing depression

An effective programme will also enhance the relationship between the person with diabetes and their healthcare professionals ².

## Group based diabetes self management education

The effects of group-based diabetes self management education (int) compared to routine treatment (contr) in T2DM patients were assessed in a systematic review with meta-analysis.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number of studies</th>
<th>Number of participants (Int/contr)</th>
<th>Difference (95% CI)</th>
<th>P-value†</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA$_{1c}$</td>
<td>11</td>
<td>750/753</td>
<td>-0.46 (-0.74 to -0.18)</td>
<td>0.001</td>
</tr>
<tr>
<td>FPG</td>
<td>5</td>
<td>344/346</td>
<td>-1.26 (-1.69 to -0.82)</td>
<td>0.000</td>
</tr>
<tr>
<td>Diabetes knowledge</td>
<td>5</td>
<td>477/478</td>
<td>0.85 (0.48 to 1.22)</td>
<td>0.000</td>
</tr>
<tr>
<td>Self management skills*</td>
<td>4</td>
<td>295/239</td>
<td>0.55 (0.11 to 0.99)</td>
<td>0.015</td>
</tr>
<tr>
<td>Self efficacy/Empowerment*</td>
<td>2</td>
<td>167/159</td>
<td>0.28 (0.06 to 0.50)</td>
<td>0.012</td>
</tr>
<tr>
<td>Weight</td>
<td>4</td>
<td>247/245</td>
<td>-1.66 (-3.07 to -0.25)</td>
<td>0.021</td>
</tr>
<tr>
<td>Treatment satisfaction</td>
<td>3</td>
<td>247/237</td>
<td>0.39 (0.21 to 0.57)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*6 month data †The P-value is calculated for the difference between the intervention and the control group.

Definition of Structured patient education

“evidence based, flexible to the needs of the individual and dynamic; users should be involved in its on-going development. The programme should have a specific aim and learning objectives which are shared with patients, carers and family. The programme should support self management attitudes, beliefs, knowledge and skills for the learner, their family and their carers.”

DoH and Diabetes UK, 2005
Self-Management Education

- Patient-centred philosophy
- Structured, written curriculum
- Evidence base
- Trained educators (using Lay educators)
- Quality assurance
- Audit

Educational Interventions

Each intervention could reduce the HbA1c and improve outcomes

Which one:

• has a poor evidence base with poorly designed trials?
  • is delivered by untrained staff with no QA?
• is variable content and uncertain ingredients?
  • is omitted for lack of resources?
• is taken in half the dose to save money?
Outline

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The philosophy adopted by the DESMOND programme

People are ultimately responsible for their own self management

The barriers to self management are in the person’s world

People want to maximise their quality of life

The consequences of diabetes are experienced by the person with diabetes

(Based on the work of RM Anderson and MM Funnell - DESMOND Programme, 2010)
The theoretical basis of the patient programme

Common Sense Model

Dual Processing Theory

Social Learning Theory

# Health Beliefs in newly diagnosed patients

Beliefs expressed as % of responses to each Likert alternative for newly diagnosed patients before attending a DESMOND education programme

<table>
<thead>
<tr>
<th>Belief</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t understand my diabetes</td>
<td>11.2</td>
<td>29.8</td>
<td>27.9</td>
<td>27</td>
<td>4.2</td>
</tr>
<tr>
<td>I will have diabetes for the rest of my life</td>
<td>30.3</td>
<td>35.8</td>
<td>28.4</td>
<td>1.8</td>
<td>3.7</td>
</tr>
<tr>
<td>My life will be shorter because I have diabetes</td>
<td>0.5</td>
<td>5</td>
<td>55.5</td>
<td>29.8</td>
<td>9.2</td>
</tr>
<tr>
<td>I have only got a mild form of diabetes</td>
<td>5.6</td>
<td>17.2</td>
<td>40</td>
<td>30.7</td>
<td>6.5</td>
</tr>
<tr>
<td>My diabetes is a serious threat to my health</td>
<td>11</td>
<td>36.1</td>
<td>38.8</td>
<td>11.4</td>
<td>2.7</td>
</tr>
<tr>
<td>The course of my diabetes depend upon me</td>
<td>27.2</td>
<td>58.1</td>
<td>13.4</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>I worry about getting the complications of diabetes</td>
<td>12.6</td>
<td>41.6</td>
<td>25.7</td>
<td>16.8</td>
<td>3.3</td>
</tr>
</tbody>
</table>

