Supplementary Material to:
Cluster randomised controlled trial of a psychological intervention for type 2 diabetes
published in British Journal of General Practice, August 2018.

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1 Full description of the study’s methods

Trial design

D6 was a pragmatic parallel two-arm cluster RCT design for 18 months. Ethical approval was granted by the King’s College Hospital Research Ethics Committee (reference 09/H0808/97) and by the respective Primary Care Trusts (reference RDLSLBex 534 and 2010/403/W). Changes to the protocol were approved by the Trial Steering Committee and the Research Ethics Committee. All participants gave informed consent, including access to their medical records.

All moderate-to-large GP practices (≥6000 patients registered) in the Lambeth, Southwark, Lewisham, Wandsworth, and Bexley Clinical Commissioning Groups, representing a resident population of 1.43 million in south London, UK, were invited to participate if they had a practice nurse delivering diabetes care. Practices were reimbursed £10k for seconding their nurse for one day/week for 15 months. We began recruiting patients after each practice consented to randomisation. The study was conducted in two phases as recruitment had slowed down significantly secondary to organisational uncertainties caused by the Health and Social Care Act 2012. This Act reorganised the UK’s National Health Service (NHS), dismantling current organisational structures and creating new ones for funding, management, accountability, and regulation.15

Patients

The target population was adults with T2D who had persistent suboptimal glycaemic control despite care pathways based on national guidance,17 therefore a group likely to have barriers to achieving optimal self-management. The study population was patients on diabetes registers of consenting practices. Using standardised search strategies, a list of potentially eligible patients based on the HbA1c (current and preceding 18 months) was generated by each practice and invited to participate. Three practices were eligible and willing to participate but did not have a nurse to second. A protocol change was made in Phase 2, which allowed a consenting practice without a nurse to amalgamate with an adjacent consenting practice which had a nurse, and each pair formed one cluster. The rationale was that the
patient catchment area was likely to be similar and that both practices used the same clinical guidance for diabetes care.

Inclusion criteria were adults aged 18–79 years, duration of T2D for ≥2 years, persistent suboptimal glycaemic control defined as HbA1c ≥69.4 mmol/mol on two occasions (at least once in the preceding 18 months and at recruitment) while on at least two oral diabetes medications (metformin and one other), and/or requiring insulin therapy. The HbA1c was lowered to ≥64 mmol/mol in Phase 2 to increase recruitment. These lower cut-offs for HbA1c was selected to maximise the proportion of patients who could potentially benefit. The minimum requirement of being prescribed at least two classes of oral diabetes medications was to ensure that efforts to optimise and intensify medical care according to national guidance had been offered to the patient before randomisation. Exclusion criteria were: severe mental disorders; terminal illnesses and end-stage diabetes complications; morbid obesity with a BMI >40 kg/m² in Phase 1, which was raised to >50 kg/m² in Phase 2 to enhance recruitment; non-ambulatory as patients had to be able to attend the clinic; no phone/internet access; non-English-speaking as therapy was delivered in English; and currently receiving psychological treatments from elsewhere. Patients who had Patient Health Questionnaire-9 (PHQ-9) depressive scores >20 were excluded if they had psychotic depression or active suicidal ideation.16

Randomisation

Randomisation of practices (unit of cluster) was conducted after baseline data were collected by an independent statistician using a random number generator to assign equal numbers of practices to each arm at each phase. Allocation concealment was conducted by holding the randomisation list by an independent manager in password-locked computer. The trial manager was only able to reveal to themselves, and then to one D6 researcher, the allocation after entering the details of the practice.

Randomisation of clusters was intended to take place after all the patients had been recruited but this was leading to unacceptable delays in training the nurses. Therefore, some patients were recruited after randomisation of clusters but remained blind to allocation until the interventions were offered in both groups.

Procedures
Baseline measures
Baselines measures were: age, gender, self-reported ethnicity, occupation, employment status, and smoking status. HbA1c was measured centrally (King’s College Hospital NHS Foundation Trust) by affinity chromatography (Primus Ultra2, Kansas City, USA) and reported in mmol/mol. Complication status was assessed before randomisation by the research assistant as follows: neuropathic ulcer risk was assessed by perception of 10g monofilament; retinopathy coding e was taken from the most recent of annual standardised digital retinal photography documented in the community-based Diabetic Eye Complications Screening Service (DECS), with a new appointment arranged if one had been missed; urine was collected to assess nephropathy using the urinary albumin:creatinine ratio (ACR); and history of macrovascular complications collected from the medical records.

In addition, the following secondary outcomes were measured: systolic and diastolic blood pressure using an electronic sphygmomanometer; body mass index (BMI) (kg/m\(^2\)) and waist circumference (cm); depressive symptoms using the Patient Health Questionnaire-9 questionnaire;\(^6\) the Alcohol Use Disorders Identification Test (AUDIT);\(^23\) and the Diabetes Distress Scale, which measures diabetes specific psychological burden (in the protocol we had proposed a similar but longer scale).\(^24\) A fasting blood sample was sent for measurement of HbA1c, total cholesterol, and triglycerides.

Intervention

Group 1: Standard care
The nurse delivered diabetes care in both groups as recommended by national guidance.\(^17\) To control for attention, standard care nurses offered the same number of sessions as in D6. The sessions were audio-taped for assessment of contamination bias.

Group 2: Standard care plus D6
D6 aimed to provide the nurses with skills based on MI and CBT to address psychological barriers maintaining poor self-management. The theory underlying MI is that the patient’s state of ambivalence (resistance versus willingness to make lifestyle changes) is the core psychological construct that needs addressing.\(^6\) MI is a directive, person-centered counselling style which encourages patients to change behaviours using collaborative, non-judgmental, and affirming communications. The theory underlying CBT is that barriers to diabetes self-
management are maintained by unhelpful thoughts (e.g., if I can’t cure diabetes, what’s the point?), unhelpful behaviours (e.g., missing insulin doses), and distressing emotions (e.g., low mood/anxiety when seeing a high blood glucose reading). Identifying and challenging these cognitive barriers are effective in changing behaviours.

The D6 nurses were trained in six skills drawn from MI and CBT: 1. Active listening; 2. Managing resistance; 3. Directing change; 4. Supporting self-efficacy; 5. Addressing health beliefs; and, 6. Shaping behaviours. These skills were applied to common barriers around diabetes such as medication adherence, self-testing, physical activity and dietary changes. The training was conducted by a senior diabetes-experienced clinical psychologist and lasted three months. It comprised three hours per week, interactive classroom activities, a training caseload (average 3-5 non-study patients), and weekly supervision of audiotaped sessions.

We produced a manual containing the rationale for D6, the six psychological skills, case examples, strategies to manage clinician’s own resistance, and for ‘troubleshooting’ common clinical obstacles. D6 nurses were expected to apply the skills flexibly to different situations (e.g., weight loss, medication adherence) using visual aids and worksheets. The format was 12 face-to-face individual sessions (sessions 1-4 fortnightly during months 1-2, sessions 5-6 monthly during months 3-6, and sessions 7-12 during months 7-12). Monthly group supervision by a senior clinical psychologist was provided. The sessions were audio-taped for assessment of fidelity.

The Motivational Interviewing Treatment Integrity (MITI) Scale (version 3.1.1)\(^21\) and Behaviour Change Counselling Index (BECCI)\(^22\) were used to assess treatment fidelity of D6, and to compare competencies in both groups. The MITI assesses: global spirit and global empathy with scores ≥ 3.5 (range 1-5); percentage of complex reflections, open questions, and MI adherent behaviours with scores of ≥40%, 50%, and 90% respectively; and ratio of reflections to closed questions scores with ≥1 as proficient. The middle 20 minutes of sessions were rated by two independent psychologists trained in MITI and blind to treatment allocation. The BECCI consists of 11 items with 5-point Likert scales to rate the frequency or the strength of the nurse skill, ranging from 0 (not at all) to 4 (a great extent). A clinical psychologist, blind to treatment allocation, rated the BECCI. We stratified sessions by nurse and patient and then randomly selected tapes (that lasted ≥20 minutes) for 3 different patients for each nurse from either session 2, 3 and 4. Three nurses did not have three tapes lasting 20 minutes or more and, for these, the three longest tapes were chosen.
Outcomes

As the recruitment and follow-up was delayed by the NHS restructuring and patient attrition, the protocol was changed from 24 months follow-up to 18 months. The primary outcome was change in HbA1c from cluster randomisation to 18 months. If the study HbA1c data were missing at 18-month, we used routinely collected HbA1c data if it was collected within the 15-month follow-up window. Secondary outcomes were change in lipids, blood pressure, BMI and depressive symptoms at 18 months. Research assistants were blind to allocation when collecting follow-up data.

Sample size

A 10.9 mmol/mol difference in HbA1c in D6 compared to standard care was the minimal clinically acceptable reduction at 18 months, considering: (a) baseline HbA1c and (b) that standard care may produce a 2.2 mmol/mol (equivalent to 0.2%) reduction in HbA1c for the placebo effect of participating in a RCT (actual difference between groups 8.8 mmol/mol (equivalent to 0.8%), equivalent to a moderate effect size of d=0.55). Assuming 20% dropout, we needed 360 patients to achieve 80% power at a two-sided alpha-level of 5%, with 20 practices with 18 patients each per arm. We then took account of clustering by practice and we assumed two practices per arm dropped out. Therefore, we needed 24 practices with a total patient size of 24x18=432 patients. The required sample size adjusted for a clustering intra-correlation coefficient (ICC) effect of 0.05 was 81x1.7=138 patients per arm (inflation factor 1.7).

We recruited 334 patients of which 231 had at least one follow-up in 24 clusters. The average cluster size was therefore 10 patients per cluster, smaller than our assumed size of 15 patients per cluster with a post-hoc power of 77% (STATA 13 clsampsi function) at two-sided alpha-level of 5%.25

Statistical analysis

Data were analysed using STATA 13. The sample characteristics were described as means (standard deviation (SD)) or as proportions (percentage). A comparison of patient list size and Index of Multiple Deprivation rank score by practices that participated versus those that did not was conducted using Student’s t-test.26 A linear mixed-effects model estimated group differences in HbA1c levels between D6 and standard care groups at 18 months. We included
the 15-month HbA1c as this clinically just overlaps with the 3-month window for 18-month HbA1c and to include more patients with at least one follow-up measure. Data were analysed as intention-to-treat (ITT). Time (with two levels: 15 and 18 months), treatment group, an interaction between treatment group and time, Primary Care Trust (as a possible prognostic factor), recruitment phase, and baseline HbA1c were included as fixed covariates. The dependency of the repeated observations of the same subjects was modeled on the covariance between the residuals using an unstructured covariance pattern model. Nurse was included as a random effect as the unit of randomisation.

Observations from the same nurse cluster were likely to be more similar than observations from two different clusters. However, in three cases, a practice was twinned with an adjacent practice and one nurse covered both practices. Therefore, two types of clustering could occur: within practice and within nurse. We assumed that nurse clustering would have a stronger effect than practice clustering. We therefore treated the twinned practices as one unit which is equivalent to treating nurse as the primary clustering unit. However, we repeated the model using ‘practice’ as the main clustering unit in a sensitivity analysis.

Secondary outcomes were analysed in the same way using linear mixed models to estimate group differences at 18 months (including 15 months). An independent covariance structure pattern was used for the triglycerides as the model did not converge using unstructured covariance.

Twenty-nine participants with HbA1c <64 mmol/mol contrary to the study criteria were included and this was a protocol violation. We performed a sensitivity analysis by including a binary covariate of this protocol violation (yes/no) in the model.

The analyses were conducted using maximum likelihood under the missing at random assumption. Sensitivity analyses were carried out to assess sensitivity to missingness in HbA1c using several approaches: by investigating and including predictors of missingness in the model and by using multiple imputation for the missing values of HbA1c (50 imputations using mi impute command in STATA 13 with all variables from the mixed-effects model included in the imputation model, as well as age, ethnicity, gender, baseline BMI, total cholesterol, triglycerides, blood pressure, and PHQ-9 score).

The Data Monitoring Committee oversaw the study.
Fidelity

To assess IRR for each fidelity measure, absolute agreement was measured by estimating the ICC from a two-way mixed model or using Spearman’s rank correlation coefficient if residuals from the mixed model were not normally distributed. A t-test or Mann-Whitney U-test was used to compare the skills of D6 versus standard care nurses, using STATA 14.

Role of funding source

The funder of the study had no role in study design, data collection, data analysis, data interpretation, or reporting. The authors had full access to all data and final responsibility for submission for publication and acted independently from the funding source.

Patient Involvement

We included a person with type 1 diabetes from our local community who also was an active member of the local and national Diabetes UK. This person was instrumental in guiding us to use NHS practice nurses rather than research diabetes nurses to deliver the intervention. This person inputted into the importance of quality of life and psychological well-being as outcome measures alongside glycaemic control. For the process evaluation, we invited participants to give us feedback of the intervention in terms of the perception of burden as patients. We included a person with type 1 diabetes on the Trial Steering Committee.

Transparency Declaration

The lead author affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; there were discrepancies from the study as planned and these have been explained.
### Table 1. Breakdown of patients attending each practice and primary outcome follow-up rates by group.

<table>
<thead>
<tr>
<th>Practice*</th>
<th>D6</th>
<th>Standard care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proportion with HbA1c data at 18 months (%)</td>
<td>Practice*</td>
</tr>
<tr>
<td>1</td>
<td>14/18 (77.8)</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>13/19 (72.2)</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>7/16 (43.8)</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>6/9 (66.7)</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>15/16 (93.8)</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>6/12 (50.0)</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>6/9 (66.7)</td>
<td>14</td>
</tr>
<tr>
<td>15**</td>
<td>9/18 (50.0)</td>
<td>16</td>
</tr>
<tr>
<td>17</td>
<td>9/13 (69.2)</td>
<td>18</td>
</tr>
<tr>
<td>19**</td>
<td>12/14 (85.7)</td>
<td>20***</td>
</tr>
<tr>
<td>21</td>
<td>8/14 (57.1)</td>
<td>22</td>
</tr>
<tr>
<td>23**</td>
<td>4/12 (33.3)</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>109/170 (64.1%)</td>
<td>Total</td>
</tr>
</tbody>
</table>

* Practices 1-6 are from Phase 1 (HbA1c ≥ 69.4 mmol/mol and BMI ≤ 40 kg/m²). Practices 7-24 are from Phase 2 (HbA1c ≥ 64 mmol/mol, BMI ≤ 50 kg/m², and twinned practices).
** Two practices twinned and covered by 1 nurse.
*** Practice dropped out post-randomisation.
D6=Diabetes 6
Table 2. Comparison of missingness in HbA1c at 18 months.

<table>
<thead>
<tr>
<th>Variable</th>
<th>HbA1c measured at 18 months (n=219)</th>
<th>Missing HbA1c at 18 months (n=115)</th>
<th>Test of independence (t-test or Pearson χ² test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>58.9 (11.4)</td>
<td>59.0 (11.0)</td>
<td><em>t</em>=0.045, <em>p</em>=0.964</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>72 (33.0)</td>
<td>62 (54.4)</td>
<td>χ²(3)=14.854, <em>p</em>=0.001</td>
</tr>
<tr>
<td>African/Caribbean</td>
<td>103 (47.3)</td>
<td>40 (35.1)</td>
<td></td>
</tr>
<tr>
<td>Asian/Other</td>
<td>43 (19.7)</td>
<td>12 (10.5)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>104 (47.5)</td>
<td>59 (51.3)</td>
<td>χ²(1)=0.439, <em>p</em>=0.507</td>
</tr>
<tr>
<td>Female</td>
<td>115 (52.5)</td>
<td>56 (48.7)</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A levels or higher</td>
<td>60 (27.9)</td>
<td>30 (26.6)</td>
<td>χ²(2)=0.091, <em>p</em>=0.956</td>
</tr>
<tr>
<td>O level or GCSE equivalent</td>
<td>75 (34.9)</td>
<td>41 (36.3)</td>
<td></td>
</tr>
<tr>
<td>No formal qualifications</td>
<td>80 (37.2)</td>
<td>42 (37.2)</td>
<td></td>
</tr>
<tr>
<td>Relationship status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married or Cohabiting</td>
<td>112 (51.3)</td>
<td>59 (51.3)</td>
<td>χ²(2)=1.221, <em>p</em>=0.543</td>
</tr>
<tr>
<td>Separated/Divorced/Widowed</td>
<td>60 (27.7)</td>
<td>37 (32.2)</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>45 (20.7)</td>
<td>19 (16.5)</td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>92 (42.0)</td>
<td>47 (40.9)</td>
<td>χ²(1)=0.040, <em>p</em>=0.841</td>
</tr>
<tr>
<td>No</td>
<td>127 (58.0)</td>
<td>68 (59.1)</td>
<td></td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>32.1 (6.0)</td>
<td>31.5 (6.4)</td>
<td><em>t</em>=0.839, <em>p</em>=0.402</td>
</tr>
<tr>
<td>Systolic BP (mm/Hg)</td>
<td>133.6 (17.2)</td>
<td>135.3 (16.9)</td>
<td><em>t</em>=0.823, <em>p</em>=0.411</td>
</tr>
<tr>
<td>Diastolic BP (mm/Hg)</td>
<td>79.2 (10.0)</td>
<td>79.2 (10.3)</td>
<td><em>t</em>=0.052, <em>p</em>=0.958</td>
</tr>
<tr>
<td>HbA1c (mmol/mol)</td>
<td>79.1 (17.4)</td>
<td>83.2 (19.3)</td>
<td><em>t</em>=1.96, <em>p</em>=0.051</td>
</tr>
<tr>
<td>Total Cholesterol (mmol/L)</td>
<td>4.2 (1.1)</td>
<td>4.3 (1.3)</td>
<td><em>t</em>=0.501, <em>p</em>=0.617</td>
</tr>
<tr>
<td>Fasting triglycerides (mmol/L)</td>
<td>1.6 (1.2)</td>
<td>1.9 (1.4)</td>
<td><em>t</em>=1.631, <em>p</em>=0.104</td>
</tr>
<tr>
<td>Diabetes duration (years)</td>
<td>10.5 (6.1)</td>
<td>10.0 (6.7)</td>
<td><em>t</em>=0.694, <em>p</em>=0.488</td>
</tr>
<tr>
<td>DDS (mean item score)</td>
<td>2.2 (0.8)</td>
<td>2.3 (0.8)</td>
<td><em>t</em>=0.959, <em>p</em>=0.338</td>
</tr>
</tbody>
</table>

Data are n (%) or mean (SD), as appropriate.

1 Yes = full time, part-time, student or self-employed

2 No = retired/unemployed/not seeking employment

BMI = Body mass index; BP = blood pressure; DDS = Diabetes Distress Scale
Table 3. Inter-rater reliability for each MI domain.

<table>
<thead>
<tr>
<th>MI Domain</th>
<th>Inter-rater reliability*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Spirit (ICC)</td>
<td>0.87</td>
</tr>
<tr>
<td>Global Empathy (Spearman’s rho)</td>
<td>0.91</td>
</tr>
<tr>
<td>% Complex Reflections (ICC)</td>
<td>0.86</td>
</tr>
<tr>
<td>% Open Questions (ICC)</td>
<td>0.92</td>
</tr>
<tr>
<td>Reflection/Question Ratio</td>
<td>0.88</td>
</tr>
<tr>
<td>(Spearman’s rho)</td>
<td></td>
</tr>
<tr>
<td>% MI Adherent (ICC)</td>
<td>0.90</td>
</tr>
</tbody>
</table>

MI=Motivational interviewing; ICC=Intra-class correlation coefficient
*Reliability was calculated as an ICC if the distribution was normal and a Spearman’s rho if non-normal.

We rated 69 sessions (4.0% of all available recordings) for fidelity from 33/170 and 36/164 patients from the D6 and standard care groups, respectively. The level of competency in the D6 group was below the beginner proficiency level in all the scales for MI and BECCI. Except for a slightly higher proportion of open questions in D6, and a slightly larger reflection/question ratio in standard care, there were no statistically significant differences in the remaining mean MI domain scores or BECCI scores.
## CONSORT 2010 checklist of information for reporting a cluster randomised trial

<table>
<thead>
<tr>
<th>Section/Topic</th>
<th>Item No</th>
<th>Standard Checklist item</th>
<th>Extension for cluster designs</th>
<th>Page No *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title and abstract</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>Identification as a randomised trial in the title</td>
<td>Identification as a cluster randomised trial in the title</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1b</td>
<td>Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts)</td>
<td>See table 2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a</td>
<td>Scientific background and explanation of rationale</td>
<td>Rationale for using a cluster design</td>
<td></td>
<td>4-5</td>
</tr>
<tr>
<td>2b</td>
<td>Specific objectives or hypotheses</td>
<td>Whether objectives pertain to the cluster level, the individual participant level or both</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Methods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>Description of trial design (such as parallel, factorial) including allocation ratio</td>
<td>Definition of cluster and description of how the design features apply to the clusters</td>
<td></td>
<td>5-6</td>
</tr>
<tr>
<td>3b</td>
<td>Important changes to methods after trial commencement (such as eligibility criteria), with reasons</td>
<td>Appendix</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Participants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Eligibility criteria for participants</td>
<td>Eligibility criteria for clusters</td>
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<td>5</td>
</tr>
<tr>
<td>4b</td>
<td>Settings and locations where the data were collected</td>
<td></td>
<td></td>
<td>5</td>
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<tr>
<td><strong>Interventions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>The interventions for each group with sufficient details to allow replication, including how and when they were actually administered</td>
<td>Whether interventions pertain to the cluster level, the individual participant level or both</td>
<td></td>
<td>6-7</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6a</td>
<td>Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed</td>
<td>Whether outcome measures pertain to the cluster level, the individual participant level or both</td>
<td></td>
<td>7-8</td>
</tr>
<tr>
<td>6b</td>
<td>Any changes to trial outcomes after the trial commenced, with reasons</td>
<td></td>
<td>7-8, Appendix</td>
<td></td>
</tr>
<tr>
<td><strong>Sample size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7a</td>
<td>How sample size was determined</td>
<td>Method of calculation, number of clusters(s) (and whether equal or unequal cluster sizes are assumed), cluster size, a coefficient of intraclass correlation (ICC or k), and an indication of its uncertainty</td>
<td></td>
<td>8, Appendix</td>
</tr>
<tr>
<td>7b</td>
<td>When applicable,</td>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td><strong>Randomisation:</strong></td>
<td><strong>Sequence generation</strong></td>
<td><strong>Allocation concealment mechanism</strong></td>
<td><strong>Implementation</strong></td>
<td><strong>Blinding</strong></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
<td>-------------------------------------</td>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>8a</strong> Method used to generate the random allocation sequence</td>
<td><strong>9</strong> Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned</td>
<td><strong>10</strong> Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions</td>
<td><strong>10a</strong> Who generated the random allocation sequence, who enrolled clusters, and who assigned clusters to interventions</td>
<td><strong>11a</strong> If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how</td>
</tr>
<tr>
<td><strong>8b</strong> Type of randomisation; details of any restriction (such as blocking and block size)</td>
<td></td>
<td></td>
<td><strong>10b</strong> Mechanism by which individual participants were included in clusters for the purposes of the trial (such as complete enumeration, random sampling)</td>
<td><strong>11b</strong> If relevant, description of the similarity of interventions</td>
</tr>
<tr>
<td></td>
<td><strong>9</strong> Specification that allocation was based on clusters rather than individuals and whether allocation concealment (if any) was at the cluster level, the individual participant level or both</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>10c</strong> From whom consent was sought (representatives of the cluster, or individual cluster members, or both), and whether consent was sought before or after randomisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>5-6, 18, Appendix</strong></td>
</tr>
<tr>
<td>Results</td>
<td>13a</td>
<td>For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome</td>
<td>9-10, Figure 1, Appendix 3 Table 1</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Participant flow (a diagram is strongly recommended)</td>
<td>13b</td>
<td>For each group, the numbers of clusters that were randomly assigned, received intended treatment, and were analysed for the primary outcome</td>
<td>9-10, Figure 1, Appendix 3 Table 1</td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>14a</td>
<td>Dates defining the periods of recruitment and follow-up</td>
<td>Figure 1, Appendix</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14b</td>
<td>Why the trial ended or was stopped</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Baseline data</td>
<td>15</td>
<td>A table showing baseline demographic and clinical characteristics for each group</td>
<td>Table 1</td>
<td></td>
</tr>
<tr>
<td>Numbers analysed</td>
<td>16</td>
<td>For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups</td>
<td>10, Figure 1</td>
<td></td>
</tr>
<tr>
<td>Outcomes and estimation</td>
<td>17a</td>
<td>Results at the individual or cluster level as applicable and a coefficient of intracluster correlation (ICC or k) for each primary outcome</td>
<td>10-11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17b</td>
<td>For binary outcomes, presentation of both absolute and relative effect sizes is recommended</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Ancillary analyses</td>
<td>18</td>
<td>Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory</td>
<td>10-11, Appendix</td>
<td></td>
</tr>
<tr>
<td>Harms</td>
<td>19</td>
<td>All important harms or unintended effects in each group (for specific guidance see CONSORT for harms(\text{iii}))</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td>20</td>
<td>Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses</td>
<td>12-15</td>
<td></td>
</tr>
<tr>
<td>Limitations</td>
<td>21</td>
<td>Generalisability (external validity, applicability) of the trial findings</td>
<td>12-15</td>
<td></td>
</tr>
<tr>
<td>Generalisability</td>
<td></td>
<td>Generalisability to clusters and/or individual participants (as relevant)</td>
<td>12-15</td>
<td></td>
</tr>
<tr>
<td>Interpretation</td>
<td>22</td>
<td>Interpretation consistent with results, balancing benefits and harms, and considering other relevant</td>
<td>12-15</td>
<td></td>
</tr>
<tr>
<td>Other information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration</td>
<td>23</td>
<td>Registration number and name of trial registry</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Protocol</td>
<td>24</td>
<td>Where the full trial protocol can be accessed, if available</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Funding</td>
<td>25</td>
<td>Sources of funding and other support (such as supply of drugs), role of funders</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

*Note: page numbers optional depending on journal requirements*
4 Supplementary Data from the Economic Evaluation

Correspondence to: Professor Anita Patel anitapatelconsulting@gmail.com

4.1 Summary of methods

A within-trial economic evaluation assessed the cost-effectiveness of D6 from a health and social care perspective at 18 months. This linked individual-level costs with HbA1c and quality-adjusted life year (QALY) gains estimated from the Short Form 12 (SF-12) version 2.52,53 We calculated individual-level total costs (English pounds sterling, £, 2011–12 prices) by attaching unit costs from national sources to individual-level (all-cause) resource use quantities covering a retrospective 6-month period at baseline and 18 months. Use of hospital services was assessed by retrospective review of hospital records. Use of out-of-area hospital services, community-based services, and medications were measured by self-report using a specifically developed proforma. Cost estimates for D6 included the full costs of staff training/supervision/assessment and time spent on delivery to patients. Outcomes and costs at 18 months were discounted by 3.5%.

Costs and QALY gains at 18 months were compared using non-parametric bootstrap regressions (10000 repetitions) with baseline covariates and adjustment for nurse. We only calculated incremental cost-effectiveness ratios where either group showed statistically greater costs and outcomes. The probability of cost-effectiveness for D6 was assessed by constructing cost-effectiveness acceptability curves (10000 bootstrap repetitions) for threshold ranges of £0–£50,000 per QALY gain/point improvement in HbA1c. Sensitivity analyses explored the impact on cost and/or outcome differences when: (a) missing data due to loss of follow-up were imputed (using multiple imputation in STATA 11.2) rather than excluded, (b) the unit cost of the D6 intervention was lowered by assuming 50% more people received D6, (c) accounting for the inadvertent inclusion of 29 individuals with HbA1c <64 mmol/mol by including a binary covariate for this, and (d) accounting for clustering at practice rather than nurse level.
### 4.2 Intervention Costs

#### Table S1: D6 intervention costs (English pounds sterling, £, 2011–12 prices; total costs rounded to nearest £)

<table>
<thead>
<tr>
<th>Intervention Component</th>
<th>Description</th>
<th>Resources</th>
<th>Resource and cost details</th>
<th>Total cost</th>
<th>Unit cost per participant (n164)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Training</strong></td>
<td></td>
<td>Trainer’s time</td>
<td>1 band 8a clinical psychologist for 4 hours (3 hour training plus 1 hour preparation) for 12 weeks for 2 courses (1 * 4 * 12 * £60) £5,760</td>
<td>£20,074</td>
<td>£122</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trainees’ time</td>
<td>11 trainees (primary care nurses) for 3 hours for 12 weeks (11 * 3 * £35) £13,860.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capital/materials</td>
<td>Room to train in: 3 hours training for 12 weeks for 2 courses (3 * 12 * £3.10 per hour) £223.20. Printing of 11 D6 psychology skills handbook: (11 * £11.94) £131.34. Printing of 10 A4 PowerPoint presentations for 12 session for 11 trainees (10 * 12 * £0.06) £79.20. Use of 1 video camera: £19.99.</td>
<td>£223.20</td>
<td></td>
</tr>
<tr>
<td><strong>Supervision</strong></td>
<td></td>
<td>Trainer’s time</td>
<td>1 band 8a clinical psychologist for 3 hours (2 hour supervision plus 1 hour preparation) for a total of 35 group supervision sessions (1 * 3 * 35 * £60) £6,300. 1 band 8a clinical psychologist for 30 minutes for transcription of 131 taped trainee sessions (0.5 * 131 * £60) £3,930.</td>
<td>£23,449</td>
<td>£143</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trainees’ time</td>
<td>1 trainee (primary care nurse) for 2 hours for 140 trainee attendances at group sessions (1 * 2 * 140 * £35) £9,800.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transcription</td>
<td>Transcription of 131 30-minute sessions: (131 * 30 * 0.80) £3,144.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Materials</td>
<td>1 audio recorder per trainee: (11 * £24.99) £274.89.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td></td>
<td>Assessor’s time</td>
<td>1 band 8a nurse for 30-minutes, for 11 assessments (1 * 0.5 * 11 * £60) £330</td>
<td>£330</td>
<td>£2</td>
</tr>
<tr>
<td>Intervention</td>
<td>Cost per patient</td>
<td>Mean £301</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants offered 12 sessions over twelve months.</td>
<td>£43,853</td>
<td>£267</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trainees’ time Individually calculated for each case based on number of sessions attended (assume 30 minute session): (30 minutes * £0.75 per minute) £22.50 per session.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources and details (all pounds sterling (£), 2011/12 prices):**

4. Information from the clinical team: £11.94 each.
5. Rymans photocopying. Available at: [http://www.ryman.co.uk/photocopying](http://www.ryman.co.uk/photocopying) [accessed: 13/02/2015]: £0.06 per copy for 100+ pages
6. Argos camcorder. Available at: [http://www.argos.co.uk/static/Product/partNumber/2268077.htm](http://www.argos.co.uk/static/Product/partNumber/2268077.htm) [accessed: 13/02/2015]: £19.99 for the lowest priced camcorder.
7. Transcript Divas Transcription Services. Available at: [http://transcriptdivas.co.uk/](http://transcriptdivas.co.uk/) [accessed: 13/02/15] Based on £0.80 per minute of recording data.
8. Argos voice recorder. Available at: [http://www.argos.co.uk/static/Product/partNumber/3071452.htm](http://www.argos.co.uk/static/Product/partNumber/3071452.htm) [accessed: 13/02/2015]: £24.99 for the lowest priced voice recorder.
9. Curtis L. 2012. Unit Costs of Health and Social Care 2012. Personal Social Services Research Unit: University of Kent. Based on £46,600 median full-time equivalent total earnings for a band 8a nurse, with proportions of a band 7 nurse for per hour cost applied (£40,200 - £52 per hour): £60 per hour.
## 4.3 Other Unit Costs

### Table S2: Unit costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Unit cost (£) 2011-12 prices</th>
<th>Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inpatient services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous System</td>
<td>bed day</td>
<td>368</td>
<td>1</td>
<td>NHS reference cost - Code A</td>
</tr>
<tr>
<td>Eyes &amp; Periorbital</td>
<td>visit</td>
<td>134</td>
<td>1</td>
<td>307 - diabetic medicine on Total-OPATT tab cost as diabetes clinic</td>
</tr>
<tr>
<td>Mouth, head, neck &amp; ears</td>
<td>bed day</td>
<td>606</td>
<td>1</td>
<td>cost as diabetes clinic</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>bed day</td>
<td>519</td>
<td>1</td>
<td>130 - ophthalmology on Total-OPATT tab</td>
</tr>
<tr>
<td>Cardiac Surgery &amp; Primary Cardiac</td>
<td>visit</td>
<td>326</td>
<td>1</td>
<td>DAP839 - Phlebotomy: on TDAPS tab (Pathology services)</td>
</tr>
<tr>
<td>Conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digestive System</td>
<td>bed day</td>
<td>428</td>
<td>1</td>
<td>NHS reference cost - Code F</td>
</tr>
<tr>
<td>Hepato-biliary and Pancreatic Systems</td>
<td>bed day</td>
<td>398</td>
<td>1</td>
<td>NHS reference cost - Code G</td>
</tr>
<tr>
<td>Musculoskeletal System</td>
<td>bed day</td>
<td>486</td>
<td>1</td>
<td>NHS reference cost - Code H</td>
</tr>
<tr>
<td>Skin, Breast &amp; Burns</td>
<td>bed day</td>
<td>404</td>
<td>1</td>
<td>NHS reference cost - Code J</td>
</tr>
<tr>
<td>Endocrine &amp; Metabolic System</td>
<td>bed day</td>
<td>327</td>
<td>1</td>
<td>NHS reference cost - Code K</td>
</tr>
<tr>
<td>Urinary Tract &amp; Male Reproductive Systems</td>
<td>bed day</td>
<td>350</td>
<td>1</td>
<td>NHS reference cost - Code L</td>
</tr>
<tr>
<td>Female Reproductive System &amp; Assisted</td>
<td>bed day</td>
<td>599</td>
<td>1</td>
<td>NHS reference cost - Code M</td>
</tr>
<tr>
<td>Reproduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obstetrics</td>
<td>bed day</td>
<td>818</td>
<td>1</td>
<td>NHS reference cost - Code N</td>
</tr>
<tr>
<td>Diseases of Childhood &amp; Neonates</td>
<td>bed day</td>
<td>577</td>
<td>1</td>
<td>NHS reference cost - Code P</td>
</tr>
<tr>
<td>Vascular System</td>
<td>bed day</td>
<td>472</td>
<td>1</td>
<td>NHS reference cost - Code Q</td>
</tr>
<tr>
<td>Radiology and Nuclear Medicine</td>
<td>bed day</td>
<td>513</td>
<td>1</td>
<td>NHS reference cost - Code R</td>
</tr>
<tr>
<td>Haematology, Chemotherapy, Radiotherapy &amp;</td>
<td>bed day</td>
<td>448</td>
<td>1</td>
<td>NHS reference cost - Code S</td>
</tr>
<tr>
<td>Specialist Palliative Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Trauma, Emergency Medicine and</td>
<td>bed day</td>
<td>458</td>
<td>1</td>
<td>NHS reference cost - Code T</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunology, Infectious Diseases &amp; other</td>
<td>bed day</td>
<td>360</td>
<td>1</td>
<td>NHS reference cost - Code W</td>
</tr>
<tr>
<td>contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General inpatient</td>
<td>bed day</td>
<td>439</td>
<td>1</td>
<td>NHS reference cost - Overall inpatient</td>
</tr>
<tr>
<td>A&amp;E</td>
<td>bed day</td>
<td>112</td>
<td>1</td>
<td>TAandEMSNA - Accident and Emergency Services: Not Leading to Admitted</td>
</tr>
<tr>
<td><strong>Outpatient services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes clinic</td>
<td>visit</td>
<td>134</td>
<td>1</td>
<td>307 - diabetic medicine on Total-OPATT tab cost as diabetes clinic</td>
</tr>
<tr>
<td>Diabetes foot clinic</td>
<td>visit</td>
<td>134</td>
<td>1</td>
<td>cost as diabetes clinic</td>
</tr>
<tr>
<td>Diabetes eye clinic</td>
<td>visit</td>
<td>134</td>
<td>1</td>
<td>cost as diabetes clinic</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>visit</td>
<td>86</td>
<td>1</td>
<td>130 - ophthalmology on Total-OPATT tab</td>
</tr>
<tr>
<td>Blood tests / phlebotomy</td>
<td>visit</td>
<td>3</td>
<td>1</td>
<td>DAP839 - Phlebotomy: on TDAPS tab (Pathology services)</td>
</tr>
<tr>
<td>Dietetics</td>
<td>visit</td>
<td>57</td>
<td>1</td>
<td>Total - OPATT Tab: Service code 654A - Adult dietetics</td>
</tr>
<tr>
<td>General medical outpatient</td>
<td>visit</td>
<td>158</td>
<td>1</td>
<td>300 - general medicine on Total-OPATT tab</td>
</tr>
<tr>
<td>Day surgery centre</td>
<td>visit</td>
<td>123</td>
<td>1</td>
<td>Total OPATT (Outpatient Attendances Data) tab - code 100 - general surgery</td>
</tr>
<tr>
<td>A&amp;E</td>
<td>visit</td>
<td>110</td>
<td>1</td>
<td>180 - A&amp;E on Total-OPATT tab</td>
</tr>
<tr>
<td>X-ray (x-ray only)</td>
<td>visit</td>
<td>30</td>
<td>1</td>
<td>Total - OPATT Tab: Direct Access Plain Film - DAPF</td>
</tr>
<tr>
<td><strong>Community based professionals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP at surgery</td>
<td>contact</td>
<td>36</td>
<td>2</td>
<td>P183 - PSSRU - per patient contact lasting 11.7 minutes - Excludes qualification costs, including direct care staff costs.</td>
</tr>
<tr>
<td>GP at home</td>
<td>contact</td>
<td>92</td>
<td>2</td>
<td>P183 - PSSRU - per patient out of surgery visit lasting 23.4 minutes - Excludes qualification costs, including direct care staff costs.</td>
</tr>
<tr>
<td>GP telephone</td>
<td>contact</td>
<td>22</td>
<td>2</td>
<td>P183 - PSSRU - per telephone contact lasting 7.2 minutes - Excludes qualification costs, including direct care staff costs.</td>
</tr>
<tr>
<td>Diabetes specialist nurse at surgery</td>
<td>contact</td>
<td>11.11</td>
<td>2</td>
<td>p178 - PSSRU - Nurse specialist - £43 per hour excluding qualifications, assuming 15.5 (specified on p180 for practice nurse) min appointment</td>
</tr>
<tr>
<td>Diabetes specialist nurse at home</td>
<td>contact</td>
<td>16.11</td>
<td>2</td>
<td>p178 - PSSRU - Nurse specialist - £43 per hour excluding qualifications, assuming 15.5 (specified on p180 for practice nurse) min appointment</td>
</tr>
<tr>
<td>Diabetes specialist nurse telephone</td>
<td>contact</td>
<td>6.78</td>
<td>2</td>
<td>p178 - PSSRU - Nurse specialist - £43 per hour excluding qualifications, assuming 15.5 (specified on p180 for practice nurse) min appointment</td>
</tr>
</tbody>
</table>
excluding qualifications, assume same proportion of costs as a GP telephone call (61% (*0.61)) - 11.11*61=678
P180 - PSSRU - £45 per hour of face-to-face contact excluding qualifications assuming 15.5 (specified on p180) min appointment based on practice nurse visit cost above but use the proportion of district nurse home visit hour / clinic hour proportion from PSSRU 2010 (68/49=139%)

Practice nurse at surgery contact 11.63 2
Practice nurse at home contact 16.166 2

Practice nurse telephone contact 7.0943 2
Chiropodist/podiatrist at surgery contact 48.529 1
Chiropodist/podiatrist at home contact 70.367 1

Chiropodist/podiatrist telephone contact 29.603 1
Optician at surgery contact 20.7 3

Optician at home contact 28.773 2
Optician telephone contact 12.627 2

District nurse at surgery contact 11.347 2
District nurse at home contact 15.76 2

District nurse telephone contact 9.6136 2
Dietician at surgery contact 72.277 1
Dietician at home contact 104.8 1

Dietician telephone contact 44.089 1
Physiotherapist at surgery contact 48.529 1
Physiotherapist at home contact 70.367 1

Physiotherapist telephone contact 29.603 1
Occupational therapist at surgery contact 30 2
Occupational therapist at home contact 54.78 2

Occupational therapist telephone contact 18.3 2
Psychiatrist at surgery contact 171.4 1

Psychiatrist at home contact 248.53 1
Psychiatrist telephone contact 51.626 1
<table>
<thead>
<tr>
<th>Service Type</th>
<th>Contact Type</th>
<th>Contact Cost</th>
<th>Item Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychotherapist at surgery</td>
<td>Contact</td>
<td>189.04</td>
<td>2.94 per item pack</td>
</tr>
<tr>
<td>Psychotherapist telephone</td>
<td>Contact</td>
<td>40.8</td>
<td>1.35 per item pack</td>
</tr>
<tr>
<td>Counsellor at surgery</td>
<td>Contact</td>
<td>59</td>
<td>2.79 per item pack</td>
</tr>
<tr>
<td>Social worker at surgery</td>
<td>Contact</td>
<td>3.05</td>
<td>2.94 per item pack</td>
</tr>
<tr>
<td>Social worker telephone</td>
<td>Contact</td>
<td>108.42</td>
<td>11.58 per item pack</td>
</tr>
<tr>
<td>Home help/ care worker at surgery</td>
<td>Contact</td>
<td>11.58</td>
<td>4.17 per item pack</td>
</tr>
<tr>
<td>Home help/ care worker at home</td>
<td>Contact</td>
<td>11.58</td>
<td>15.7 per item pack</td>
</tr>
<tr>
<td>Meals on Wheels at surgery</td>
<td>Contact</td>
<td>5</td>
<td>50 per item pack</td>
</tr>
<tr>
<td>Meals on Wheels at home</td>
<td>Contact</td>
<td>5</td>
<td>6 local authority meal v £4</td>
</tr>
<tr>
<td>Meals on Wheels telephone</td>
<td>Contact</td>
<td>3.05</td>
<td>£50 per item pack</td>
</tr>
<tr>
<td>Pharmacist for advice at surgery</td>
<td>Contact</td>
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<td>£156 per item pack</td>
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<td>Pharmacist for advice at home</td>
<td>Contact</td>
<td>4.17</td>
<td>£156 per item pack</td>
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<tr>
<td>NHS direct at surgery</td>
<td>Contact</td>
<td>22.358</td>
<td>£50 per item pack</td>
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<tr>
<td>NHS direct telephone</td>
<td>Contact</td>
<td>22.358</td>
<td>£156 per item pack</td>
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**Insulin equipment**

- **Blood glucose monitor / metre**: 12 per 100
- **Blood glucose testing strips**: 30.1 per 100-pack
- **Insulin pen**: 15.7 per item
- **Insulin pump**: 2375 per item
- **Needle**: 2.79 per 100-pack
- **Syringe**: 1.35 per 10-pack
- **Finger prick device**: 2.94 per 200-pack

**Notes**

* Services (Outpatient Setting) - Follow-up Attendance Non Face to Face - MHOPFUA2 (Adult other services)

p171 PSSRU - £136 per hour of client contact - assume 1 hour appointment, Excludes qualification costs,

based on psychologist visit cost above but use the proportion of district nurse home visit hour / clinic hour proportion from PSSRU 2010 (68/49=139%) assume same proportion of costs as a psychiatrist face to face v non face to face (30% (*0.30))

Assume same as a psychologist. "A psychotherapist may be a psychiatrist, social worker, psychologist, mental health nurse or other mental health professional who has had further specialist training in psychotherapy. Increasingly, there are a number of psychotherapists who do not have backgrounds in these fields but who have undertaken in-depth training in this area.