DESMOND Newly Diagnosed/ Foundation Curriculum

- Developing a personal plan
- Housekeeping
- The Patient Story
- What diabetes is
- Main ways to manage diabetes
- Diabetes consequences/personal risk
- Monitoring and taking action
- Food choices: Glucose, IR and Fats
- Physical Activity
- Stress and emotion
- Screening/annual clinics
Largest Global Study

To evaluate the effects of a structured education programme

• Biomedical outcomes
• Psychological outcomes
• Behavioural
• Quality of life

Primary aim: Preparing people for a lifetime of self management from diagnosis

Davies MJ et al BMJ 2008 doi:10.1136/bmj.39474.922025.BE
Results

- No difference in HBA1c (-1.5%)
- Weight loss
- Smoking cessation (OR 3.6)
- Changes in health beliefs
- Reduced depression scores
- Improved CVD risk score

Analysis using current cost to PCTs of delivering DESMOND

- ‘Real world’ cost per patient of delivering the DESMOND course for a typical PCT * is £55 compared to £203 in the trial
- Training costs much lower than during the trial and economies of scale (eg more patients per course)

<table>
<thead>
<tr>
<th></th>
<th>Control Mean</th>
<th>Intervention Mean</th>
<th>Adjusted Incremental Mean (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Cost</td>
<td>-</td>
<td>£76</td>
<td>£76</td>
</tr>
<tr>
<td>Combined Cost</td>
<td>£16,941</td>
<td>£17,032</td>
<td>£91 (-£321 to £631)</td>
</tr>
<tr>
<td>Combined long-term QALYs</td>
<td>10.2166</td>
<td>10.2572</td>
<td>0.0406 (-0.0283 to 0.1050)</td>
</tr>
<tr>
<td>Incremental Cost per QALY</td>
<td>-</td>
<td>-</td>
<td>£2,241</td>
</tr>
</tbody>
</table>

DESMOND meets all NICE criteria on Structured Education

- A written curriculum
- An underpinning philosophy and theoretical basis
- A formal training programme and quality assurance process for Educators
- An audit and evaluation process
- A robust published evidence underpins it all
Evidence of Impact Empowering Patients

- Gold standard Type 2 structured education patient education
- Over 200,000 DESMOND graduates
- Delivered to BME communities with interpreters and specialist visual tools
- Courses delivered across the UK, Ireland, Australia and Gibraltar
- 1250 Trained Educators
DESMOND in QATAR, Australia and New Zealand and Sub-Saharan Africa

- Rolled out DESMOND in Australia through partnership with Diabetes Western Australia
- Now exporting the programme to New Zealand
- Adapted the DESMOND Newly Diagnosed Programme for the Hamad Medical Corporation after a visit to Qatar
- MRC Grant to work in SSA in Malawi and Mozambique
### DESMOND in practice data in 1674 subjects in Leicester

<table>
<thead>
<tr>
<th>Variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex, n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>891 (53.2)</td>
</tr>
<tr>
<td>Females</td>
<td>783 (46.8)</td>
</tr>
<tr>
<td><strong>Ethnicity, n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>White European</td>
<td>238 (66.3)</td>
</tr>
<tr>
<td>South Asian</td>
<td>121 (33.7)</td>
</tr>
<tr>
<td><strong>HbA1c, mean(SD)</strong></td>
<td>8.33 (5.41)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Change in mean (95% CI) from baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c, %</td>
<td>968 6 months</td>
</tr>
<tr>
<td></td>
<td>-0.96 (-1.07, -0.85)</td>
</tr>
</tbody>
</table>
Outline

• Definitions of Structured Self-Management Education

• Example of an evidence based programme in Diabetes Management

• Example of an evidence based programme in Diabetes Prevention

• Summary
The Imperative of Prevention

The GOOD News: two thirds of diabetes can be prevented!

The BAD News: Without concerted action diabetes prevalence is forecast to increase dramatically across the country.