P193 PSSRU - Home care worker per hour of face to face contact, Weighted average accounting for different rates for day/evening/weekday/weekends. Plus, info that over 50% of visits are for 30 minutes so accounting for this (23.16/2= £11.58)

Assume same proportion of costs as a GP telephone call (61% (*0.61))

P190 - PSSRU - social worker adult services - £156 per hour of face to face contact - assume 30 min - excludes qualifications.

based on social worker visit cost above but use the proportion of district nurse home visit hour / clinic hour proportion from PSSRU 2010 (68/49=139%) assume same proportion of costs as a GP telephone call (61% (*0.61))

P125 PSSRU - £6 local authority meal v £4 independent sector cost per day

Assume same proportion of costs as a GP telephone call (61% (*0.61))

P172 PSSRU - £50 - assume 5 min consultation - excludes qualification costs.

Same as home visit

Assume same as a pharmacist surgery consult cost as telephone

21.02 in 2009/10 so inflate up to 2011/12
Sources


### 4.4 Sensitivity Analyses

Table S11: Total costs at baseline and 18 months including intervention costs based on sensitivity analyses (2011/12 prices; all 18 month costs except intervention costs discounted)

<table>
<thead>
<tr>
<th>Costs at 18 months</th>
<th>Control</th>
<th>Intervention</th>
<th>Unadjusted mean difference</th>
<th>95% C.I.</th>
<th>Adjusted mean difference</th>
<th>95% C.I.</th>
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<tr>
<td>Health &amp; social care costs including intervention costs</td>
<td>107</td>
<td>1025</td>
<td>573</td>
<td>92</td>
<td>1184</td>
<td>572</td>
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<td><strong>GP Clustering</strong></td>
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<td>1025</td>
<td>573</td>
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<tr>
<td><strong>Alternative intervention cost</strong></td>
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<tr>
<td>Health &amp; social care costs including intervention costs</td>
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<td>1025</td>
<td>573</td>
<td>92</td>
<td>1095</td>
<td>572</td>
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<tr>
<td><strong>Intention to treat</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>Health &amp; social care costs including intervention costs – intention to treat</td>
<td>170</td>
<td>1052</td>
<td>497</td>
<td>164</td>
<td>1126</td>
<td>473</td>
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</table>

*Comparisons include clustering for nurse. **Comparisons include clustering for nurse plus covariates for baseline cost, age, gender, marital status, ethnicity, duration of diabetes and baseline utility. * Statistically significant

Table S12: Outcomes at baseline and 18 months interpolated to a six month period to match the cost data based on sensitivity analyses

<table>
<thead>
<tr>
<th>Outcomes at 18 months</th>
<th>Control</th>
<th>Intervention</th>
<th>Unadjusted mean difference</th>
<th>95% C.I.</th>
<th>Adjusted mean difference</th>
<th>95% C.I.</th>
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<tr>
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<td></td>
<td></td>
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<tr>
<td>HbA1c (discounted)</td>
<td>109</td>
<td>71.31</td>
<td>19.22</td>
<td>110</td>
<td>71.60</td>
<td>18.11</td>
</tr>
<tr>
<td>SF12 based QALY (discounted and interpolated)</td>
<td>48</td>
<td>0.36</td>
<td>0.06</td>
<td>58</td>
<td>0.37</td>
<td>0.06</td>
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<td><strong>GP cluster</strong></td>
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<tr>
<td>HbA1c (discounted)</td>
<td>109</td>
<td>71.31</td>
<td>19.22</td>
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<td>SF12 based QALY (discounted and interpolated)</td>
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<td>0.06</td>
<td>58</td>
<td>0.37</td>
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<tr>
<td><strong>Intention to treat</strong></td>
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<tr>
<td>HbA1c (discounted)</td>
<td>170</td>
<td>72.16</td>
<td>16.74</td>
<td>164</td>
<td>72.19</td>
<td>15.61</td>
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<tr>
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<td>170</td>
<td>0.36</td>
<td>0.06</td>
<td>164</td>
<td>0.37</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Comparisons include clustering for nurse. **Comparisons include clustering for nurse plus covariates for age, gender, marital status, ethnicity, duration of diabetes and baseline utility.** * Statistically significant
4.5 Cost-effectiveness

For the economic analysis, 139 (42%) and 85 (25%) participants had the two necessary combinations of cost/HbA1c/covariate and cost/SF-12/covariate data, respectively; characteristics of those with and without data were comparable.

Based on QALYs, probabilities of cost-effectiveness for the D6 group at 18 months did not exceed 35% at the examined willingness to pay thresholds. However, based on HbA1c, probabilities of cost-effectiveness were around 5% at a willingness to pay threshold of £0, rising to (and remaining at) around 65% at thresholds of £5000–£50000. However, willingness to pay for a point improvement in HbA1c is unknown, and such a small improvement is unlikely to be clinically meaningful. Based on QALYs, probabilities of cost-effectiveness for the D6 group at 18 months did not exceed 35% at the examined willingness to pay thresholds. However, based on HbA1c, probabilities of cost-effectiveness were around 5% at a willingness to pay threshold of £0, rising to (and remaining at) around 65% at thresholds of £5000–£50000. However, willingness to pay for a point improvement in HbA1c is unknown, and such a small improvement is unlikely to be clinically meaningful.
Figure S1: Cost-effectiveness plane for HbA1c changes at 18 months from a health & social care perspective

Figure S2: Cost-effectiveness plane for QALY gains at 18 months from a health & social care perspective
Figure S3: Cost-effectiveness acceptability curve for HbA1c point improvements at 18 months from a health & social care perspective

Figure S4: Cost-effectiveness acceptability curve QALY gains at 18 months from a health & social care perspective
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The Diabetes-6 (D-6) Study

A psychology skills handbook for primary care nurses supporting patients with Type 2 Diabetes
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Foreword

This handbook is written for the NIHR funded D-6 study.

It is intended as a training resource and reference handbook for diabetes professionals working with Type 2 Diabetes patients with persistent suboptimal glucose control.

The handbook covers six core psychological skills for diabetes professionals. It draws on Motivational Interviewing and Cognitive Behavioural Therapy, which are introduced in the first section. Each section includes a rationale for why the skill is useful, a description of specific techniques and how to administer them. Each section also considers potential problems which may arise for the clinician in using each skill.

The following sections of the handbook cover how to integrate these skills depending on the patient’s needs, a trouble shooting section which considers possible reasons for no change in the patient’s behaviour and longer case examples. Examples of dialogue between diabetes patients and clinicians are used throughout the handbook to illustrate the skills in action.

The final sections of the handbook consider how to assess for common mental health problems and provide a list of local community resources to support lifestyle changes. A useful tools section will also be found at the end of the handbook, with handouts for patients and clinicians including visual aids, questionnaires and prompts for discussion.

Written by Dr Nicole de Zoysa, Clinical Psychologist

Thanks to Melanie Rimes for the illustrations
Section A:
D-6 Background
D-6 Background

Why do we need to consider psychology in diabetes?

In the 21st century, the management of long-term conditions is an increasing priority for the NHS. With chronic disease management comes a greater responsibility for the patient in managing their own health. For some patients, taking on this role is much harder than for others. The patients who struggle continue to mistreat themselves or fail to make lifestyle adjustments, despite the prospect of disease progression. In Type 2 diabetes, 60% of patients are failing to achieve target (Massi-Benedetti, 2006) despite access to sophisticated technology and health education. This is frustrating for everyone concerned.

Both Motivational Interviewing and Cognitive Behaviour Therapy are psychological approaches that tackle the area of behaviour change. They have been shown to improve outcomes for diabetes patients and reduce HbA1c (Ismail, Winkley, Rabe-Hesketh, 2004). These approaches suggest that how we talk to a patient, the questions we ask and the attitude we bring to our consultation can significantly affect outcome. The aim of the D-6 study is to train practice nurses in some of these techniques to support those patients who are struggling.

Introduction to Motivational Interviewing (MI)

What is Motivational Interviewing?
Motivational interviewing is a consultation style designed to strengthen a patient’s commitment towards change. MI is both person centred (understanding and affirming the patient’s point of view) and directive (guiding them towards behaviour change).

The key tasks in MI can be summarised as follows:

EE  Expressing Empathy
RR  Rolling with Resistance
AA  Avoiding Arguments
SS  Supporting Self efficacy
DD  Developing Discrepancy

A useful acronym for remembering these is DEARS. These areas will be covered in detail in the subsequent chapters.

The development of MI
MI was originally developed from the field of alcohol misuse. Bob Miller, an American Psychologist, and his colleagues became interested in finding cost effective treatments for people with alcohol problems. They noticed that some therapists had more success with their clients than others, even when the clients had been randomly assigned. The researchers started to look at the transcripts from these sessions and investigated what factors predicted better outcomes. Surprisingly, they found that
resistance was a by-product of the interaction between the therapist and the client. This challenged the notion that resistance was exclusively to do with the client.

Specifically, they found that when counsellors gave confrontational responses (even with good intentions), this would elicit increased defensiveness (i.e. resistance or denial) from the client. Therapists who expressed high empathy had patients with better outcomes. Furthermore, if therapists changed their style from a confrontational to a client-centred approach, client defensiveness reduced. Looking at transcripts of client responses, they found that client defensiveness could predict lack of behaviour change. This body of research suggested that the degree of resistance or motivation displayed by a client could be modified by the therapist’s behaviour.

For more information regarding the theories associated with MI, see Appendix.

The ‘spirit’ of MI
MI is more than just a collection of techniques. The ‘spirit’ of MI is about adopting a certain attitude or mindset that will promote behaviour change. The underlying principles of MI can be summarised as follows:

- **Collaborative** – a joint decision making process, with both parties having an equal share of the power. Only the patient can enact a behaviour change – their viewpoint needs to be respected and utilised.
- **Evocative** – the art of MI is to connect healthy behaviour with what patients care about or value. MI seeks to draw out from the patient their reasons, values, resources and beliefs about change. Consequently, patients provide their own arguments for change.
- **Honouring patient autonomy** – an acceptance that people are allowed to make their own choices about their health. Ironically, acknowledging a person’s right not to change can sometimes give space for change to occur.

When you are in the flow with MI, consultations feel different; you meet patients where they are; you demonstrate you understand – the sense of struggle is abated. When patient defensiveness has gone down, you then have room to manoeuvre to guide them towards better self care. Rollnick (2008) reminds us that MI is “about guiding more than directing; dancing rather than wrestling; listening at least as much as telling” (p.6). Consequently, this handbook has been divided into ‘what to do’ sections i.e. technique and ‘how to do it’ sections, describing the style or spirit.
The process of change
The MI approach draws upon Prochaska & DiClemente’s (1983) Stages of Change (SoC) model. This model suggests that change is not an ‘all or nothing’ concept but that people pass through different stages (including contemplating a change and making preparations), moving backwards and forwards, before reaching a maintenance stage (see diagram below).

The skill of MI is to meet your patient where they are on the cycle of change and to adapt your consultation accordingly. For example, if you proceed with goal setting with a patient who is still weighing up the pros and cons of doing exercise, you may notice an increase in resistance. This is because the clinician is in ‘action’ and the patient is in ‘contemplation’. According to this model, resistance occurs when the patient and clinician are at different stages on the change cycle. (see Appendix for more information regarding the Stages of Change model).

The majority of patients with poorly controlled diabetes are not ready to move into action to improve self-care when they first present. The resistance may not always be easy to recognise. Patients may avoid expressing their irritation, anger or rebellion to you directly. However, the resistance becomes obvious when they come back the next month with their sugar levels unchanged.
Introduction to Cognitive Behavioural Therapy (CBT)

What is Cognitive Behavioural Therapy?
Cognitive Behavioural Therapy was first developed as a treatment for depression by Beck (1967). It arose from the realisation that how a patient reacted emotionally depends on how they interpret events. Consequently, CBT rests upon the idea that cognitions (e.g. thoughts, beliefs, attitudes) influence our emotional, physical and behavioural responses. Consider these two examples:

What Beck discovered is that these thoughts can appear so quickly and so fleetingly that the person may not be consciously aware of them. For example, if you ask someone to give a speech in front of a room full of people, they may notice that their heart rate increases and that they start to perspire. However, they may not be aware of any thoughts at the time. By asking the person specific questions, we can find uncover the ‘hidden’ interpretation of the event i.e. “I might mess it up”, “my face will go red” or “my boss will judge me negatively”. These sorts of thoughts are called Negative Automatic Thoughts (NATs) and the role of therapy is to help the patient become aware of them.

CBT works on the assumption that when patients are suffering from an emotional disorder e.g. depression or anxiety, they may hold unrealistic or unhelpful beliefs which are contributing to the problem. Common unhelpful ways of thinking include:

- Catastrophising - focussing on the worst case scenario
- Personalising - assuming anything that goes wrong is my fault
- Black and white thinking - viewing a situation from extreme positions
The aim of therapy is to help patients identify these automatic thoughts, using certain questions e.g. what went through your mind just then?; what does that say about you as a person?, what conclusions do you draw from this event? Patients may be asked to keep thought records to make a note of habitual ways of responding. Once the thought has been identified, the therapist will support the patient in exploring alternative viewpoints. This helps the patient to realise that their experience (e.g. sadness) is being coloured by their thoughts and that there may be an alternative or more helpful way of viewing the situation (cognitive restructuring). The behavioural part of CBT involves behavioural experiments. This involves testing out a patient’s predictions by trying out new behaviours and observing the results objectively. Goal setting and problem solving are other behavioural techniques used in CBT.

The aim of this course is not to turn you into a CBT therapist, but to understand the theory linking thoughts to behaviours/feelings and to provide a few techniques e.g downward arrow (see Chapter 5) to enhance your consultations. These skills may be particularly helpful when managing patients who have co-morbid depression or anxiety.

**Working with health beliefs**

Even if a person is not feeling clinically depressed or anxious, the way they think about their illness will influence how they manage it. There are several theories from health psychology which highlight the role of beliefs in health behaviours e.g Leventhal’s self regulatory model (2001) and Ajzen’s theory of planned behaviour (see Appendix). These theories hold that patients will form certain ideas about their illness, the value of self care behaviours, the success of past efforts to manage it and other people’s perceptions. For example, if a patient believes their diabetes is temporary, they may not see the need for medication. Seen in this way, seemingly “irrational” behaviour can start to make more sense. The D-6 model assumes that there is always a rationale for a patient’s behaviour (even if it isn’t immediately obvious). By asking the right sorts of questions, we can use our consultations more effectively to target the unhelpful thoughts or beliefs that are maintaining poor self care. As a result, you will be better equipped to deal with some of the psychological barriers to glycaemic control. D-6 is not about offering psychotherapy but providing *psychologically enhanced* consultations around diabetes.
Psychological skills in a medical setting

A normal question to ask at this stage is how different the D6 skills might be to what you do already. You have a level of expertise to fall back upon in terms of your nursing and diabetes experience and no doubt have had to handle patients of varying complexity. As you read this handbook, you will probably notice skills that you already use in day-to-day practice. Indeed, the D6 skills build upon already established good nursing practice (e.g. active listening). However, there will be some areas that feel very different to routine practice and that highlight the challenges of adopting a psychological model. It is best to be prepared for this culture shift.

Who’s the expert?
MI encourages you to view the patient as the ‘expert’. This is very different from the patient seeking ‘expert’ advice and treatment from the clinician. In this situation the patient is passive and knows less than the healthcare provider. In behaviour change work, however, the patient becomes ‘active’. You may suggest exercise/dietary changes, but it is the patient who knows best how to integrate this into their lives - they know when they go shopping, when they feel most tired, who can help with childcare, what exercise they prefer etc. In order to liberate that knowledge, we need to suppress our own ‘righting reflex’ i.e. telling them what’s best!

One way to view this is that the patient becomes the Consultant or Specialist about themselves. This means you are consulting them about how to change their behaviour, rather than the other way round. This can be particularly difficult for healthcare professionals who are drawn to this work because they actively want to help others. A sign that we are doing our job well is that we have informed, educated, problem-solved, prescribed and ultimately fixed our patients. Although helpful in a lot of situations, when it comes to long-term lifestyle changes, the patient needs to take over the reins of responsibility. Letting go of this can feel unsettling at first, especially when we are well versed in problem-solving on the patient’s behalf.

How do I know I’m doing anything useful?
The D6 intervention will encourage you to expand your idea of clinical ‘work’. For instance, there is more emphasis on ‘listening’ as a clinical tool. This is where we can become unstuck. Work is often conceptualised as writing a prescription, taking someone’s blood pressure or giving health advice (i.e. practical directive action). A good outcome will involve some sort of goal-setting or plan. Without this it may feel like we haven’t done our job very well.

However, this intervention will also involve listening, reflecting and tolerating some ambivalence (i.e. the patient is in two minds). Through listening we give space for the patient to explore their ambivalence, show that we are interested in them and obtain vital information to guide our consultation. We will learn to respond in ways that fuel motivation. In this way, our ‘talk’ is also part of our therapeutic armoury – potentially as powerful as the drugs we administer.

For D-6, ‘work’ about moving a patient along in their thinking. The goal for a session is to increase the amount of pro-change statements made by the patient (i.e. moving them through the stages of change). This is still ‘work’ even if it’s not accompanied
by a more practical action. In fact, by focussing prematurely on action we may induce further resistance from the patient. Sometimes *not* doing something can be the more skilful response.

**The ticking clock**

It is common to worry that by asking patients what they think and how they you’re your consultation time will overrun. Remember that you’re not being asked to do ‘therapy’ with a patient. Your questions will focus upon diabetes related concerns and with practice you will become more skilled at steering the conversation in the relevant direction. In addition, it is not your job to ‘fix’ all the problems you unearth in one session. Sometimes, this means ending a session with a sense that things are still ‘undone’. This is to be expected for a long-term intervention such as D-6.

It is also common to *overestimate* the amount of time that has passed when someone else is talking and to *underestimate* the amount of time that has passed when we are talking. Research suggests that even one to two minutes of real listening (without a hidden agenda) can make a significant difference to the outcome of your consultation. Yet two minutes can feel like an eternity to a silent healthcare professional!

Worry about time can actually provide a very real distraction. If we approach a task thinking “I’ve only got 5 minutes” the whole project may take much longer because we are distracted by the urgency of time. However, if we approach a task as if it will take 15 minutes (i.e. take the time pressure off) we can be more fully present to the task at hand and therefore respond more skilfully. Paradoxically, this often has the effect of achieving the same outcome in less time i.e. of speeding things up.

These are some comments made by Swedish primary care nurses¹ who underwent some training in Motivational Interviewing.

‘*After 25 years, old habits die hard*’ ‘the difficult part is the re-learning, as the method in itself really isn’t that difficult. It’s important to be really focussed because it’s easy to revert to what is habitual’

‘*We didn’t listen much before ...instead we used to bombard people with advice, which was something we had been taught to do*’

“*The more you understand the principles [of MI], the more you really begin to appreciate motivational interviewing*”

---

¹ Reported by Soderlund et al 2008
References


Chapter 1: Active Listening
Skill 1: Active Listening

Why is Active Listening important?

Listening can appear a deceptively simple task. In fact, it is a very complex skill and forms the foundation for all therapeutic interventions. Poor listening can result in missing vital information, the patient feeling misunderstood and disengaged from the consultation. Listening is often perceived as a passive skill, but we will go on to show that good listening involves being highly active and is more than asking questions and remaining silent during the answer.

Good listening demonstrates to the patient that you are interested in what they are saying and are able to express empathy with their difficulties. Both these messages are the building blocks from which a therapeutic rapport is formed. Without this rapport, patients may not feel able to be honest about their struggles and hopes (i.e. their ambivalence) and to try out new behaviours. This is particularly relevant to diabetes patients, whose ‘unheard’ stories may be driving poor glycaemic control.

Active listening is the cornerstone of all motivational interviewing. However, there are situations when it is particularly relevant.

• At the start of a consultation, when the focus is on understanding what has brought the patient into the room
• When the interaction between you and the patient feels particularly stuck or resistant
• When the patient is highly emotional e.g. tearful, angry or anxious

Some guidance on ‘what to do’ and ‘how to do it’ with regard to Active Listening are presented below.
**Active listening – WHAT to do**

The following acronym summarises four techniques which can be used to promote active listening: OARS.

- Open questions
- Affirmations
- Reflections
- Summaries

As oars are used to steer a rowing boat, these metaphorical oars can help steer the consultation in a pro-change direction. How you use them, in terms of attitude and body language, will also have a significant bearing on this.

**Open Questions**

Most consultations will involve a mixture of closed and open questions. The use of open questions is an important tool in behaviour change work. Open questions allow patients to elaborate on their answers. The more patients talk about their reasons for changing or not changing, the more pointers we receive about how to direct and pace the consultation. Closed questions can be counter productive in behaviour change because they can produce “yes/no” answers which tell us very little about any motivation to change.

Open questions also shift the balance of power towards the patient. It is easy to fall into the ‘question/answer’ trap which places the onus on you to think of the next question for the passive patient. It maintains the status quo (i.e. that you must do all the work in the consultation) and moves away from a collaborative approach. A string of closed questions can also provoke resistance in a patient. It contributes to a sense of being ‘processed’ rather than understood. Consider these two examples:
Example 1

C: Do you know your latest HbA1c?
P: No
C: It’s 10.2%
C: Do you know what that means?
P: Not sure
C: It’s not a good sign. The glucose levels in your body are too high, putting you at risk for a number of complications.
C: Does that concern you?
P: I suppose that’s not good
C: Well, we need to do something about that then. Let’s start by looking at your diet ...

Example 2

C: Do you know your latest HbA1c?
P: No
C: It’s 10.2%
C: What does that mean to you?
P: Maybe that’s why I’ve been feeling so tired and thirsty?
C: So you’ve noticed having less energy and needing to drink more. How does that impact on your life?
P: Well it’s a hassle when I go to new places with the kids – I’m always worrying where the nearest loo is.
C: Maybe we could think about ways to improve this for you – what do you think?
P: I’m prepared to listen to what you’ve got to say ...

In the second example the clinician has revealed some of the reasons for change and the patient’s readiness to take on new information. In the first example, we have little indication of what the patient thinks about their HbA1c, what difficulties it’s causing them, what might be the driver for change, and whether they are at all ready to think about change. The patient has become passive in the whole process, not volunteering any more information than the bare minimum.

An open question encourages more than a one word response. They can start with:

• What / Why / How
• Tell me more about ...
• Say some more about ...
• That’s interesting - please expand on that ...

Closed questions are more likely to start with:

• Can you ...
• Do you ...
• Have you ...
• How many ...
• When ...
• Where ...

C: Do you know your latest HbA1c?
P: No
C: It’s 10.2%
C: What does that mean to you?
P: Maybe that’s why I’ve been feeling so tired and thirsty?
C: So you’ve noticed having less energy and needing to drink more. How does that impact on your life?
P: Well it’s a hassle when I go to new places with the kids – I’m always worrying where the nearest loo is.
C: Maybe we could think about ways to improve this for you – what do you think?
P: I’m prepared to listen to what you’ve got to say ...
Example 3

**CLOSED**  Do you have any worries about your diabetes?
**OPEN**  What worries you the most about your diabetes?

**CLOSED**  Does your wife know about your hypos?
**OPEN**  How does your wife feel about your hypos?

**CLOSED**  Have you tried Weight Watchers before?
**OPEN**  What are your thoughts about the Weight Watchers programme?

The patient has indicated they aren’t taking all their injections

**CLOSED**  How many injections do you miss a week?
**OPEN**  What makes it harder for you to take your insulin sometimes?

Closed questions can shut down the patient prematurely. Therefore, it gives you less to work with and the responsibility for change is back in your court. Open questions allow the patient to take some control with the direction of the answer. It also signals that you are interested in their perspective.

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**Affirmations**

Affirmations are statements which demonstrate support for the patient. They may reflect positive aspects of a patient’s behaviour, highlight their attributes or validate their efforts. Affirmations are important for a number of reasons. They colour the emotional tone of the consultation – creating a positive, hopeful and constructive atmosphere. It is important to consider what feelings a patient will be left with once they have left the room. Will they feel uplifted or downcast? Long after the words have faded, it is the emotional tone of a consultation that will stay with the patient and influence their subsequent behaviour outside the clinic room.

Affirmations can encourage positive self talk in the patient. Patients who are depressed have a tendency to focus upon the negative aspects of themselves or the world and discount the positive (see chapter 5). By providing affirmations, you are highlighting their capabilities and strengths e.g. resilience, problem-solving, or flexibility. You also demonstrate that their efforts are worth acknowledging. This provides an opportunity for patients to hear new ‘stories’ about themselves, build their confidence and their sense of hopefulness.

Consider these examples:

**P:** I know I should have done better
**C:** Your health is important to you

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**C:** You sound like someone who can multitask very well - how might that skill apply to your diabetes?

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20 minutes late
C: I’m sorry you’ve had so many obstacles to get here, but I’m impressed with your persistence to still attend the appt

P: I missed a few doses – not very good – I’m falling back into old habits.
C: Can we slow things down?
P: OK.
C: How many were you missing, in average week, when we first met?
P: About 4 or 5
C: And how many now?
P: 2
C: That’s an improvement of 50% – well done. What do you think about that?
P: Well I suppose I didn’t see it like that
C: Tell me how you managed that?

P: I can’t get it down. I eat sensibly, I always take my background, I just hate my mealtime injections.
C: You really take your diabetes seriously and put a lot of work into managing it – you are very committed to this

In the above examples, it would have been easy to get dragged down by the patient’s pessimism and immediately focus on what could have been improved. This means we are giving attention to the wrong behaviour i.e. what they haven’t done, not what they have. This can fuel their pessimism and hopelessness.

**Reflections**

Reflections demonstrate to the patient that you are listening and have understood what they have said. The key to reflective listening is to think in terms of hypothesis testing. The patient has told you something and you form a hypothesis (best guess) about what you think the patient means. Then you reflect your hypothesis back to them. One way to approach this is to imagine saying the words “Do you mean ….?”. In practice, you leave the “do you mean” part out and just present the patient with the second part i.e. the reflective statement.

There are different levels of reflection:

**Simple reflections**

This is a basic acknowledgement of what a patient has said. It involves either repeating back to them what they have said or rephrasing it by changing a few of the words. It can be useful at the start of a consultation or when the situation is getting heated.

Examples:
P: When I try and lose weight, I always end up piling on the pounds again
C: You've tried losing weight in the past, but it's been hard to maintain

P: I always take my tablets. There isn't a day that goes past that I miss one.
C: You take your tablets every single day, no matter what

P: I feel really disappointed in myself that I couldn't come here and say I've achieved more this week
C: You feel disappointed.

Complex reflections
Complex reflections add something additional to what the patient has said. This may mean drawing out what has been implied but not said explicitly (e.g. an emotion) or creating a shift in emphasis. The latter allows you to use reflective statements strategically to emphasise ambivalence, roll with resistance or elicit change talk. There will be more on these complex reflections in further chapters. The following are types of complex reflection:

- Selective attention / Positive reframing (see Chapter 2 and 4)
- Overshooting/undershooting – amplified reflections (see Chapter 3)
- Double sided reflections (see Chapter 3)
- Reflecting emotional tone (see Chapter 2)

Complex reflections are more appropriate when the clinician has got to know the patient, formed a rapport and has a better sense of their perspective and feelings. Different types of complex reflection will be introduced in subsequent chapters.

Summaries
A summary is an expanded group of reflective statements. Summaries provide a way to assess where you have got to in a conversation. They can provide a pause, time to reflect and digest what has been said. This can be particularly helpful if the pace of the dialogue is starting to feel frenzied. A summary may provide a turning point, after which you can change direction in a consultation. Summaries are often used to mark significant landmarks in the consultation e.g. the start, midway and the end.

Example:

P: I find that diabetes consumes all my life, because all I’m thinking is, what can I eat? What can I eat? What can I do? What can’t I do? And I don’t want to become obsessive about it. But everything is geared up towards your next blood test. Everything is geared up towards your next injection and I find it’s very oppressive ... It’s the vastness of it, it’s the ... thinking you’re doing the right things and having hypoglycaemia. Thinking you’re doing the right things and your blood sugar is way off the scale, you know! Not even being able to pinpoint anything specific to say ... oh! This is what triggered that, or that’s what triggered ... you know! You think you got it there, you think you’ve got it under control and the next thing you know ... it’s frustrating as I say. I mean I
got a booklet erm ... to record my testing in, and on the front of it, there is a picture of a man playing a trombone and it says “diabetes does not have to control your life” ...huh I wish!

C: So let me see if I’ve got this right Sarah. There are several things you were saying there. That diabetes has an impact on so many areas of your life like the testing, what you’re eating, managing hypos - that it feels like there is a possibility of getting obsessed with it, because there are so many things you could be monitoring all the time. The other thing I’m hearing is that no matter what you do, you’re not even sure if it’s even having the right impact on your diabetes and that’s frustrating.

P: Yeah exactly

C: Where do you think you’re at now with your diabetes management?

In the above example, the patient is feeling extremely frustrated. The clinician uses the summary as an opportunity to reflect back the patient’s concerns and create a pause in the consultation. Notice how the clinician does not try to problem solve or challenge what the patient is saying. The summary is used to establish rapport and reduce patient defensiveness.
Active listening – HOW to do it

Open Questions
The attitude behind open questions is one of curiosity, of showing a genuine interest as to how your patient views their diabetes. Remember that the patient has the answers if we hold out long enough to hear them. Try to hold back from making any assumptions at this point or thinking of solutions. The approach is exploratory. Keeping this in mind will enable you to really listen to what the patient is telling you. Having a hidden agenda is distracting and will diminish the quality of your listening.

Affirmations
Affirmations may feel difficult at first. The key is to constantly be on the look out for the ‘green shoots’ (see more about this in Hotspots). Try and keep your praise specific and authentic. Useful questions to ask yourself are:

- What exactly are you congratulating them for and why is it worth commenting on?
- What effort will they have had to put in to achieve this?

Specific praise tends to carry more weight than vague praise. Consider these examples:

C1: Well done for losing 4 pounds – that’s brilliant!

C2: I’m really impressed that you stuck with your diet over Christmas. It must have taken a lot of commitment to avoid temptation at that time of the year.

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C1: It’s really good that you’ve taken those injections over the past week.

C2: You’ve shown courage in facing your fears about injections. There may have been times that you felt like not going through with it, but you found a way to get beyond that. How did you manage it?

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C1: Congratulations on making it to the gym this week!

C2: It’s fantastic news that you’ve signed up to the gym. It’s been something you’ve been putting off for a while, but this week you decided to bite the bullet and make your health a priority. How did that feel?

In the C2 examples, the clinician is not only giving praise but communicating an understanding of the struggles/sacrifices that needed to be overcome. This sort of affirmation is longer but follows the principle (from behavioural psychology) of giving more attention to the constructive behaviours. The C2 examples also lend themselves more readily to further elaboration from the patient e.g. How did you manage that? How did that feel?

Following from this, it can be useful to reflect upon how much of your consultation style focuses on ‘what could be better’ statements v ‘what has already gone well’ statements. By focussing exclusively on the former, we subtly communicate (albeit
unintentionally) a message of disappointment, failure and not being good enough. Instead consider every interaction with a patient as an opportunity to motivate rather than de-motivate; to engender optimism rather than pessimism.

Reflections
According to the MI model, reflections should be presented as statements rather than questions. Once we start using reflections, it can sometimes feel more comfortable to use phrases such as ‘so it sounds like …?’ ‘I wonder if …?’ ‘Maybe you are feeling…?’ or allowing our voices to go up at the end of a statement to imply a question. However, by turning reflections into questions, we imply that the patient needs to respond. This can interrupt the flow of a patient’s thoughts and is less helpful in expressing empathy. Reflections don’t need to be responded to. However, if a reflection sounds inaccurate to a patient, they will usually let you know. See below:

\[P: \text{My husband says ‘oh why don’t you just take better care of your diabetes’. He makes it sound so simple.}\]
\[C: \text{You’re angry at your husband}\]
\[P: \text{Not so much angry, just disappointed that he will never really understand what it’s like for me to live with diabetes.}\]

Example 1
\[P: \text{I have tried to lose weight before and it just becomes really tedious – always thinking, ‘can I eat this?’ ‘can I eat that?’ Deep sigh}\]
\[C: \text{Dieting can start to feel overwhelming.}\]
\[P: \text{It just makes you want to put up with the pounds for an easy life.}\]

Example 2
\[P: \text{I have tried to lose weight before and it just becomes really tedious – always thinking ‘can I eat this?’ ‘can I eat that?’ Deep sigh}\]
\[C: \text{So it sounds like dieting in the past has become a bit of a chore?}\]
\[P: \text{Well yeah, it’s always on your mind 24/7... you never get a break from it – do you know what I mean?}\]

In Example 1, the patient is able to move on to her current state of mind i.e. wanting an easy life. By posing a reflection as a statement, the clinician has communicated that they have understood, no response is needed from the patient and they can move on to reveal further information. In the second example, the patient feels obliged to give a response and elaborate further on their initial point. It’s interrupted the flow of their thinking.

Summaries
For most of the consultation the patient should be doing most of the talking, with the clinician providing a skilful nudge in the right direction. Summaries are when the ‘taking stick’ passes to you. Allow yourself the time and space to be heard. Sometimes patients may feel excited that you have understood them and want to add their own comments. Gently but firmly allow yourself to be heard at this point. It can help to preface your statements, by introducing it as a summary and to avoid going off on a tangent midway in response to patient interruptions.
C: So to summarise, testing regularly does not fit easily into your life. You have been asked many times by the doctors to bring in your record book and feel somewhat embarrassed that you have an empty book.

P: Yeah, totally awful – like I know what they must be thinking...

C: Yet there are pressures in your life that make it very difficult to test and this is something that the doctors seem less aware of. You would like to think of ways to make testing more realistic for you, given the real limitations you have. What might be a helpful place to start with this?

An MI summary usually tries to incorporate a presentation of the patient’s current position (the pros and the cons) but also adds some forward momentum, in a gentle but purposive way.
Active Listening - clinician HOTSPOTS

It feels like I’m doing nothing
Sometimes asking, listening and reflecting can indeed feel like ‘doing nothing’. The patient is doing most of the talking and the clinician is not giving advice or problem solving. There is no obvious intervention in the conventional sense. However, the clinician is really being highly active - choosing which open question to ask, selecting what to reflect back to the patient and how to summarise the issues. The clinician may not be saying much at this stage, but what they do say will be strategic with the aim of building rapport and expressing empathy – the foundations to behaviour change. In addition, remember that the talking we are trying to elicit from the patient is itself an intervention. Patients hearing themselves articulate their ambivalence encourages them to resolve these dilemmas.

It takes so much longer
Using OARS to facilitate good listening can feel like a time consuming process. However, it is common to over-estimate how much time is passing when we are not talking. Being fully present with a patient (without an agenda) for even one to two minutes can go a long way. Research reports that patients feel more satisfied with their care and also perceive the clinician to have spent more time with them than they actually did. Done well, patients’ responses to open questions will often provide the answers to specific closed questions.

Giving praise feels fake to me
As clinicians are also human beings (!) some of us also have a tendency to be overly self-critical and to neglect our achievements. It’s important to be aware of when we’re doing this so that we don’t reinforce our patients’ self-deprecation.

It will also be important to find a language that works for you. There are a variety of ways of providing affirmations - some more colourful than others. We may view this approach as artificially upbeat or sycophantic. However, a few statements delivered authentically will carry more weight than a barrage of forced compliments.

There is nothing to praise!
The most challenging patients can provoke this response. They don’t seem to be making an effort to manage their diabetes and health information falls on deaf ears. How can we validate non-existent efforts? With the MI approach, we might say that effort (like beauty) is in the eye of the beholder. We look for the ‘green shoots’ no matter how small or fragile e.g. just attending the appointment. We may need to look outside of diabetes – how do they manage their home, their work, their hobbies, their relationships – all the time looking for transferable skills/positive attributes. We do this to create some momentum for change. By ignoring the small efforts, we join our patients in their hopelessness - a sort of psychological stalemate.
Chapter 2: 
Rolling with Resistance
Skill 2: Managing resistance

Why do patients display resistance?

Resistance to change can make working as a diabetes clinician a challenging and sometimes frustrating process. However, the skills of motivational interviewing are specifically designed to address this area.

The model of motivational interviewing rests on three central concepts:

- Resistance is a normal part of the change process
- Resistance is not in the patient, but in the interaction between the clinician and the patient. After all, you can’t be resistant unless you have something to be resistant against!
- Resistance occurs when there is a mismatch between the patient’s stage of change and the clinician’s stage of change e.g. the clinician is in ‘action’ but the patient is in ‘precontemplation’

Unhelpful ways of managing resistance include: arguing, raising our voice, talking over the patient, blaming the patient, labelling the patient and giving up on the patient. This is often the consequence of feeling disheartened that a patient is rejecting our help or not listening to good sense. Learning the skills to address resistance not only makes change more likely to happen but it can also enhance our own levels of motivation and job satisfaction.
Obvious forms of resistance include aggression/hostility, not taking medication as prescribed or avoiding appointments. However, resistance appears in many guises and we should also be on the look out for less obvious forms of resistance which can include:

- Changing the subject or giving irrelevant details
- Promising to make changes and not following through
- Perpetually turning up late for appointments
- “Yes, but ….” patient responses
- Passive behaviours e.g. one word answers
- Minimising concern or down playing problems

These are subtle ways that the patient can re-gain some control over the pace and direction of the sessions. These all indicate that we may not be in the same place as the patient, that the patient is struggling and that we may need to change tack.
Managing resistance – WHAT to do

The techniques to manage resistance are divided into three categories:
1) Dealing with barriers - when there is active resistance
2) Dealing with avoidance - when there is passive resistance
3) Dealing with heated situations - when the emotional temperature is high

Dealing with barriers
This section is for situations when the patient's talk returns again and again to the barriers they are facing. It may sound like a ‘yes, but’ conversation or a catalogue of reasons why the patient feels they can’t change. They may refer to life events, unhelpful family members / medical professionals, inconvenience, stigma and discomfort.

Remember that in these situations, the patient is actually thinking very hard about change. It is only because they are considering the possibility of change, that they are starting to see the obstacles and this can signal a step forward. In these situations the patient may be feeling overwhelmed, confused or even hopeless. The task is to express empathy at the difficulty of the situation, whilst at the same time looking for areas of hope and possibility.

MI introduces the concept of ‘rolling with resistance’. This involves suppressing our knee jerk reaction to react to resistance. Rolling with it means having the knowledge that change is a process which takes time, involves backward and forward steps and that resistance is malleable. Consequently, we treat resistance as something to side step rather than confront. We choose not to give it too much attention.

Selective attention
This is a type of complex reflection. It involves selectively reflecting back the ‘green shoots’ from a mix of positive and negative comments.

P: I just hate injections, so I suppose that puts me off. I mean what other condition do you have to inject yourself X times a day? It’s such a hassle, although I suppose the pen thingy makes it easier.

C: Injecting is not a pleasant experience for you, but you’re also aware that some needles could be a lot worse. Tell me more about what makes the pen easier to use.

It is tempting here to talk about other conditions where the treatment could be worse, feel aggravated that without insulin they wouldn’t be alive, or feel that you’re supposed to join in the argument or agree that nothing is fair.
P: It doesn’t help that my husband is not interested in healthy eating. When he shops – the fridge is full of junk food. I mean if I didn’t have to contend with that, life would be a lot easier.

C: You are concerned about having healthy food in the house – tell me about when you go shopping

In this example, we could have chosen to confront the patient i.e. “you may not like it, but you have to contend with it, so how are you going to manage?” But then we miss the opportunity to expand on times when healthy food is bought. Consequently, we side step the barrier for change (i.e. the husband) for now. You may choose to return to this issue, once the resistance has reduced.

Positive reframing

This type of complex reflection gives you the opportunity to present an alternative interpretation of an event. It can be helpful if the patient can only see the negative viewpoint, which is keeping them stuck

P: I think my wife thinks I bring on the hypos myself
C: Your wife sounds concerned about your health

This reframes the wife’s comments as possible concern rather than being accusatory. Positive reframing helps to steer the conversation into more hopeful and optimistic waters.

P: With diabetes, you have to pay so much more attention to everything – even your feet! I spend half my life seeing doctors.
C: There are lots of people paying close attention to your health to give you the best quality of life.

P: They say I need to take Metformin – I suppose they wouldn’t say it if I didn’t need it, but I feel fine.
C: It’s good to hear that you’re not feeling unwell at the moment.

With these examples, it is easy to take the bait i.e “doctors are only trying to help you for your own good” or “but you’re not fine, and here’s why ….” However, the latter responses can fuel further resistance as the patient defends their position from attack.

P: I hate testing my blood sugars – feels so miserable when you see a high blood sugar, and you think, oh god, what’s happened now?
C: You are conscientious about getting your blood sugars near to target

Again, one might have chosen to respond to this patient by providing more education about why they should be testing their blood sugar. However, this would miss the opportunity to highlight the positive aspects of his experience and therefore engender hope and minimise resistance.
### Overshooting reflections

In this type of reflection – you overshoot i.e. use stronger language to create an opportunity for pro change talk.

- **P:** I know I should try and think about smoking, but it’s tricky, I enjoy my cigarettes - sometimes I think it’s my only pleasure in life
- **C:** Giving up smoking will be an impossible task.
- **P:** Well I know other people who have managed it, so ...

- **P:** I don't have a problem managing my diabetes
- **C:** There’s no room for improvement whatsoever
- **P:** Well, I guess I don’t always eat the right things

- **P:** I’ve never been a gym person, I can’t see myself doing anything like that
- **C:** So there’s absolutely no form of activity you would consider
- **P:** No, not formal exercise as such, but I suppose I could do more with the dog

### Avoidant situations

This section is about situations when patients deny or minimise any difficulties with their diabetes management. They may say very little, or get defensive or just divert you onto what’s going well. Remember in these situations it’s highly unlikely that the patient doesn’t perceive there to be a problem, in fact quite the opposite. The problem seems so insurmountable that denial can help them cope with it. Your task is to gently guide them towards acknowledging some ambivalence. If a patient won’t engage with you about their diabetes, you may need a lead to help you get a foot in the door. Here are some useful techniques.