- >5%
- 4.5-<5%
- 4-<4.5%
- 3.5-<4.5%
- 2.5-<3.5%

The GOOD News: two thirds of diabetes can be prevented!
Systematic review of prevention of diabetes subjects in with IGT

Resource intensive: DPP

- 16 one-to-one core sessions in the first 24 weeks
- Monthly additional contact (with in-person contact at least every 2 months)
- Group-based consultations quarterly
- Would require over 200 million extra consultations in the UK
Consideration of context

• Need to tailor and evaluate prevention programmes within the health care system in which they intend to operate

• Approaches that utilise existing infrastructure and practices more likely to succeed

• Dearth of evidence from diabetes prevention projects within the United Kingdom

Dyson PA et al. Metabolism 1997;46:50-55
Hardcastle S et al. Pat Edu Counsel 2008;70:31-39
Structured education

- Recommended for individuals with Type 2 diabetes
- Compatible with the infrastructure of many health care systems
- Cost-effective method of promoting behaviour change

1. Diabetes NSF. NICE DoH 2008
2. Davies et al BMJ. 2008 Apr 19;336(7649)
3. Gillett BMJ. 2010 Aug 20;341:c4093
The PREPARE programme

**Physical activity**
- Physical activity and glucose control
- Physical activity recommendations
- Physical activity in everyday life
- Barriers
- Action plans and diaries

**Professional story**
- Health glucose metabolism
- Etiology of prediabetes
- Risk factors and complications

**Diet**
- Perceptions around diet and diabetes

Yates et al. 2008, Patient Education and Counseling 73, 264-271
Results after 12 months: Glucose control

Change in 2-hour glucose (mmol/l)

Change in fasting glucose (mmol/l)

Results at 24-months: Progression to type 2 diabetes (intention to treat)

Community based primary prevention programme for T2DM integrating identification, lifestyle intervention and community services for prevention.

5 year NIHR Programme Grant

Comprehensive work-streams to develop and evaluate a pragmatic diabetes prevention pathway

NIHR Programme Grant RP-PG-0606-1272
• 6 hour structured education programme

• Incorporates Walking Away **BUT** includes a **healthy diet** and **weight loss/maintenance**

• Accredited educator training and quality assurance pathway

• Includes a version that has been tailored to local South Asian populations

• Pilot data revealed that the programme was effective at **targeting illness perceptions, self-efficacy and promoting behaviour change**
Curriculum

50% focused on lifestyle behaviour and action planning

50% focused on knowledge and perceptions

Future Care

Developing a personal plan

Housekeeping

The Patient Story

Pre-diabetes & Glucose

Food choices: Insulin resistance

Food Choices: Focus on fats

Risk factors and complications

Let's Prevent Diabetes!

How am I doing?

Physical Activity

NIHR Programme Grant RP-PG-0606-1272
## Baseline characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standard care</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFG only, n (%)</td>
<td>51 (11.8)</td>
<td>57 (12.8)</td>
</tr>
<tr>
<td>IGT only, n (%)</td>
<td>308 (71.1)</td>
<td>301 (67.3)</td>
</tr>
<tr>
<td>IFG and IGT, n (%)</td>
<td>74 (17.1)</td>
<td>89 (19.8)</td>
</tr>
<tr>
<td>Age</td>
<td>63.9 (7.9)</td>
<td>63.9 (7.6)</td>
</tr>
<tr>
<td>Male n (%)</td>
<td>278 (64.2)</td>
<td>282 (63.1)</td>
</tr>
<tr>
<td>White European, n (%)</td>
<td>363 (84.3)</td>
<td>377 (84.5)</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>94.4 (18.9)</td>
<td>89.9 (16.6)*</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>33.1 (5.8)</td>
<td>32.0 (5.2)*</td>
</tr>
<tr>
<td>HbA1c</td>
<td>6.1 (0.4)</td>
<td>6.1 (0.4)</td>
</tr>
<tr>
<td>Average steps per day</td>
<td>3148.8 (3241.6)</td>
<td>5936.2 (2995.4)</td>
</tr>
</tbody>
</table>

* p>0.05
## Development of T2DM

HR (95% CI) takes into account clustering

<table>
<thead>
<tr>
<th></th>
<th>Standard care</th>
<th>Intervention</th>
<th>HR</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention to treat</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Events, n (%)</td>
<td>67 (15.5)</td>
<td>64 (14.3)</td>
<td>0.74</td>
<td>0.48, 1.14</td>
<td>0.18</td>
</tr>
<tr>
<td>Rate per 1000</td>
<td>63.16</td>
<td>57.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>py (95% CI)</td>
<td>(49.71, 80.24)</td>
<td>(45.09, 73.59)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Per protocol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Events, n (%)</td>
<td>67 (15.5)</td>
<td>51 (14.7)</td>
<td>0.65</td>
<td>0.41, 1.03</td>
<td>0.07</td>
</tr>
<tr>
<td>Rate per 1000</td>
<td>63.16</td>
<td>53.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>py (95% CI)</td>
<td>(49.71, 80.24)</td>
<td>(40.31, 69.80)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NIHR Programme Grant RP-PG-0606-1272
# Biomedical outcomes