### Typical day question

This is useful for patients who do not say much or find it hard to reflect upon their behaviour and the consequences. Often talking about practical events/activities can be an easier place to start

- **C:** In what ways has diabetes affected your:
  - Physical health
  - Moods / feelings
  - Family / partner
  - Social life / friends
  - Education / career
  - Spiritual life
  - Financial security

Refer to areas that you know are of particular interest to your patient e.g. their job; their grandchildren; their dance lessons; their driving. Use specific questions about how reported symptoms e.g. having a hypo, being thirsty, being tired, needing the loo a lot, blurred vision affect their functioning in these areas.
Values Question

For people in the precontemplative stage, it can be helpful to start them talking about other areas of their life / their values and see how diabetes impacts on that. This is in contrast to working the other way round (as you might do with more motivated patients) i.e. starting with diabetes and seeing how it interferes with their life/values.

P: I got a touch of sugar but it ain’t so bad. The numbers go up and down all the time, you know. I feel pretty ok at the moment and my doctor said my blood pressure is down.
C: So it’s a bit of a mystery why you’re here.
P: There’s really nothing to worry about – you doctors always getting worried over summit. I have my two eyes, my two legs and my mental faculties (pointing to head)
C: So physically you’re fit as a fiddle, you’re not noticing any unwanted symptoms from your diabetes. But I’m interested in how diabetes may or may not affect all parts of your life and not just your body. Could I do a little card sorting exercise with you?
P: Ok

P: My family would be my top priority
C: Tell me more about that
P: Well I always put my children first. They are the most precious thing.
C: How do you spend time with your children?
P: Well they’re grown up now (laughing) so really they’re adults. I see them some weekends – they come over with their families
C: So you have grandchildren too
P: Oh yes, plenty of those
C: Family is a big part of your life, and you enjoy the time you spend with them. How might diabetes get in the way of this?
P: Well I’ve seen people in wheelchairs – I don’t want to end up like that. But at the moment I feel fine.
C: What’s your understanding about how people end up in a wheelchair?
P: Their diabetes had got bad
C: I’m wondering whether it’s possible that those people also felt fine like you at some point?
P: I guess so ... maybe things just got worse for them.
C: You recognise that diabetes can progress and get worse for people, sometimes leading to needing a wheelchair. That’s not somewhere you want to go.

C: Can I show you a diagram\(^2\) that some people find helpful?
P: OK
C: These are some of the ways we think we can slow down diabetes. What areas seem relevant to you?

\(^2\) See Menu Options handout (Appendix)
P: Well I don’t smoke, I eat ok I guess, I do a spot of walking I suppose that’s exercise
C: You sound as if you have a good grasp of the basic concepts, that healthy eating and exercise are very important, but you still have some specific questions about the details. Have I got that right?
P: I just need to avoid the chocolate bars don’t I?

The clinician how has a way in – an opening has been created about an issue that the patient wants to know more about.

Normalising

This is about highlighting the difficulties in managing diabetes and that poor adherence to healthy advice is not unusual. If patients feel they are not being singled out as the only ‘culprit’, they can be more open to a dialogue about their difficulties.

Patient with a disabled child – clinician suspects that they are not taking medication:

C: So you must get really busy in the afternoons taking care of your daughter
P: Oh yes, my mind is always somewhere else
C: When people have other pressures in their life, it’s not unusual to forget their insulin – how is that for you?
P: Sometimes it does slip my mind, yes

In this example, the clinician offers a statement describing what can considered as the ‘norm’ or a generalised way of behaving. This gives the patient ‘permission’ to talk about her own omissions. Another way to normalise the difficulties of managing diabetes is to ask the patient if they know anyone else who has diabetes and what problems and coping strategies these other patients use. The purpose here is to encourage the patient to express the challenges that other people might also face.

In heated situations

Sometimes the emotional tone of a consultation can feel quite heated. In these situations, it would not be unusual to feel antagonised. The task is not to engage in the battle, thereby fuelling the fire, but to de-escalate the situation.

Simple reflection

In the heat of the moment, it can be helpful to simply reflect back what the patient has said. It also gives an opportunity to make sure you have understood what they have told you, as an emotionally laden statement may be less coherent.

P: I’m fed up with diabetes. I just don’t want to think about it anymore, ok?
C: You’ve had it with diabetes and talking about it makes you feel worse.

(You could move on to the values exercise – see Appendix)
P: I don’t want another meter, because I’m not going to test my sugars, so there’s no point.
C: Right now, you don’t want to do any blood glucose testing, so it seems silly for me to give you another meter.
P: Yeah, exactly.
C: What feels like a more useful area for us to talk about today?

(You could refer to the menu options here – see Appendix)

Taking a one down position

This means acknowledging shared responsibility for the situation. It is useful when the consultation feels very hostile. By the clinician acknowledging some responsibility, the patient no longer needs to attack or justify – this provides a temporary reprieve. Taking a one down position removes some of the heat out of the interaction and steers the consultation towards more constructive ground.

P: I’m ok with my diabetes - I do what I’m told, I don’t know why these blood tests keep coming back so bad. (spoken forcefully)
C: I’m sorry to hear that. We have obviously failed you in some way, because your sugars are still running high. What information would you find helpful to hear from me today?

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P: It’s not my fault they’re running high, everyone gets high readings sometimes.
C: You’re absolutely right. No one can be expected to get it right 100% of the time.
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P: I’ve got to see you now have I? I’ve just been waiting over an hour in the hospital. Nobody tells you what’s going on. I suppose you’re just going to have a go at me about my diet or something.
C: I’m really sorry that you’ve had to wait so long and that nobody’s been communicating with you. That doesn’t sound like you’ve been treated very well. How can we make the next 30 minutes useful for you?

These examples highlight powerful ways to defuse the situation and minimise patient defensiveness.
Managing resistance – HOW to do it

With Motivational Interviewing, the clinician does not feel obliged to answer a client’s objection or resistance. Instead we side step, roll with, highlight the ‘green shoots’ rather than the weeds. By holding this position consistently something will finally shift in the consultation – creating momentum for change. In contrast, by confronting or challenging anti-change talk, we are giving our attention to the wrong behaviours.

It is important to be aware of what not to do when managing resistance. This includes taking resistance personally. If necessary, take a breath or provide a summary to create some mental space. Remember it is not anyone’s fault when there is resistance in the room – it just describes the interaction between you both. Try and assume that the patient is ambivalent - we just need to find the pro change statements.

In MI, resistance is viewed as useful information. It is a signal for the interviewer to shift their approach. In this way, resistance is not viewed as ‘the enemy’ but as a signpost. Viewing resistance in this way means we are less likely to be punitive towards ourselves and also to the patient. Being worn down by resistance can be draining and dispiriting, whereas being ‘informed’ by resistance can allow us to work more constructively with the patient.
Managing resistance – clinician HOTSPOTS

These patients don’t really want to change
Well this might be true, but it might not. By giving people the benefit of the doubt, we have something to work with. Always assume the patient is ambivalent – that part of them is considering change.

Why should I be the one apologising?
If a patient is angry or not managing their diabetes more actively, it can feel quite uncomfortable or even insincere for you to be the one to apologise. However, taking a one down position is a way to signal to a patient that arguing with you is a futile exercise. Offering an apology can quickly de-escalate a situation, and make room for a more productive conversation.

They just need to listen to reason
Patients definitely need to listen to the reasons to take care of their health. However, information which falls on deaf ears is no use to anyone. Therefore, the timing of when you provide the information is important.

They just need to be scared
Scare mongering is a seductive technique! If we can raise people’s fear levels it might just jolt them into action. The problem with this is twofold: people who can’t manage anxiety very well may slip further into avoidance and denial. Scaring them will reinforce this unhelpful way of coping with difficult things. Secondly, fear driven behaviour change may work in the short term, but not in the long term. When patients have a lapse (which is a normal part of the change process) they may anticipate more ‘fear talk’ from the clinician, meaning they are less likely to come back and be honest about their struggles.

I can’t be that calm all the time!
We, like our patients, are human and fallible – prone to losing our temper, feeling hurt or saying something insensitive. This is the norm. The point of these techniques is to increase the likelihood that more of your consultations will be constructive. This will never be 100%. Beware your own black and white thinking (see Chapter 5)!

They keep going back to the same old excuses – it’s like listening to a broken record
If patients keep returning to anti-change statements and it feels like you are covering the same ground at each consultation, you may need to take a more pro-active stance to addressing these barriers. Often patients repeat issues if they aren’t sure that they have been properly heard or understood. This is a sign that the patient needs more active listening. Going back to the OARS, slowing down the pace of change and expressing empathy may help you move beyond this impasse.
Chapter 3: Directing change
Skill 3: Directing change

Why is directing change important?

Although motivational interviewing is about listening to the patient in an empathic manner and respecting their autonomy, it is also about directing them towards change.

In order for anyone to change they will need to have considered the reasons for change and weighed them up against the losses in making that change. Being in two minds i.e. ambivalence is a normal part of the change process. The problem with ambivalence is that people can get stuck there. They may think of one argument for change and then another argument against change (“yeah but, no but”), and it’s as if they cancel one another out. If patients can’t resolve their ambivalence, they may stop thinking about the issue altogether.

Your OARS will help in keeping you afloat in the consultation and steer you and the patient in the direction you want to go. However, they may not get you to the final destination. Directing change is a strategy aimed towards resolving ambivalence. It involves raising awareness of the pros and cons of making a change, strengthening the pro-change talk and highlighting the incompatibility between the current situation and the patient’s values or goals.

It can be summarised as:

- Eliciting change talk (DARN Questions)
- Amplifying change talk
- Activating change talk (CAT Questions)
Directing change – WHAT to do

DARN Questions

You can direct change by getting the patient to tell you their reasons for change. The trap we often fall into is to tell patients why they should change. If we give patients the reasons to change they are left either to passively agree or to resist through a “yes, but …” answer. Neither option engages the patient constructively. By doing all the talking, we also deprive the patient of the opportunity to hear themselves articulate their reasons for change. According to Bem’s self perception theory, verbalising this out loud is an important mediator for change.

The drivers for change can be summarised as DARN- CAT*:

D – Desire: “want” “wish” “like”
  e.g. I would like to get better control of my diabetes
A – Ability: “can” “could” “able”
  e.g. My sister could help me with baby sitting
R – Reason: Stating a specific reason for change
  e.g. Better control would mean I feel less tired during the day
N – Need: “need to” “have to” “must” “important”
  e.g. I need to get better control of my diabetes

*CAT statements are considered in the next section.

These are all examples of preparatory talk – laying the mental foundations on which to support behaviour change. Questions that elicit DARN statements from a patient will be fuelling the “human engines for change” (Rollnick, Miller & Butler, 2008, p.40). Here are some examples of questions to elicit change talk around diabetes:

Why would you want to slow down your diabetes? (desire)
How would you do it, if you decided to? (ability)
What, for you, are the three best reasons to get better control? (reason)
How important is it for you to make these lifestyle changes? (need)
By asking these questions you are not only eliciting change talk, but also have an opportunity to check out the patient’s understanding of their health education (more on this later in Chapter 5). In addition, you are connecting with their values. For instance, we might think that reducing the risk of a heart attack is a major reason to give up smoking, but the patient might be more motivated by the thought of saving money or nicer smelling breath.

There are tools you can use which will extract similar information to the above questions. These are the readiness/confidence rulers (see Appendix) and the Decision matrix (see Appendix). These tools will help explore a patient’s ambivalence – eliciting the reasons for and against change. If a patient is able to come up with reasons for and against change, you may choose a double sided reflection (this is a type of complex reflection) to reflect their ambivalence. See example below:

C: What concerns do you have about taking your insulin?
P: Insulin makes you put on weight
C: So you feel heavier from taking insulin. How does being overweight affect you?
P: I don’t fit into my clothes, and I can’t move about easily and my joints they really hurt.
C: So there’s a sense of feeling bigger and less mobile when you’re overweight, but on top of that, you’re telling me that it leads to pain. That must be very distressing. That must make you want to avoid the weight.
P: Yes I do
C: I guess there is a dilemma – on the one hand you recognise a need to take your insulin, on the other you feel it will lead to weight gain. What benefits might insulin give you?

In the last two sentences the clinician delivers a double sided reflection and follows this with a question to elicit more change talk.

**Amplifying change talk**

When you hear change talk, don’t just sit there, say something! Remember that any signs of change talk coming out of the patient’s mouth are like young shoots struggling to grow. Without water or sunshine they will struggle to thrive and may be overtaken by weeds. Our task is to amplify the change talk, so that it starts to carry more weight than the anti-change talk. Amplification can happen in a number of ways:

1) **Provide affirmations** i.e. statements of support for pro change ideas e.g.
   - It’s great that you see the value of attending your appointments
   - You’re thinking really hard about how to fit exercise into your life

2) **Encourage elaboration** e.g.
   - How did you manage that?
   - How did it feel?
   - Why would that be important to you?
3) **Selective attention**

Your task here is to look out for the pro-change statements amidst the anti-change talk (see Chapter 2)

*e.g.*

*P:* I can’t really cook and so I tend to buy junk food – usually too knackered to think about anything else after work. I don’t think I’m a junk food addict – I can quite happily munch on carrots and stuff like that, but it’s a lot easier to grab a chocolate bar on the way home.

*C:* If healthy food is presented to you, you don’t mind eating it. When do you come across stuff like carrots?

The clinician is selectively reflecting back the positive angle i.e. the patient enjoys eating healthy food and then asks them to elaborate on how they might come across healthy food. In this example, there is some rolling with resistance.

You can also apply the above techniques to amplify anti-sustain talk i.e. a statement that reflects the downsides of not changing. Consider these examples:

*P:* This can’t really go on I know.
*C:* What is it that needs to change?

*P:* I’m just tired all the time, and have ended up in A&E a few times
*C:* What do you imagine will happen if this continues?

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*P:* I suppose my eyes are already showing some changes – I wasn’t really expecting that.
*C:* What does that suggest to you?
*P:* My diabetes is racing on ahead - more than I thought.

In both examples, the patient is starting to hint at the negative sides of having poorly controlled diabetes. Instead of letting this pass, the clinician is using elaboration to strengthen the anti-sustain talk i.e. encouraging the patient to talk further about the disadvantages of not changing their behaviour.

**CAT Questions**

The following are examples of *implementing* talk – statements that suggest the patient is ready to consider action.

- **C – Making a commitment:** “will” “intend to” “going to”
  
e.g. I will renew my insulin prescription

- **A – Activation:** “ready to” “willing to” (without specific commitment)
  
e.g. I am willing to test more frequently

- **T – Taking steps:** Reporting recent action towards change
  
e.g. I signed up to join a gym last week

Commitment language signals the strength of change talk. For example, a patient may say “yes it’s important for me to put diabetes first (need)” or “I would like to be slimmer (desire)” or “I could buy healthier ready meals (ability)” - none of these statements are providing an actual commitment towards change. The task here is to
support the patient in translating their ‘good’ intentions into action (i.e. a preparation phase in the cycle of change)

The following are examples of questions to move patients towards activation:

- Where could you go from here?
- Who could help you with this?
- What do you intend to do?
- What are you going to do next?
- What would you be willing to consider?
- What could be your first step?
- What feels like a reasonable change/goal for you to make?
- What feels manageable/realistic for you?

Check out with the patient what are the obstacles/barriers to change occurring:

- What’s preventing that happening now?
- What’s stopping that being the case?
- Who / where / how are the obstacles preventing you from getting the outcome you want?

Help the patient to start problem-solving around this (more on this in chapters 4 and 6)

- What might be a way around this?
- What needs to change for you to move forward with this?
- Who/what could help you with this?

Knowing when to ask questions that are action-oriented will be a matter of timing and clinical judgement (see How to section below).
Directing change - HOW to do it

In order for a patient to resolve their ambivalence, they need to see a good enough reason to change (eliciting and amplifying change talk) and to believe that they can change (activating change talk).

Eliciting and amplifying change talk
The key to directing change is to adopt the mindset that the patient has the answers. The patient needs to convince you of the reasons why they should change, rather than the other way around. This means they need to come up with robust evidence, like a lawyer presenting their case in court, as to why change is worthwhile. Remember that the more patients verbalise why they should change, they more likely they are to change their behaviour. Your task is to simply facilitate this process by asking the sorts of questions that will elicit change talk. However, don’t forget to intersperse your questions with reflections, or the patient could feel they are in a firing line of questions.

Managing ambivalence
As soon as a patient has given you a reason for change, they may come up with another reason to cancel it out. You may need to spend more time than you think in the land of ambivalence. This means reflecting on the pros and cons, expressing empathy in relation to the difficulties and strengthening the pro-change talk. At this point, the clinician should normalise this process – letting the patient know that ambivalence is normal and that attachment to ‘unhealthy’ behaviours is not unusual. Things may feel like they have stalled at this point. However, by gently but consistently reflecting the current dilemma (e.g. inconvenience ‘v’ poor health) back to the patient you will start to generate some internal momentum (see Appendix on Cognitive Dissonance). Think of this preparatory talk as the scaffolding without which the ‘house of change’ will collapse.

Activating change talk
Timing is a crucial factor in directing change. If you move to ‘action’ prematurely patients may feel threatened, misunderstood or inadequate, leading to disengagement. As always, your patient will be your best guide as to when they are ready to implement change. Listen out for when there is some momentum towards change i.e. when you hear the DARN-CAT statements coming from the patient’s mouth (not yours!). Only when you hear pro-change talk emerging, might you consider dipping your toe in the water of ‘action’. This means supporting patients to think about how they will translate their ‘good’ intentions into action.
Directing change – clinician HOTSPOTS

**Asking DARN-CAT questions – What if patients just tell me what I want to hear?**
This may be the case at first. However, as the patient learns to trust you, they will take the risk to say things that move away from ‘textbook’ answers. If trust is an issue, the focus should be on building up further rapport with the patient through active listening.

**Thinking about pros and cons of change – what if the patient doesn’t see any pros?**
If a patient cannot think of any good reasons for change, try some further exploratory questioning. Areas to consider are:
- *Why they have come to see you today?*
- *What they imagine life could be like if their diabetes was better controlled?*
- *What other people who are close to them feel about their diabetes?*

It is possible that patients are genuinely unaware of the positive benefits associated with improved diabetes control. This can be provided through further diabetes education or sharing the benefits other patients have reported. In Motivational Interviewing information can be provided to the patient, after seeking permission first (see chapter 5)

**Thinking about pros and cons of change  - what if the patient feels the cons outweigh the pros?**
Again, you will want to explore exactly how the patient has reached this conclusion to check for any inaccurate or missing health information. Ways to do this are considered in chapter 5. After considering all the pros and cons, a patient may decide it is not worth changing their behaviour and this is something they are within their rights to do. This can be a bitter pill for clinicians to swallow. However, it is worth considering whether the patient may be more amenable to change at a different time in their life (e.g. when their domestic situation is more stable) or whether the goal can be modified (e.g. aiming for a smaller drop in HbA1c)

**What if I ask about goal setting before they are ready?**
If a patient is not ready for goal setting – they will signal this in some way e.g. not completing the goal, not attending the appointment, going quiet etc. It is normal for clinicians to get it wrong sometimes and to prematurely push a patient towards action. The important thing is to pick up on the feedback you are getting from the patient so you have an opportunity to change tack and rescue the situation. The art of MI is being responsive to any feedback (negative or positive) the patient gives you and using this to guide your next move.
An Interlude:
Thinking about learning
Learning new skills

I’m not sure about this psychology stuff!
At this point and before you launch into the rest of the handbook, it may be worth thinking about the process of learning itself. You may find that your head is already spinning with all the new concepts, words and jargon you have just read and how you might fit this into your practice. Learning the D6 skills will involve some changes to your established practice. Therefore, we are not just talking about changing our patient’s behaviour but also changing our own!

We now know that the process of change comes with ambivalence and is not an ‘all or nothing’ concept. There will be some aspects you are keen to change about the way you communicate with patients, and others you are reluctant to let go off. It is important to acknowledge that being in two minds is a normal part of the process. In addition, take a moment to reflect where you might be on the Stages of Change model – are you in action or contemplation or somewhere else? Observe how your position on the change cycle may vary, going forwards as well as backwards as you proceed through training.

Will I ever ‘get’ it?
Even if one is motivated to acquire new skills, this motivation can soon dwindle as the reality of making mistakes, feeling incompetent and possibly hopeless kick in. Maslow outlines the stages involved in learning a new skill. See below:
It can be helpful to keep this model in mind to prepare yourself for the peaks and troughs that inevitably arise from learning a new skill. During the first stage you may be ‘blissfully’ unaware of what you don’t know (unconscious incompetence). During the process of learning you become conscious of what areas are lacking (conscious incompetence). When you start to consciously change how you respond to a patient, to try something different and see the results, this can be rewarding and uplifting (conscious competence). Over time and with consistent practice, your skills become more ingrained, your instinct improves and the responses come more easily. Eventually, you may lose sight of the skills that you have gained because they become so automatic. (unconscious competence).

**Kolb learning cycle**

How do we learn a new skill? The old fashioned way of ‘chalk and talk’ i.e. being taught information whilst we listen passively is not always the optimal way to learn. What is missing is the component of experience i.e. of having a go ourselves. This experience is unique to each individual and will highlight for them what went well, what needs tweaking and what’s to be avoided for next time. This process of feedback and reflection is very important for learning to occur. See diagram below:

Kolb Learning Cycle

![Kolb Learning Cycle Diagram](image-url)
One of the key phrases to highlight is ‘saying what you did without being judgemental’. All too often, especially in those who are highly conscientious, the feedback stage can be overly critical or berating of our ability “I should have …” “I’ll never get it” “I’m so stupid”. The process of learning simply requires that we view the data objectively and consider what we might do differently the next time, without the need for unhelpful judgements or labels. The experience of mistakes/set backs is part of the process it’s expected and fertile learning ground.
Chapter 4: Supporting Self-efficacy
Skill 4: Supporting Self-efficacy

Why is supporting self-efficacy important?

Self efficacy is defined as a person’s belief in his or her ability to carry out a specific act or behaviour. It comes from Albert Bandura’s social learning theory in the 1980’s. In an MI context, it is about increasing a patient’s confidence in their ability to make changes. One way to quickly undermine this confidence is to provide all the answers for the patient. This subtly communicates the message that the patient doesn’t have their own resources.

In behaviour change work, supporting self efficacy is about helping patients to come up with their own solutions to the problems they raise. It follows from the idea that although we are the experts on diabetes and general principles of behaviour change, the patient is an expert on themselves. They will know what will and won’t work for them, and what has worked for them in the past. They will also know how much change is feasible for them, given their current commitments and limitations - although we may gently nudge and shape those intentions.

A patient’s confidence in their ability to make changes is an important mediator for long term change. Firstly, they can set the rate and amount of change that feels comfortable for them, giving a greater likelihood that they will achieve it. Secondly, by asking questions that ask patients to think for themselves, it demonstrates that you have confidence in them and their resources to make change. The sense of achievement is likely to be greater if patients can come up with their own ideas. Thirdly, it helps patients become more self reliant in the long term, and less dependent on their healthcare provider. In addition, self efficacy is a transferable skill than patients can apply to or from other areas in their life.

Very often a patient’s sense of self efficacy can be low during their diabetes consultations. This is because they may expect the healthcare professional to tell them what to do, and also because they may have already experienced failed attempts to self regulate their diet, exercise levels and insulin needs. A low sense of self efficacy (and often self esteem) can be associated with feelings of hopelessness and is a maintaining factor in depression. Hence, by supporting self efficacy you are not only helping the patient manage their diabetes but may also help to alleviate mild to moderate symptoms of depression.
Supporting self efficacy - WHAT to do

Supporting self efficacy is more about the particular attitude we adopt with patients, rather than a specific technique (see How to do it). However, there are some useful questions which can help us move forward in our consultations.

Affirmations

Supporting self efficacy draws on making affirmations. These are the points where you can highlight what the patient has already achieved and make explicit the link between their actions and positive consequences.

\[ C: \text{Given you’re under the weather and didn’t fancy coming here, how did you manage that?} \]
\[ P: \text{Well I thought I might feel better if I go outside and it might make me feel like I’m doing something positive for my health} \]
\[ C: \text{How do you feel now you’re here?} \]
\[ P: \text{Yeah, I’m glad I made the effort actually} \]
\[ C: \text{Telling yourself to come here, even though you didn’t feel like it was a useful strategy.} \]

In the above example, for instance, the patient has demonstrated that low mood can be temporary, that positive self talk (ie. telling yourself motivating statements) can lead to action and that there may be benefits to doing something that you may not feel like doing initially. These are all areas that could be later applied to his/her diabetes control.

To support self efficacy through affirmations, you are asking the patient how they managed to achieve something and what the consequences were. This reinforces their role as an active, effective agent in the world i.e. things just don’t happen to me, I can make them happen. Use every opportunity to find out a patient’s personal toolkit of resources. You may have to look outside diabetes initially to find them e.g. being a mother, effective employee, good friend.
Solution Focussed Questions

Solution focussed questions are useful at later stages when the patient is starting to think about making changes. By asking these sorts of questions, you are hoping to activate a different sort of change talk: C A T

C  Commitment (Will, intend to, going to etc)
   *What do you intend to do?*

A  Activation (Ready to, willing to – without specific commitment)
   *What are you ready or willing to do?*

T  Taking steps (Reporting specific action/steps towards change)
   *What have you done already?*

Further types of questions to help patients draw on their own resources are listed below:

**Using past experience (useful in the ‘preparation’ stage of change)**

*What have you found has worked for you before?*  
*Was there ever a time when you were having more success with this? Tell me about that.*  
*What factors support you with this?*  
*What factors get in the way?*  
*Who has helped you in the past?*  
*When are you more likely to make progress with this?*

**Using other people**

*Who could support you with this? How might they best support you?*  
*What might you say to a friend in this situation / facing this obstacle?*  
*Imagine other patients with diabetes were listening to your dilemma – what might they say/do/suggest, if they were here?*  
*What might your best friend/wife/family member say is the way forward?*

**Using hypothetical scenarios**

*Imagine that you felt more in control of your diabetes, what would need to change to enable you to feel that way?*  
*What do you think is standing in the way of that?*  
*What do you think would work for you on this?*  
*If you were feeling less stuck, what do you imagine might be the next step forward?*

**Making suggestions**

Sometimes patients will find it impossible to think of a way forward and you may find yourself needing to make a suggestion. However, always check in with yourself:

- Have I really given the patient enough opportunity to come up with their own ideas?
- Is this the ‘righting reflex’ creeping in through the back door?
- Am I rushing the session on?
There are ways we can limit the potential damage of making suggestions:
   1) To view suggestions as a last resort
   2) To ask for permission before we offer them

We ask for permission because it honours the patient’s autonomy, it seeks their active involvement in the information exchange and it lowers resistance i.e. you are not foisting upon them anything they didn’t agree to.

Would you like to hear about some things that other patients have found helpful?
Would it be ok if I tell you one concern I have with this plan?
There are several things you can do to keep your blood sugar levels under control. Do you want to hear them, or are there other things that we should talk about first?
Supporting self efficacy - HOW to do it

In order to support self efficacy in our patients, we need think about the questions we ask, how we ask them and to suppress a very natural tendency to give advice. Certain questions (such as those above) encourage patients to reflect upon their own resources. They should be asked with an open, curious attitude which models a belief that patients do have their own resources (albeit unexpressed) and that it is our task to elicit these. As this approach will be unusual for most patients, it may require some gentle persistence on the part of the clinician to encourage this way of thinking. For instance, approaching the question from a few different angles.

P: I keep forgetting to take my tablets. I only see what I’ve missed the day after.
C: So forgetting your tablets is something you’ve identified as a problem. What would make it easier for you to remember them?
P: No idea
C: Have you ever managed to take them more regularly?
P: No
C: Say a good friend of yours was having the same dilemma – forgetting their tablets – what might you suggest to them?
P: Oh I might suggest they were losing their marbles like me (laughing)
C: You seem to manage very well in many aspects of your life. Would you make any practical suggestions to your friend?
P: Well maybe they could take them at a certain time of day, with a TV programme or something
C: And how might that work for you?
P: I’ve never really thought about that. I suppose I watch Coronation Street religiously ...

After each initial ‘no’ response, the clinician could have exited the conversation, or jumped in with a suggestion, but instead he/she gently perseveres so that the patient can come up with their own idea.

Beware the ‘righting reflex’ – when you sense you are slipping into ‘you should’ ‘you must’ ‘why don’t you …’ you are moving towards an authoritarian stance. It is easy then to fall into the question/answer trap which can fuel a ‘yes, but’ line of conversation or silence an already passive patient. A useful rule of thumb is the ‘three strike rule’. This means asking the question three different ways, before changing tack or offering a suggestion.

Supporting self efficacy should be highlighted throughout e.g. though affirmations. However, beware of timing in relation to moving towards action. The solution focussed questions outlined above are for patients who have started to resolve some of their ambivalence and are starting to think about change in more concrete terms.

P: I know about all these horrible complications. But my life just gets too hectic sometimes, you know. The injections just slip down the priority list.
C: So what might you say to a friend about this problem?
P: You’re screwed?

At this point, reflections and exploratory questions may be more useful to build up rapport and to reinforce the patient’s confidence/desire to change:

**Versus**

P: I know about all these horrible complications. But my life just gets too hectic sometimes, you know. The injections just slip down the priority list.  
C: You recognise how important the injections are for your long term health, but you’re struggling to fit them into a very busy life.  
P: Yeah exactly.  
C: Tell me more about why you feel the injections are important?  
Or  
C: Tell more about how you manage to juggle the different areas of your life?

In this example you are looking for change talk (*Desire / Reason / Need*) or skills/strengths (*Ability*) than can be applied to diabetes care. It is a more appropriate strategy (given where this patient is at) than asking them to think about steps toward action.
Supporting self efficacy – clinician HOTSPOTS

What if they don’t come up with anything?
It is quite possible that some patients will struggle to come up with their own ideas. The danger is to assume that all patients are like this or to give up at the first hurdle when asking about their ideas. In situations where the patient seems genuinely stuck, it is not off limits to make suggestions (see above).

But I’m the professional / expert in this relationship!
There is no doubt that you hold a vast amount of expertise about diabetes and how to manage it. However, our task here is behaviour change. If we are talking about the patient’s behaviour, then it will be the patient who knows themselves best. Ultimately they are in charge of their own life, and must make an informed choice about whether to prolong its quality.

Sometimes you have to take charge e.g. DKA / a severe hypo
Without a doubt, there are times when the clinician needs to take charge and it would be inappropriate to have a lengthy discussion or ask the patient to come up with their own solutions. This mindset is appropriate for emergency / rapid response situations. A question to ask ourselves is: are we leaping into the same ‘emergency mode’ for long-term lifestyle changes?

What if their suggestions are ‘wrong’, ill advised or inappropriate?
A patient may decide to cut out all sugar from their diet or to tackle their exercise levels, when really you are more concerned about their poor adherence to medication. In either case you may want to intervene. There are a couple of ways to handle this depending on the clinical situation:
1) To allow them to start with something they are motivated to attend to, and look out for transferable skills
2) To allow them to start with something they are motivated to attend to, and reflect with them what could be done differently the next time
3) To ask permission to comment on their plan of action

If I just give them this piece of information, it could make all the difference
It is tempting to believe that patients don’t have the knowledge to make sensible decisions, and if we just provided this knowledge, they would change. However, we know from numerous health promotion campaigns, that education isn’t enough. Furthermore, it is unlikely that diabetes patients with long term poor control will be ignorant of the facts. More likely, is that patients will block out information that they’re not ready to hear, which is why the decision for more information should come from them not you.

Patients want us to be the expert
When starting to work in this way, you may encounter responses such as “well if I knew that I wouldn’t be here, would I?” or “I thought you’re supposed to be the expert!”. Some patients may seek to maintain the status quo i.e. active clinician / passive patient and feel threatened by any attempts to reverse this. This is a form of
resistance which we can choose to roll with (see Chapter 2), all the while maintaining that you are interested in their perspective and believe they may have some useful ideas.

C: What might make it easier for you to avoid buying unhealthy foods?
P: Well if I knew that I wouldn’t be here, would I love?
C: I think you’re a resourceful woman, and I’m interested in any ideas you might have about this...

If I just tell them what to do, it’ll speed up the whole process
This is false economy with speed. Telling patients what to do may get create the illusion that you are moving forward, that the patient has heard you, is compliant and will follow through with action. The high rates of poor diabetes control however, suggest that the information we provide does not lead to long term behaviour change.

They’re too depressed
If a patient is appearing very stuck, hopeless or passive, it is even more tempting to provide them with advice/solutions. However, remember that by ‘rescuing’ the patient in this way, we might be inadvertently reinforcing their sense of being ‘useless’. In these situations, we may need to slow down the pace of change, be gently persistent in encouraging them to come up with their own ideas and have the ‘three strike rule’ at the forefront of our minds. Remember that the rate of change will invariably be slower with a depressed patient than a non depressed patient. If these strategies fail, we may need to discuss this patient with a mental health colleague.
Chapter 5: Addressing health beliefs
Skill 5: Addressing health beliefs

Why are health beliefs important?

This section draws on ideas from the Health Belief Model (Lewinsohn, 2001) and Cognitive Behavioural Theory (Beck, 1967). These models make the assumption that health behaviours do not arise out of thin air but are driven, in part, by a patient’s thoughts and beliefs about their diabetes. When a patient displays an unhelpful behaviour e.g. not taking Metformin, the assumption from the above models is that there will be an underlying thought/belief which justifies the behaviour e.g. I’m not really ill.

In an ideal world, health information would be translated into accurate and helpful health beliefs by the patient. In the real world however, information is often missed (e.g. that diabetes is a chronic condition), misunderstood (e.g. I must avoid all carbohydrate) or distorted (e.g. all hypos are severe) When this happens, problems in behaviour change are more likely to occur. Therefore, it is important to identify how a patient is thinking about their condition.

If we can understand the thought process or rationale underlying a behaviour, this can make the seemingly “irrational” actions of our patients more rationale. Furthermore, once we understand their viewpoint, it can help us feel more empathy for the patient, and therefore less frustrated by their ‘non compliance’. Feeling empathy rather than frustration is a good place to start in supporting our patients to make changes.

On a pragmatic level, much time can be wasted when we fail to take into account a patient’s individualised health beliefs and instead assume what is underlying their actions. Consider these two examples. They both start with the same scenario:

**Example 1**

C: It seems that your symptoms really vary from day to day. Pause
Are you sometimes not taking your tablets? (spoken gently)
P: Yes, I don’t always take them ... usually when I’m going out

C: Have you thought about keeping your pills in a little box?
P: No
C: Then you can take them with you when you go out. Pause
Is that something you could maybe try?
P: Nods head

**Example 2**

C: I wonder what makes it harder for you to remember when you are going out?
P: Shrugs shoulders
C: What would be the worst thing about taking them more regularly?
P: Well, you’ll get more side effects, so I don’t like to take too many.
In the first example, the clinician assumes that the issue is a memory problem. The second example reveals how a few well chosen questions have uncovered the patient’s real concern around side effects. Without this probing, the clinician may have used the time to discuss dosette boxes, when the consultation really needs to be about the patient’s concerns around side effects. Addressing health beliefs help make your consultations more effective by targeting the key cognitions that contribute to poor glycaemic control.
Addressing health beliefs – WHAT to do

Identifying health beliefs

The first step is to identify the health belief which is maintaining the problematic behaviour. It sounds simple but can be quite challenging. Firstly, the patient isn’t always consciously aware of what health beliefs they have and even if they are, may not feel comfortable disclosing them to you. In the latter case, building trust through rapport (see Active Listening section) will go some way to address this.

The upward arrow and downward arrow techniques can be used to ‘uncover’ less obvious health beliefs. These techniques involve asking a number of repeated questions along a specific line of enquiry. They build on the DARN-C questions introduced in chapter 3.

**Upward Arrow**

The upward arrow is a useful technique to identify information that the patient may be missing or misunderstanding in relation to why a specific behaviour change may be beneficial to them. The central line of enquiry is:

*Why is X beneficial for you?*

X being whatever behaviour the patient is avoiding.

You continue to ask this same question (maybe phrased in different ways) until a gap in knowledge is found.

*Why might that be important?*

*How would that be of benefit to you?*

*Why might the doctor / I suggest this?*

*Why is that a good thing for you?*

*How does that help you in your life?*

All the while, you are asking yourself what is this patient missing or not seeing or underestimating?

Consider this example

A Type 2 diabetic patient is not taking his insulin regularly, but does complain of fatigue and going to the toilet a lot. He’s not sure why he needs to inject when he feels “pretty ok” at the moment.

*C: Why would we recommend taking insulin?*

*P: To treat my diabetes*

*C: And how might the insulin do that?*

*P: It gets the sugar down doesn’t it?*

*C: Right. And why might you think it’s important to get the sugar down?*

*P: To treat the diabetes*
An upward arrow line of enquiry has revealed that this patient has made a link between insulin and treating diabetes. However, how insulin can help his day to day symptoms (which do concern him) is not evident. Therefore, he has no real rationale for taking his medication other than an abstract concept of it “treating his diabetes”. It may have been tempting to stop at “it gets the sugar down” and be satisfied that this patient understands why insulin is of benefit to him. Yet, if we assume that this patient is not taking his insulin because he is missing or misunderstanding some vital information we would not be satisfied with this answer, but continue the upward arrow line of enquiry:

> C: OK. So how might getting your sugar level down improve your energy?
> P: I don’t know actually. I mean sugar gives you energy doesn’t it?
> C: Would it be helpful for me to explain how we think the insulin works?
> P: Yeah it would

Clinician goes on to use key/lock metaphor for insulin action and putting fuel in the engine for energy - see Appendix

In ideal world, patients would have attended some form of diabetes education. However, this is not always the case, especially with older patients, and furthermore, what patients hear and what they interpret or retain at the time can be very different. The point of this technique is to find out what the patient has understood regardless of what they’ve been told. Consider the following example:

A patient consistently attends appointments, but always fails to bring a record of any testing

> C: So it seems it’s really difficult to test regularly. Could we talk some more about that?
> P: Yeah, I know I should.
> C: Right, so I’d be interested to know why you think it might be important to test your blood sugar levels.
> P: Well I need to write them down innit.
> C: Uhuh. So you feel you need to keep a record – why’s that?
> P: So you can see my readings, if I’m going high or low.
> C: Right – and why is it important to see that?
> P: To see if I’m managing my diabetes ok – keeping my sugars low. You guys wanna keep an eye on me.

So at this point, it’s not at all clear what’s in it for the patient i.e how it might benefit them.

> C: So you feel it’s about keeping an eye on you. Tell me more
> P: Well yeah if I write it down, you’ll be having a go at me, about getting good numbers

So the upward arrow has revealed that the patient actually believes that this is no more than a ‘big brother’ exercise. It’s clear now that the aim of the consultation is to link how recording data might actually be of benefit to the patient.
C: Mmm, well I’m not sure you’ve got it quite right there.
P: Oh?
C: We do need to see the numbers but really that’s for your benefit – can I explain how that might be?
P: OK.
Clinician goes on to use bespoke tailoring analogy (see Appendix)

**Downward Arrow**

This technique is similar to the above except its central line of enquiry is:

*Why is X a problem for you?*

X being whatever behaviour the patient is avoiding.

A downward arrow line of questioning was used in the first example given in this chapter.

C: It seems that your symptoms really vary from day to day. Pause
Are you sometimes not taking your tablets? (spoken gently)
P: Yes, I don’t always take them ... usually when I’m going out
C: I wonder what makes it harder for you to remember when you are going out?
P: Shrugs shoulders
C: What would be the worst thing about taking them more regularly?
P: Well, you’ll get more side effects, so I don’t like to take too many.

Other useful questions include:

*What might that be a problem?*
*What concerns you about that?*
*What worries you most about?*
*Why is that a bad thing for you?*
*How does that hinder you in your life?*

Your aim is to find out what is this patient overestimating, distorting or misinterpreting? The downward arrow can reveal unhelpful health related cognitions which may be keeping the patient stuck. Consider the following examples:

C: Just looking at your record book there seem to be quite a few hypos here
P: Yeah I guess so
C: How do you respond when you see those readings?
P: Oh well I usually know that my meal isn’t far off
C: What would be your concern about treating a hypo straight away?
P: Erm well I just don’t see the point in making a fuss really
C: It feels like an unnecessary hassle to treat a mild hypo. What sort of hassles would it cause you?
P: Well it’s not so much me, but my daughter is always around you see. I think she’d worry if she saw me taking a dextrose tablet – she’s knows something’s up.
In this case the consultation needs to be about addressing needs of the daughter e.g. further education, a joint session, ways for mum to explain mild hypos to her daughter.

C: How would you feel about starting some sort of exercise?
P: I’m not really up for that.
C: What concerns do you have about exercise?
P: Nothing. It’s just not my cup of tea.
C: Right. I’m really curious as the word exercise can mean such different things to different people – what would it mean to you?
P: Going down to the gym – circuits and weights. I’m not really a gym person – never felt comfortable in those places

In this case, the consultation needs to address other forms of exercise that the patient might be more willing to consider.

P: There’s no way I’m going to start on insulin
C: Insulin does not feel like an option for you. What would be the worst thing about taking insulin for you?
P: Well let’s just say I know people on insulin
C: Uuhh, and what have you gathered from that?
P: Well it’s a hassle isn’t it? You have to have injections with you when you go out. Injecting in restaurants – out and about. No way I’m gonna do that.
C: Ok Leroy… I think there might have been a misunderstanding between you and the doctor
P: Oh? What’s that then?
C: Well you’re right the doctor does want you to start on injectable insulin. However, he was just talking about an injection once a day, which you could give at home, before bed.
P: Just once a day?
C: Yes – would that be something you might consider?
P: Well once a day... in the privacy of my home ... I would have to think about that...

In the example above, the clinician has de-escalated the situation, found out the relevant health belief and given new information (with permission). Instead of building further resistance or making assumptions (e.g. he must be scared of needles), the clinician has skilfully moved the patient from pre-contemplation (“No way I’m gonna do that”) towards contemplation (“I would have to think about that …”). It might be tempting here to react to the resistance e.g. ‘well insulin is what’s going to control your diabetes’ or stop the enquiry prematurely by making assumptions e.g. he must be scared of needles. Actually the patient is concerned about being seen in public and this gives you something to work with constructively.

**Unhelpful thinking styles**
It is always important to check that patients have the correct information about their diabetes and a clear rationale for why behaviour change might improve their quality of life. However, some patients may have developed maladaptive or unhelpful thinking styles which can make the thought of change very distressing. This is
especially true in patients who are anxious or depressed. In this population, the same thinking style which contributes to their depression or anxiety might also prevent them from managing their diabetes more optimally.

Common thinking errors include:

- **Personalising**: Attributing all negative outcomes to a personal deficit, often neglecting the role of other factors
- **Catastrophising**: Only attending to the worst case scenario
- **All or nothing**: Responses are on either extreme of a continuum

The end of this chapter has a table with examples of common thinking ‘errors’ in diabetes. Consider the examples below which show how the same thinking style can be present in diabetes and non diabetes scenarios alike.