<table>
<thead>
<tr>
<th></th>
<th>12 months</th>
<th>36 months</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fasting glucose</strong></td>
<td>0.001 (-0.10, 0.10)</td>
<td>-0.05 (-0.18, 0.07)</td>
<td>0.0004 (-0.10, 0.10)</td>
</tr>
<tr>
<td><strong>2-hour glucose</strong></td>
<td>0.08 (-0.23, 0.39)</td>
<td>-0.14 (-0.46, 0.18)</td>
<td>-0.03 (-0.28, 0.22)</td>
</tr>
<tr>
<td><strong>HbA1c (%)</strong></td>
<td>-0.04 (-0.10, 0.02)</td>
<td>-0.07 (-0.18, 0.04)</td>
<td><strong>-0.06 (-0.11, -0.01)</strong>*</td>
</tr>
<tr>
<td><strong>Total Cholesterol (mmol/l)</strong></td>
<td>-0.07 (-0.16, 0.02)</td>
<td>-0.11 (-0.23, 0.02)</td>
<td>-0.06 (-0.14, 0.01)</td>
</tr>
<tr>
<td><strong>HDL cholesterol (mmol/l)</strong></td>
<td>-0.01 (-0.07, 0.05)</td>
<td>-0.02 (-0.08, 0.05)</td>
<td>0.01 (-0.04, 0.05)</td>
</tr>
<tr>
<td><strong>LDL cholesterol (mmol/l)</strong></td>
<td><strong>-0.10 (-.018, -0.02)</strong>*</td>
<td>-0.09 (-0.19, 0.01)</td>
<td><strong>-0.08 (-0.15, -0.01)</strong>*</td>
</tr>
<tr>
<td><strong>Body weight (kg)</strong></td>
<td>-0.27 (-1.17, 0.63)</td>
<td>-0.26 (-1.17, 0.65)</td>
<td>-0.10 (-0.85, 0.66)</td>
</tr>
<tr>
<td><strong>Systolic BP (mmHg)</strong></td>
<td>1.22 (-0.85, 3.30)</td>
<td>0.55 (-2.09, 3.19)</td>
<td>0.81 (-0.97, 2.60)</td>
</tr>
<tr>
<td><strong>Diastolic BP (mmHg)</strong></td>
<td>0.80 (-0.66, 2.26)</td>
<td>-0.49 (-2.15, 1.17)</td>
<td>0.24 (-0.82, 1.30)</td>
</tr>
</tbody>
</table>

* p<0.05

NIHR Programme Grant RP-PG-0606-1272
### Psychosocial and lifestyle outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>12 months</th>
<th>36 months</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illness perception score≠</td>
<td>-2.06 (-4.03, -0.09)*</td>
<td>-1.16 (-2.69, 0.37)</td>
<td>-1.61 (-2.92, -0.30)*</td>
</tr>
<tr>
<td>Quality of life†</td>
<td>0.01 (-0.002, 0.02)</td>
<td>0.02 (0.01, 0.03)**</td>
<td>0.01 (0.001, 0.02)*</td>
</tr>
<tr>
<td>Anxiety score‡</td>
<td>-0.40 (-0.77, -0.03)*</td>
<td>-0.11 (-0.44, 0.23)</td>
<td>-0.28 (-0.54, -0.02)*</td>
</tr>
<tr>
<td>Depression score‡</td>
<td>-0.34 (-0.81, 0.14)</td>
<td>-0.05 (-0.44, 0.35)</td>
<td>-0.21 (-0.57, 0.16)</td>
</tr>
<tr>
<td>Fibre intake</td>
<td>0.97 (-1.27, 3.21)</td>
<td>1.53 (-0.94, 4.00)</td>
<td>-1.01 (-3.11, 1.08)</td>
</tr>
<tr>
<td>Fat intake</td>
<td>0.45 (-2.62, 3.51)</td>
<td>-3.60 (-7.52, 0.31)</td>
<td>-0.72 (-2.92, 1.48)</td>
</tr>
<tr>
<td>Unsaturated fat intake</td>
<td>0.32 (0.05, 0.58)*</td>
<td>0.38 (0.12, 0.63)**</td>
<td>0.33 (0.15, 0.51)**</td>
</tr>
<tr>
<td>Sitting time (mins)</td>
<td>-25.94 (-49.95, -1.92)*</td>
<td>-20.15 (-43.91, 3.60)</td>
<td>-26.29 (-45.26, -7.32)**</td>
</tr>
<tr>
<td>Average steps</td>
<td>509.97 (63.58, 956.35)*</td>
<td>510.55 (10.24, 1010.85)*</td>
<td>452.45 (95.83, 809.06)*</td>
</tr>
</tbody>
</table>