- If my boss shouts at me, I must have done something wrong (personalising)
- If I have a ‘bad’ blood glucose reading, it’s always my fault (personalising)

All hypos will result in me passing out (catastrophising)

- If my chest hurts, I must be having a heart attack (catastrophising)
- If I can’t go back to my old job, then I can never work again (all or nothing)
- If I can’t achieve consistent weight loss etc there’s no point trying (all or nothing)

When using the downward arrow technique it can be useful to be on the look out for these unhelpful thinking styles. With practice, they become easier to spot. There can be subtle clues in the language:

- the use of extreme words such as **always, never, no, all, always, everyone**
- what the patient says sounds like a rule e.g. **should, must, if … then**.
- statements have little room for flexibility, distort the facts or set the bar too high
- responses may be self demeaning or overly critical e.g. **I’m an idiot**

Consider the above examples again, with the clue words highlighted.

- If my boss shouts at me, I must have done something wrong (personalising)
- If I have a ‘bad’ blood glucose reading, it’s always my fault (personalising)

All hypos will result in me passing out (catastrophising)

- If my chest hurts, I must be having a heart attack (catastrophising)
- If I can’t go back to my old job, then I can never work again (all or nothing)
- If I can’t achieve consistent weight loss etc there’s no point trying (all or nothing)
Creating new health beliefs (cognitive restructuring)
Once you have a better understanding of a patient’s unhelpful health beliefs, you may need to intervene at a cognitive level i.e. changing their reasoning. This is called cognitive restructuring. For some patients, this may be a relatively straightforward task of providing the information they are missing in a meaningful way. However, if the patient has an unhelpful thinking style which is distorting the information they have been given, some additional psychological tools may also be helpful (see next section).

By using the arrow techniques you can pinpoint the key misunderstanding and tailor the information you provide to address this. In providing new health information, pictures can be a useful way to explain complex information and make it more memorable. Some common misunderstandings in diabetes knowledge are outlined below with associated visual aids. However, you may well have your own visual resources for this.

The role of insulin
The patient does not really understand the importance of taking insulin and its role in managing their diabetes symptoms and/or progression. They may know it’s to treat diabetes but hasn’t made a link with their day to day symptoms. Use of a key/lock metaphor* and fuel in the engine* to explain the action of insulin in relation to symptoms.

The purpose of blood glucose testing
The patient does not understand how collecting data may benefit them. They might think it’s for your purposes only or they might have a ‘one size fits all’ idea about insulin doses. Using a bespoke tailoring* analogy and emerging patterns* diagram to explain dose titration.

Insulin and weight gain
The patient is concerned that they will put on weight. There may be some unhelpful assumptions tied to this: 1) the insulin makes them hungry 2) the insulin makes them put on extra weight 3) the weight will be ongoing. Using a weight gain plateau* graph and a discussion related to weight being related to consumption rather than ‘extra’ calories. Discussion points may include only putting on what you consume; ways to manage weight gain, weight gain reaching a plateau.

* See Appendix
Working with unhelpful thinking styles
The next section provides some ‘psychoeducation’ rather than diabetes education. It introduces ways to help restructure the information which may have got distorted due to cognitive bias (i.e. an unhelpful thinking style). This section considers ways to help patients think in a more healthy way about their diabetes.

Personalising
If a patient tends to attribute all negative outcomes to themselves it is likely that they will start to feel bad about themselves, experience excessive distress in response to their diabetes management and possibly give up. For these patients there is too much responsibility on their shoulders. Too much attention is given to the factors they can control and not enough attention is given to the factors beyond their control. They feel fed up because their efforts aren’t translated into results and this gives them an overall sense of failure or not being ‘good enough’.

Using a Spider diagram* (for blood glucose control and for weight - see Appendix) is one way to re-focus a patient’s attention on the multiple factors that influence a health outcome.

Key points in using this visual aid:
Draw it out if possible on a blank piece of paper. Start with the blood glucose/weight circle in the middle. Ask the patient to come up with all the factors they know that influence this reading. Try and reach a blank with the patient. Ask for permission to complete the diagram if any are missing. Key questions: What are within your control and what are less easy to control or outside of your control? Make sure you check back to see if and how this new piece of information may have altered their perspective.

Example
C: Would it be ok to look at what affects your blood glucose in more detail?
P: Ok
C: If this is a blood glucose reading in the middle, what would you say are the factors that will influence this number?
P: Erm well what I eat obviously and when I’ve taken my insulin and how much.
C: Great – so I’ll write here ‘food’ and ‘insulin’. What else?
P: If I’ve done lots I suppose – been rushing around y’know.
C: OK, so ‘level of activity’ (writes this down). What else?
P: Erm ... dunno ... that’s it isn’t it?
C: Might there be anything else that can cause your blood sugars to go up or down?
P: I suppose if I’ve been ill
C: Yes so ‘illness’ is another one. What else?
P: Can’t think anymore
C: Can I add some more to this picture?
P: ok
C: We know that ‘stress’ can affect your blood glucose readings, also your ‘hormones’ – where you are in your menstrual cycle. And your ‘genes’ will also affect this – so some people will respond better to insulin than others. What are your thoughts about that?

P: Yeah, I sort of know that but I guess I don’t really think of those things on a day to day basis. There’s a lot going on really isn’t there?

C: Precisely. What factors are within your control?

P: These ones (points to food, insulin, exercise)

C: What factors are outside your control?

P: I guess these ones (points to the others)

C: So what might that say about why your readings are sometimes disappointing despite your best efforts?

P: Well there’s all this stuff going on all the time. Some of which you’re probably not even aware of ... like whether you’re coming down with a cold or not noticing you’re stressed.

C: Uuh. Your body is a complex processing machine – trying to juggle all these variables.

Catastrophising

If a patient tends to focus on the worst case scenario they may be feeling overly anxious in response to diabetes cues. Very often a high arousal state will mean that the most threatening outcomes become highly salient and the less severe outcomes are neglected. With this thinking style, patients may over-react to low or high blood sugars, driving them in the opposite direction to bring down their anxiety. In addition, some patients may find the anxiety so overwhelming that they cope through avoidance.

A useful analogy for these patients is to think about the function of fear. Fear can be protective e.g not jumping off a cliff or not putting your hand in a fire, but it can also paralyse us when it goes into overdrive e.g. preventing us from going to a job interview. In this case, fear is not helpful anymore. Another useful analogy is to relate their diabetes worry to a guitar string – it needs to be neither too taut nor too loose for optimal self care. Therefore, some worry is understandable and helpful to keep us safe – too much can be damaging and unproductive. The concept of healthy and unhealthy fear.

For these patients, it will be important to draw out the cumulative nature of risk. Useful discussion points are that there will be mild hypos as well as severe hypos, that

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5 See Appendix
complications are related to ongoing raised blood glucose levels as opposed to occasional readings and that not all complications are life threatening.

**All or nothing thinking**

Patients who have an ‘all or nothing’ thinking style may not attempt any sort of behaviour change, unless it can achieve 100% success. This may mean they avoid trying anything or give up at the first sign of a lapse. They generally hold high standards and find it hard to tolerate anything less. Paradoxically, patients who appear to not care about their diabetes may actually hold this thinking style. The thought of not doing a ‘perfect’ job causes intolerable disappointment and/or anxiety. Their response patterns can be quite rigid i.e. it has to be done this way and no compromise is possible. They may be somewhat of a perfectionist.

This attitude can be very unhelpful with diabetes. This is because managing diabetes is all about managing setbacks, unexpected results, outliers etc. Your response to when it goes wrong (rather than when it goes right) is a key indicator of successful management.

There are some psychological tools that may address the issue of ‘all or nothing’ thinking. The perspective taking graph (see appendix) demonstrates that the path to improvement can be a bumpy ride. This can apply to weight loss as well as glycaemic control. The idea is that the person is continually improving (the dotted line) but at any one time can be experiencing a lapse (solid line). It is at the point of a lapse, that we may lose sight of the bigger picture, lose hope and give up (the magnified area). The danger is not the lapse, but the patient’s reaction to the lapse.

The self defeating cycle diagram can be drawn out with the patient for a variety of different behaviours. It demonstrates how high standards can drive change, but are not so helpful in managing lapses. At the lowest point in the cycle, patients attempt to get back on track by setting themselves another high standard and thus get caught in a vicious cycle. The diagram illustrates the need to allow for some ‘slack’ in the system in order to bring about realistic and sustainable change.

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6 See Appendix
Addressing health beliefs – HOW to do it

Identifying health beliefs
Use gentle persistence when looking for health beliefs. You may need to phrase the questions differently, several times, to uncover a patient’s true understanding of their illness and how to manage it. You may find it helpful to think about different thoughts as layers of an onion and that the ‘arrow questions’ allow you to peel back the layers, until you reach a key belief. Try not to give up at the first hurdle, remember that patients may not be used to exploring or expressing their beliefs, and therefore some gentle direction may be needed. If the behaviour doesn’t make sense to you, keep going until it does.

*P:* The dietician says I need to eat less rice and potatoes
*C:* Why might that be a good idea?
*P:* It’ll help my diabetes

The patient knows they need to eat less carbohydrate, because it will help their diabetes, but they’re still not doing it, therefore their behaviour does not make sense to the clinician, so they keep going with their line of enquiry.

*C:* How might that be?
*P:* Well I suppose I might lose some weight but I’m happy as I am you know. My husband thinks I look fine.

So the patient has only linked dietary changes to weight loss and not the progression of diabetes. Furthermore, the patient does not even view weight as an important issue. Consequently, the non adherence to dietary advice now makes more sense.

The upward or downward arrow needs to be used sensitively, otherwise there is a risk of it sounding like an interrogation or knowledge test. Speak with a gentle tone of voice and express genuine curiosity about a patient’s viewpoint. It can be helpful to preface your questions with phrases such as:

“I’m really interested in your take on this ..”
“People interpret health information in all sorts of different ways ...”

Beware of a tendency to make assumptions (see more about this in the ‘Hotspots’ section below). Follow a line of enquiry with a patient, rather than jumping to predefined conclusions. The common thinking errors in diabetes table, is merely a guide to inform your questioning, not a substitute for asking the patient.
Creating new health beliefs
The most important part about providing new information is to check back with the patient. A useful sequence for medical consultations is:

Elicit – Provide – Elicit

This means asking about what the patient has understood (elicit), providing information to address the gaps or misunderstandings (provide) and then checking back with what the patient has taken in (elicit). Never assume a patient has heard what you have told them. Some useful questions:

What does that mean to you?
How does that sound to you?
What have you heard from this?
What might you take away from this?
What’s the take home message?
How would that fit with how you see things?
How do you see things now?
How does that change how you view things?

Notice how all of the above are open questions. This avoids the closed question trap:

C: Does that make sense?
P: Yes
End of consultation

Open questions are much more likely to identify potential areas of misunderstanding.

When using the visual aids in the appendices (e.g. blood glucose spider diagram), it is usually more constructive to draw them out live in the session rather than using a photocopied template. Firstly, this helps to keep the patient’s attention as they watch an unfolding picture emerge. Secondly, it gives the patient more time to process each part of the diagram as you draw it out. Thirdly, it allows you to use the patient’s own words. A ready made template is far less engaging for the patient.

When you present new information which challenges old beliefs this can be threatening for the patient e.g. I’ve spent all my life trying to control my diet and now you’re telling me I’m too much of a perfectionist. Rather than presenting new information as the ‘gospel truth’ or the only way to view a situation, present it as a hypothesis, an alternative. e.g.

A common worry is ...does this make sense to you?
Some people find that thinking about it in this way helps ....
It can be confusing when you’ve approached things in a certain way for most of your life, but I wonder if you might consider an alternative ....?
Addressing health beliefs – clinician HOTSPOTS

But I know why they’re not taking it, it’s obvious …I wouldn’t want to swallow huge Metformin pills / inject myself 4 times a day
Put ourselves in the place of the patient can be useful in evoking empathy, but it can also leave us quite stuck or alternatively barking up the wrong tree. The obvious reasons to you may not be the reasons that are most significant for the patient. Furthermore, patients may actually put up with quite a lot if they believe it’s in the interest of their well-being. Consequently, it may be a health belief which stands in the way of behaviour change, rather than the practical obstacles of tablet size and injection regimes.

African people are less concerned with their weight
You may have never thought the above, but the point being illustrated is that it is tempting to make assumptions about our patients. The human mind is often drawn to spot patterns and make stereotypes. This could be helpful in situations which require quick and decisive action and where we don’t have time to analyse each individual situation. However, in behaviour change work, these assumptions are problematic for many reasons: 1) they prevent us from engaging with the patient’s individual story and the possibility of exceptions 2) it shuts down creative thinking or problem solving 3) it can often leave us feeling quite helpless or stuck in a situation. In behaviour change work, it is often the exceptions rather than the rule which bear more fruit.

But they might have a hypo … that’s not a distortion!
There are some very real risks involved in having diabetes. However, some patients manage to live with these risks more successfully than others. One factor which will influence this will be how they evaluate that risk e.g. are they viewing all hypos as severe (catastrophising) or do they feel having a hypo means they are weak or have failed (personalising) or do they feel they need to avoid all forms of exercise (all or nothing)? These questions are important because they will influence the amount of distress one patient will feel compared to another patient, faced with the same risk factor.

It’s not the fact that the patient might have a hypo which is the distortion but the subtle nuances regarding severity, frequency, responsibility and action which may be distorted. The downward arrow technique allows you to move beyond medical facts to personal interpretation. This is where you have room to manoeuvre.
## Common unhelpful thinking styles in diabetes

<table>
<thead>
<tr>
<th>Thinking style</th>
<th>Definition</th>
<th>Maintaining thoughts</th>
<th>Unhelpful behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalising</td>
<td>Attributing all negative outcomes to a personal deficit, often neglecting the role of other factors</td>
<td>I don’t want you / me to see a bad result I am my results I’ve failed I’m sure other people can manage this better than I do</td>
<td>Not testing/recording blood glucose levels regularly</td>
</tr>
<tr>
<td>Catastrophising</td>
<td>Exclusively focussing on the worst case scenario</td>
<td>I will have a hypo I will get complications</td>
<td>Deliberately running sugars high / low</td>
</tr>
<tr>
<td>All or nothing / Black and white</td>
<td>Responses are on either end of a continuum</td>
<td>If I can’t do it perfectly I might as well give up There’s no point trying I’ll never get it right I’ll have to test every day of my life</td>
<td>Yo yo lifestyle changes e.g. diet, smoking, alcohol</td>
</tr>
<tr>
<td>Discounting the positive</td>
<td>Exclusively focussing on what has gone wrong/is negative</td>
<td>Nothing is working! Everything I try goes wrong I’d be better off having cancer</td>
<td>Passive / aggressive in consultation</td>
</tr>
<tr>
<td>Overgeneralisation</td>
<td>Applying one case example to a whole group</td>
<td>My friend ....and she’s ok / has complications I didn’t make it the last time I tried to diet/ give up smoking I’ll put on loads of weight</td>
<td>Any of above behaviours</td>
</tr>
<tr>
<td>Subjective reasoning</td>
<td>Drawing conclusions from feelings alone</td>
<td>I feel ok, so I don’t see the need for medication My body tells me when I’m low/high I know myself better than a machine I feel worse when my HbA1c is lower</td>
<td>Poor medication adherence Not testing/recording regularly</td>
</tr>
</tbody>
</table>
Chapter 6: Shaping Behaviour
Skill 6: Shaping behaviour

Why is shaping behaviour important?

So far we have been considering the skills that help our patients move towards a position of wanting to make a change in their life. Once a patient feels ready for action, it can be tempting to think that the work is done. However, the process of change will present the patient with a number of challenges: the risk of failing, the risk of getting it wrong, the risk that other people will react negatively and/or that they will judge themselves negatively. In one way, the work is just beginning. Patients may fall at the first hurdle without adequate preparation, encouragement and support to manage set backs. Consequently, the main focus of this chapter is how to shape patient behaviours towards a positive outcome.

The key principles are:
- Setting realistic goals
- Encouraging experimentation
- Managing set backs
Shaping behaviour – WHAT to do

Goal setting

Setting goals with a patient serves several functions. It helps break the task down into manageable steps, it gives the patient defined markers to aim for and it is an opportunity to ground any fantasies before they take flight (e.g. I can only be happy as a size 0 supermodel). In brief, you are setting the patient up to succeed.

A useful acronym when goal setting with a patient is to make SMART goals. There are several variations of this acronym, this is one of them:

S Specific
M Meaningful
A Attainable
R Rewarding
T Time based

(S)pecific
The following questions can be used to help the patient pinpoint exactly what they are aiming to achieve and setting tangible markers for achieving this.

What do you want to specifically achieve?
When will you feel able to try this?
How will you attempt this?
Which way will you try and make this change?
Who will be involved in you meeting this goal?

P: I’d really like to get in shape
C: That’s a very positive goal for your health
P: Yeah I know
C: We often find people are more likely to succeed if they have really prepared themselves to meet the challenge. May I ask you a few questions about how you might tackle this?
P: OK
C: When you say “get in shape” – what would you like to specifically achieve?
P: I’d like to drop a few dress sizes
C: So “a few” being ....?
P: Say 2
etc

(M)eaningful
The goal must be meaningful i.e have some value for the patient. Encourage the patient to be explicit about the value of their chosen course of action. This builds on the MI skill of eliciting change talk (Chapter 3). Once again, according to Bem’s theory of self perception, if a patient hears themselves articulating the reasons for change, they are more likely to act upon them.
Why have you chosen this particular goal?
If you succeed, how might your life be different?
How might your friends / family / healthcare professionals view the change?

(A)ttainable
The goal must be realistic. This is an opportunity to check that the patient is not setting themselves up to fail.

Does this feel like a realistic goal to you?
What would be a more realistic goal?
Do you feel you have the resources to achieve this task at the moment?
Might it be possible to break it down further?

(R)ewarding
Behavioural psychology teaches us that attaching a positive incentive to a behaviour is more likely to result in that behaviour occurring. Patients can become disheartened if they do not see rewarding results for their efforts. This can be particularly challenging in relation to long term changes, where the benefits are not immediately apparent e.g giving up smoking, or achieving sustainable weight loss.

How can you make this task rewarding for yourself?
How might you reward yourself?
How will you know if the change is working?
What are the positive signs to look out for?

(T)ime-based
The patient has set a realistic time frame to achieve their goal.

Over what time period can this goal be achieved?
Will you need more / less time to tackle this?

Playing devil’s advocate
This involves thinking through with the patient how this goal will be met and what might get in the way. The purpose of the conversation is to prepare a patient in advance so that they don’t have to come up with solutions at their most vulnerable time (i.e when things have gone wrong). Some questions might include:

What might get in the way of achieving your goal?
How might you address this barrier?
What will help you remember?
When you’re feeling down, what will help you stay motivated?
What people in your life could help you achieve your goal?
Using a graded hierarchy

If a task is particularly challenging for a patient e.g. injecting/testing when they don’t like needles, break the task down into small but cumulative steps.

Climbing the mountain worksheet (see appendix)

This is also a particularly useful technique for patients who are suffering with anxiety and/or depression. For these patients, relatively simple tasks may feel overwhelming, thereby lead to avoidance. Helping these patients to view the task in small manageable parts can encourage them to start moving forward.

Anxiety management

Anxiety can prevent patients from making healthy changes (e.g. testing their blood glucose levels, walking into a new gym, visiting the doctor) and it can also maintain unhealthy behaviours (e.g. smoking, drinking, not thinking about diabetes). Teaching patients basic relaxation skills can help patients approach anxiety provoking situations.

- Controlled Breathing (see appendix)
- Progressive Muscle Relaxation (see appendix)
- Distraction (see appendix – using senses)

Patients may find they are plagued by persistent worry e.g. about complications, having a hypo, having a heart attack. These concerns are usually grounded in reality for the diabetic patient. The task is not to eliminate the worry since it is appropriate that the patient has some level of concern about these issues, but rather to make it a less intense. The following tools can help with this:

- Healthy v unhealthy fear (see appendix)
- The worry tree (see appendix)
- Coping with uncertainty (see appendix)

Using rewards

Behaviour can be shaped through positive reinforcement i.e. praise and rewards. Very often patients don’t reward themselves because they think they don’t deserve it or their focus is on what they haven’t achieved as opposed to what they have (discounting the positive). This especially prominent in depressed patients. Rewards can provide a strong motivational pull to continue the good work. It can be useful to explain to patients that in psychological terms,
changing behaviour is more successful when it’s linked to an incentive (see SMART and (R)ewards section).

Of course coming to see an understanding and supportive clinician is also a reward in and of itself and should not be underestimated as a powerful mediator of change. Talking about rewards shows the patient that you think their behaviour is worth rewarding. You’re also acknowledging the work that has gone into the change. After all if it was easy, they would have made the change years ago.

**Diary and reward chart (see appendix)**

**Pleasant events list (see appendix)**

Focussing on increasing self-care activities can also improve mood. This means it can be a helpful intervention for patients who are depressed. However, there can sometimes be a lag between increased activity and improved mood, in the same way, there might be a lag between starting exercise and weight loss or taking medication and HbA1c i.e. there is a *delayed* reward. The following diagram can be useful in explaining the importance of persevering in the absence of immediate, positive feedback.

**Activity and mood graph (see appendix)**

### Problem solving

The path to change is often fraught with obstacles. When a patient hits a road block, it really tests their problem solving skills.