*p<0.05, ** p<0.01

NIHR Programme Grant RP-PG-0606-1272
### Secondary outcomes – per proctocol analysis

<table>
<thead>
<tr>
<th></th>
<th>12 months</th>
<th>36 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fasting glucose</strong></td>
<td>0.03 (-0.14, 0.08)</td>
<td>-0.12 (-0.23, -0.01)*</td>
</tr>
<tr>
<td><strong>2-hour glucose</strong></td>
<td>0.03 (-0.30, 0.36)</td>
<td>-0.35 (-0.61, -0.09)**</td>
</tr>
<tr>
<td><strong>HbA1c (%)</strong></td>
<td>-0.04 (-0.10, 0.02)</td>
<td>-0.11 (-0.21, -0.01)*</td>
</tr>
<tr>
<td><strong>Average steps per day</strong></td>
<td>752.44 (293.67, 1211.21)**</td>
<td>618.74 (94.45, 1143.03)*</td>
</tr>
</tbody>
</table>

*p<0.05, ** p<0.01

NIHR Programme Grant RP-PG-0606-1272
Engagement and retention


<table>
<thead>
<tr>
<th></th>
<th>Unadjusted</th>
<th>Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plus one*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retainers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.74 (0.48, 1.14)</td>
<td>0.79 (0.51, 1.22)</td>
</tr>
<tr>
<td></td>
<td>0.65 (0.41, 1.03)</td>
<td>0.71 (0.44, 1.16)</td>
</tr>
<tr>
<td></td>
<td>0.38 (0.23, 0.62)</td>
<td>0.42 (0.25, 0.72)</td>
</tr>
<tr>
<td></td>
<td>0.12 (0.05, 0.28)</td>
<td>0.13 (0.05, 0.33)</td>
</tr>
</tbody>
</table>

Hazard ratio (95% CI)
Cost Effectiveness Analysis of Let’s Prevent

ICER
£4606 Complete Case
£3643 Multiple Imputation

Based on Intervention costs of £168 to £200 over 3 years. Intervention is one 6 hours group in 1st year, annual 3 hour refresher, telephone contact for 15 minutes for 3 months. Includes all staff costs, resources, training.

Let’s Prevent Report submitted to NIHR Dec 2014

NIHR Programme Grant RP-PG-0606-1272
Costs of Prevention – Lifestyle Management Programme (£)

<table>
<thead>
<tr>
<th>Year</th>
<th>DPP</th>
<th>DPP Group</th>
<th>Let’s Prevent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>£1,200</td>
<td>£600</td>
<td>£150</td>
</tr>
<tr>
<td>Year 2</td>
<td>£600</td>
<td>£400</td>
<td>£100</td>
</tr>
<tr>
<td>Year 3</td>
<td>£600</td>
<td>£400</td>
<td>£100</td>
</tr>
</tbody>
</table>

1. DPP RG Diabetes Care April 2012 vol. 35 no. 4 723-730
2. Let’s Prevent Report submitted to NIHR Dec 2014

* Based on current £/$ exchange rate
Outline

• Definitions of Structured Self-Management Education

• Example of an evidence based programme in Diabetes Management

• Example of an evidence based programme in Diabetes Prevention

• Summary
Summary

- SDE is a critical aspect of diabetes management
- SDE programmes such as DESMOND have a good evidence base and confer additional benefits to patients
- A pragmatic low-resource diabetes prevention programme lead to improvements in metabolic health, psychological wellbeing and health behaviour over 3 years
- 35% reduced risk using per-protocol
- Metabolic benefits accompanied by a reduction in threatening health perceptions, reduction in anxiety and improved health-related quality of life