* e.g. *When my daughter is ill, I tend to forget my medication*
  *When I eat out, my diet goes out of the window*
  *The exercise prescription hasn’t come through from my GP yet*

Good problem solving skills will help patients move beyond the obstacles and will support their sense of self efficacy. The following steps can be useful:

1) Ask the patient to brain storm all the options to overcoming the problem, no matter how silly they sound
2) Weigh up the pros / cons of each option
3) Select upon one option (reinforcing that this is an experiment)
4) Encourage the patient to try it out and report back

C: *When there are other priorities in your life, it can be difficult to put diabetes at the top of the agenda*
P: *Exactly*
C: *This is a barrier to you taking your medication as consistently as you would like.*
  *Might we use the session today to think about some ways forward ...*

Again if patients are suffering with anxiety or depression overcoming obstacles can present a significant challenge. Impaired concentration and memory can affect a person’s problem solving abilities and low mood can diminish a person’s confidence in
being able to handle those problems. Consequently, helping patients develop problem solving skills is very relevant to this population.
Shaping behaviour – HOW to do it

How you talk about the process of change is very important. Encourage the patient to view any step they take as an “experiment” – a try it and see approach. In this way, there is no pressure to make a permanent commitment and the patient is more likely to try out a new behaviour.

Normalise the occurrence of set backs. This cannot be overestimated. Patients are vulnerable to relapse when their plans don’t run smoothly. If they are prepared in advance, they are more likely to use set backs constructively. You can normalise the presence of set backs, by talking with patients about set backs during goal setting i.e. how they might manage them when not if they occur.

Secondly, when set backs do occur, they need to be managed sensitively, as the patient may be judging themselves harshly or expect you to be disappointed in them. This may even lead to them no longer attending appointments. When a patient attends an appointment after experiencing a set back, this provides a natural opportunity for affirmation:

C:  well I’m really impressed you still came along to see me today even though you don’t feel you have ‘good’ news to tell me

Again, let the patient know that although they are feeling frustrated, what they are going through is part of the normal process of change. The use of the following visual aids can be helpful here:

Perspective taking (see appendix)
Spirals diagram (see appendix)

Useful phrases to help patients deal with set backs can also be helpful. This is called positive self talk e.g.

There is no such thing as failure, only feedback
The path to success is a bumpy road, not a straight line
I’m allowed to make mistakes - it’s how we learn
There is always an opportunity to have done things better, but there’s also an opportunity to do things worse.

The CBT skills of shaping behaviour need to be combined with the spirit of MI. Always check what resources the patient already has. The skills presented in this chapter are merely tools, and you may not need to use any of them, if a patient has already found a way to overcome obstacles e.g.

P: If I’m getting anxious about my injections, I just remember I want to be around for my children and that gets me through.

It would be inappropriate to introduce anxiety management techniques without enquiring how the patient is already coping and whether this is working for him/her. If you feel that the patient is genuinely lacking in resources or missing vital information,
then it is ok to provide this. However, once again, always ask for permission before giving advice or making suggestions and check back with the patient, using the ‘elicit – provide – elicit’ sequence.
Shaping behaviour - clinician HOTSPOTS

It seems tedious to go into this much detail
It is important to check exactly how a patient will go about changing their behaviour. By examining the minutiae of their plan, you and the patient can see where the pitfalls will be in advance. This means you can plan for these obstacles before they happen. Preparing patients for change is just as important as getting them to the point of wanting to change. The former is often neglected, risking that good intentions fizzle out.

I thought I was home and dry with this patient
Reaching the action stage, can feel like a significant landmark. You have worked hard to help the patient process their ambivalence and reach a point where the patient is starting to make changes. It can be utterly dispiriting when patients start to falter with their good intentions. Remember this disappointment will be felt by the patient as well as you, even if it is unexpressed. It is just as important to prepare yourself for setbacks, as well as the patient. Keep in the forefront of your mind that lapses are normal, as opposed to abnormal and a sign of defeat. By not over reacting to them, you demonstrate that backward steps are to be expected and are surmountable.

But I’m not a Psychologist!
Basic mood/anxiety management can be carried out by other health professionals. Indeed, it can make more sense sometimes for the patient to do this work with the person they have built a relationship with rather than being referred on to a stranger. A few basic suggestions/instructions in managing low mood or anxiety can make all the difference between a patient trying out a new behaviour and giving up. Remember that in cases of extreme distress, it is always possible to refer on to a specialist mental health professional.
Section B: Integrating the skills
Integrating the skills

So far we have talked about individual skills to promote behaviour change. This chapter considers how to weave the skills together. Remember that a patient’s stage of change may vary from week to week and even within a single session. Therefore, it is important to use these skills flexibly, adapting them to the shifting needs of the patient.

The overall attitude
It is common to focus on specific techniques when first learning a new methodology. Indeed, this is how this handbook has been structured. However, the overall spirit or attitude of the clinician is more important than getting the ‘right technique’. This is because there may be more than one (MI congruent) way to approach a specific situation. Consequently, the underlying ‘spirit’ of MI should dictate how we proceed rather than being bound by technique. Furthermore, the techniques themselves will flow more comfortably, if the clinician has adopted a particular mindset. This mindset assumes the following:

i) The patient has the answers
ii) The patient is in two minds i.e. part of them wants to change
iii) Resistance is useful information

Beginning

Starting the intervention
The patient will have been told about participating in a trial already. This provides the first opportunity to provide an affirmation i.e. acknowledging their contribution to research and willingness to try a different approach. You may consider the following example as a guide to introducing the research:

“Thank-you for enrolling in this study. We recognise that managing diabetes can be a difficult and challenging task.

The purpose of these sessions is to support you in getting your diabetes control as good as you feel you are able to.

Although we have some expertise about diabetes, we recognise that you are the expert about your life and how diabetes fits into it. Therefore, these sessions are not about me telling you what to do. In this way, these sessions might feel quite different to other appointments you’ve had with a practice nurse.”
Instead, we will use these conversations to think about some of the difficulties around diabetes self-management and what options might exist to help you move forward with your diabetes.

There will be 12 sessions in total, but the first six will be face to face for half an hour each.

Remember that all participants will have had to sacrifice something (time, resources, and energy) to participate in the study. Acknowledge this in the first phase of the intervention e.g.

“I am impressed that you have gone to the effort to come and join this project. You have had to get time off work/arrange child care/ prioritise your health over other activities etc, to get here today. This shows commitment to approach your diabetes in a new way and is a good place to start.”

Try to avoid the use of terms such as random, trial and motivational interviewing as they can be open to misinterpretation. Instead, consider talking about the study, the research, your diabetes meetings or project. Similarly, try to avoid overly simple statements such as good or bad control. Such phrases contain an implicit moral judgement about the patient i.e. that they are good or bad, thereby presenting the clinician as judgemental. Consider more neutral language e.g. tighter control, a lower HbA1c.

**Starting an individual session**

The aim of the beginning of a session is usually to establish rapport and then to set a focus. As we considered in Chapter 1, you will be using your OARS to express empathy and genuine interest in their perspective, thereby facilitating a therapeutic rapport. In the early phases of a session / intervention, the patients should be doing most of the talking. Your role will be to show that you’ve understood what they’ve said and are on their side.

Using a menu sheet (see appendix) can be a good place to start. It describes most of the factors that influence diabetes control. By asking patients to tell you which areas they may need to work on, you achieve several aims:

i) To identify whether the patients’ understanding of what needs to be tackled is the same as yours.

ii) You demonstrate to the patient that you are interested in their perspective and don’t have a pre-determined agenda

iii) It provides a natural opportunity for patient’s to expand upon their reasons/barriers for change.

If the patient chooses more than one area, ask them how they would prioritise these areas. If the patient has chosen an area which seems less important for their diabetes management (e.g. exercise rather than taking their insulin). You have a couple of options:
1) Ask permission to explain why you would consider insulin a greater priority. Check their understanding of your rationale using the ‘Elicit-Provide-Elicit’ strategy.

2) Go with the patient’s agenda. You can use success in their chosen area as an opportunity to apply transferable skills.

Which option you choose will depend on your clinical judgment. Look out for how engaged/motivated a patient appears by listening out for resistance. With a less engaged patient you may choose to go with their agenda. Where you feel there is a stronger rapport with a patient i.e. they are more engaged, you may decide to offer an alternative agenda.

Consider this first phase as fact finding. By the end you want a really good understanding of the drivers and barriers to change for this patient. That is your only task. Along the way, you might discover some inaccurate or unhelpful beliefs, and where some education might be needed. Remember you don’t need to tackle this straight away. For example, you may choose to make a mental note of health beliefs that need to be changed and come back to them later, especially if the patient seems particularly bored, irritated or angry. On the other hand, if they appear very anxious/despairing, you may find it a useful time to provide some correct health information. However, always ask permission first.

Your main goal at this stage is that the patient will return to the next session. Patients that have struggled with their health may be low in motivation and the use of text/phone reminders can be helpful in keeping them engaged with the study. At the beginning of the next session, you will want to gauge the ‘motivational temperature’ of the session. The following questions can provide a useful starting point:

- What do you recall from last week?
- What were your thoughts about what we spoke about last time?
- How relevant does this area feel for you today?

Midway

The middle phase of a session/intervention is usually where you start to look for and amplify pro change talk. You will be using your ‘eliciting change talk’ and ‘supporting self efficacy’ skills. You hope to evoke some forward momentum. The pace and goal of this momentum must be in tune with the patient’s capacity of change. Going too fast may risk losing a patient or producing temporary but not sustainable change. In addition, setting yourself unrealistic goals for a patient, may affect your own levels of frustration and job satisfaction.

A key indicator for pace is resistance. Consider resistance as your friend – when a patient starts to resist e.g. not saying much, becoming defensive or offering lots of anti change talk, it is a sign to take your foot off the accelerator for change. Go back to reflective listening and see if there may be room to manoeuvre in a different direction (more on this in next chapter ‘Trouble Shooting’).
A key indicator for what is a realistic goal will be the patient’s position on the change cycle. If a patient is in ‘pre-contemplation’, a goal for the clinician might be to move them towards ‘contemplation’. Similarly, if a patient is in ‘contemplation’ the next realistic step may be ‘preparation’. Note that in neither of these cases is the goal ‘action’. Remember that behaviour change isn’t just about concrete actions. Doing behaviour change work is also about promoting change in thoughts and feelings which scaffold or provide the foundations for action. The table below summarises how different stages of change may direct you towards different tasks in the session.

<table>
<thead>
<tr>
<th>Stage of change</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-contemplation</td>
<td>When patients are in this phase, they may not realise they have a problem or feel very defensive about approaching it. Key tasks are to express empathy i.e. reflecting back the difficulties and to gently develop discrepancy i.e. eliciting from them reasons for change. Another task is to avoid argumentation! Key skills: OARS; DARN; double sided reflections, overshooting reflections The main goal is to encourage the patient to start to take an interest in their health.</td>
</tr>
<tr>
<td>Contemplation</td>
<td>The patient realises there is a problem, but is not ready to take action. Key tasks are to elicit pros/cons for change and to amplify the pro-change talk. Key skills: OARS; DARN; amplification questions The main goal is that the patient starts to view change as the more appealing option.</td>
</tr>
<tr>
<td>Preparation</td>
<td>The patient is thinking about change, but has not taken any steps yet. Key tasks are to support self efficacy and express empathy regarding any concerns or anxieties. Key skills: OARS; CAT; solution focussed questions; resisting the righting reflex The main goal is that the patient starts to believe they can make this change i.e it seems achievable</td>
</tr>
</tbody>
</table>
| Action | The patient is taking practical steps to make health related changes. Without appropriate acknowledgement patients can fall back a stage.  
Key tasks are to express empathy for the effort, sacrifice, resourcefulness needed to make this change. Also to elicit change talk about why these actions may be beneficial.  
Key skills: OARS; amplification questions; affirmations  
The main goal is to stop and note the achievement and not rush on to the next task. |
| --- | --- |
| Maintenance | The patient is making consistent changes. The patient may start to become weary of the effort required to maintain the change or worry how long it will last.  
Key tasks are to elicit change talk about why these actions are useful/beneficial. To problem solve with the patient about what could get in the way and to support their self efficacy in thinking about solutions.  
Key skills: OARS; playing devil’s advocate; using rewards; problem solving; set back management  
The main goal is to prepare the patient for setbacks and potential strategies to start moving forward again. |
| Lapse | The patient has gone back to old habits, after starting to make changes.  
Key tasks are to express empathy about any disappointment, regret they may be feeling. Also to normalise the presence of setbacks and to support self efficacy in moving forward again. To acknowledge where they have got to.  
Key skills: OARS; affirmations; solutions focussed questions, setback management  
The main goal is for the patient to put their lapse into context (i.e. a temporary setback) and to develop the momentum to move forward again. |

The above table is merely a guide to working with patients at different stages of change. Throughout all the phases, you want to consider if there are any unhelpful health beliefs that are preventing change, especially in the ‘pre-contemplation/contemplation’ phase. Use your resistance barometer (i.e. your sense of how engaged the patient is) to deliver health education when the patient is likely to be most receptive to it. In the preparation/action phase, you can make more use of the ‘shaping behaviour’ skills e.g. anxiety management, problem solving, using rewards.
Ending

Ending a session

Ending sessions on time is an important skill. It may feel difficult to keep to time when you are working in this psychologically informed way. However, good time management is important for the patient, the next patient (in the waiting room) and for your own preservation. Some practical tips:

- Aim to finish 5 minutes early. This 5 minutes is usually always taken up e.g. sorting out the next appointment time, walking them to the door, saying goodbye,
- 10 minutes before the end, be mindful of drawing the session to a close,
  - Avoid opening up complex topics during this time,
  - Use summaries to signal the session is winding down,
- Ending questions:
  - What would it be helpful to take away from today?
  - What might stay with you from today’s session?
  - How does that fit for you? (after you’ve given a summary)

The above ending questions are ways to gently explore where you have got to by the end of the session. They should not be used as inadvertent ‘goal setting’ questions. Remember that pushing patients towards goal setting before they are ready (ie. in ‘Action’ on the stages of change) will risk increasing resistance.

It can be difficult to end a session when you don’t feel you have got to where you had wanted. In these cases, it is tempting to extend the session or to push the patients just that little bit further towards ‘action’. Instead, try and view your work as sewing seeds – some green shoots will appear in the session but others will take time to mature during the weeks/months ahead. Remember the spirit of dancing rather than wrestling with the patient, and staying close to where they are on the cycle of change. This will require some patience.

After your session, it is advisable to make some notes to aid your memory. The following headings can be helpful:

- **Review** – life events e.g. doctors appts, child starting school, dog died
- **Progress** – what has gone well re. diabetes care
- **Difficulties** – what areas have gone less well re. diabetes care
- **Support** – what support you offered the patient affirmations; pros/cons of change etc.
- **Plan** – what you and/or patient plan to do before you next meet
**Ending the intervention**

As the intervention comes to an end or the sessions become less frequent, consider preparing the patient for this transition. In practical terms:

- Make the boundaries of your contact explicit. When it will start, end, how long each session is and who they can contact between sessions.
- Count down your sessions - “today is the second session out of four” etc.
- Consider what support a patient has outside the surgery to continue supporting them with behaviour change (e.g. a supportive friend, buddy, counsellor, befriender, gym, walking group, diabetes patient group etc.)
- In the last few sessions, the skill of ‘Supporting Self Efficacy’ will be very important. Encourage patients to come up with their own solutions and offer recognition and affirmations for any strengths/resources they use.
- If the patient is in ‘Action’ you may want to consider using a ‘Change Plan’ (see Appendix). This is a way to record their achievements and strategies for staying on track.

Be prepared for setbacks towards the end. Some patients will be more demonstrative about their struggles towards the end of an intervention. This does not mean that your work has been in vain, but rather that the patient is reluctant to let you go! Remember the green shoots that have occurred over the course of the intervention and the skills/resources that the patient has demonstrated.

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**In a nutshell: The D-6 flow**

Begin very gently; be open to what the patient brings and let go of a predetermined agenda. Remember that patient defensiveness may be high at the start of a session/intervention and you need to reduce this first.

Introduce the behaviour change menu (see appendix) to start the process of exploration: what are THEIR thoughts/beliefs/attitudes to their diabetes? You are looking for the drivers and enemies to change – finding where the momentum for change will come from.

Be on the lookout for unhelpful health beliefs and make sure patients have the correct information by eliciting, providing and then eliciting again. Always ask for the patient’s permission.

When resistance arises - roll with it; refocus your attention on the green shoots – elaborating and nurturing them. Expect lapses and you won’t be dismayed by them.

Keep to time as best you can.
Section C:
Trouble Shooting
Trouble shooting

Using the D6 skills may not work for every patient. Remember that these skills increase the likelihood that more of your consultations will be successful, but it’s unrealistic to think this will provide a 100% success rate. This chapter deals with what to do when things don’t seem to be working. The following are some common dilemmas you may come across:

- The patient is attending, but nothing is changing
- The patient says the ‘right things’, but nothing is changing
- The patient is becoming more defensive / less engaged

Remember that the above dilemmas represent some form of resistance. When you meet resistance in diabetes (albeit passive) you may feel anxious that you are not doing your job properly. Your patient is not playing the doctor-patient game by the agreed rules. Your offer to provide help and advice is being rejected. You may be tempted to bully the patient and shake them into sense. Or you may feel rejected and want to shrug your shoulders, walk away or label them.
Clinician Factors

Before throwing in the towel with a patient take some time to reflect upon your own practice. Below are some of the common traps that can fuel resistance (including passive resistance). We are all liable to fall into these traps from time to time and therefore it is worth pausing to reflect upon how these dilemmas might arise and how we could approach things differently.

A mismatch on the change cycle

This is the most common reason for resistance: the clinician is already in action but the patient is in pre-contemplation/contemplation. Prematurely pushing a patient towards action can result in potential disengagement e.g. a patient may agree to do something, but repeatedly turn up having failed to do the task.

Remember that motivational interviewing is about helping a patient resolve their ambivalence. This might mean that the ‘work’ is about strengthening a patient’s reasons for change through eliciting change talk. In order to do this, we need to move away from the notion that ‘action’ is the only valuable outcome. The preparation steps are still ‘work’ and patients can be congratulated for doing the ‘thinking’ around behaviour change e.g. preparing, researching, weighing up pros and cons, discussing with partner.

The best way to fine tune our practice, is to listen to our patients. Use your recorded transcripts to do this. Our patients are our best teachers and will provide a wealth of feedback, if we are receptive to it (e.g. how did this patient respond after what I said?)

Key reflections:
Am I at the same stage of change as the patient?
Am I prematurely pushing them into action?

Not feeling understood

Another common reason patients disengage is because they don’t feel understood. Patients in this situation worry that their difficulties aren’t being heard and that they will be judged or pushed into a situation they don’t feel ready for. In this position a patient may become more defensive or disengage from their healthcare service altogether. Consequently, building rapport through active listening is another vital, and sometimes overlooked, piece of work.

We may feel a huge amount of empathy for our patients, and it is easy to assume that by listening and nodding our patients will realise that we understand. However, the skill of ‘active listening’ involves making your response explicit through verbal statements. Simple reflections and affirmations can be very effective in communicating empathy.

Key reflections:
Am I expressing empathy?
How does the patient know that I have genuinely understood their position?

Not getting a word in

It is easy to slip into advice giving mode or to ask lots of closed questions to identify a ‘solution’. Consider how much space the patient has to think about and articulate their own dilemmas/solutions. Remember Bem’s self perception theory and the importance of patients’ hearing themselves talk. Also remember the subtle messages communicated by ‘stealing’ this opportunity from the patient (that you are the expert, you have the answers and that they have fewer resources than you). This encourages passivity and dependence. Persevere in helping patients become more creative and self reliant – remember the 3 strike rule. It can feel like a quick and easy solution to provide the answers, but this does the patient no favours in the long run.

Key reflections:
Am I resisting the righting reflex?
How much time do I give the patient to come up with their own ideas/solutions?

Discounting the positive

If it feels like nothing is changing, is it really true that nothing is changing? It may be true that the patient’s HbA1c is not coming down yet, but exclusively focussing on this is a surefire way to fuel burnout for the patient and the clinician. Remember that the role of MI is to engender hope. This means looking out for the small successes e.g. coming to appointments, verbalising thoughts about change, trying new things out, making a phone call, discussing self care with partner. With hope in the consulting room there is momentum to move forward.

Conversely, when patients are doing well, it can be very tempting to focus on the next goal, on how things can be improved. But pause here. Allow yourself to expand on the positive narrative: how did they manage the change; how did they feel afterwards; other people’s reactions – even if this takes the entire consultation. Sowing these seeds of optimism will fuel the behaviour change process when they leave the consultation room. By not fully acknowledging what they have already achieved, patients are then left with the message that they still are not quite ‘good enough’.

Key reflections:
Am I giving more weight to what still needs to be improved upon ‘vs’ what they have already achieved?
How does the patient feel when they leave the consultation – hopeful or hopeless?
Sometimes we can become overly ‘patient centred’. We follow, empathise and affirm at every consultation. The patient enjoys coming, talks a lot, feels understood - but not a lot is changing. This is particularly true when patients present us with so many barriers for change that we end up feeling as overwhelmed as they do – we are then buying into the patient’s hopelessness. Remember that motivational interviewing is both person centred AND directive. Try to include some ‘eliciting change talk’ questions in every consultation. By just following the patient we don’t give them an opportunity to consider alternative behaviours and fuel the engines for change.

**Key reflections:**

*Am I getting stuck in the patient’s story?*

*Am I neglecting to ask change talk questions?*

See Appendix (What MI is not and MI adherent/non adherent behaviours) for more advice about staying on the right track.
**Patient factors**

Re-visiting the dilemmas outlined above:

- The patient is attending, but nothing is changing
- The patient says the ‘right things’, but nothing is changing
- The patient is becoming more defensive / less engaged

The success of the D6 skills will depend, to some extent, on the competency of the clinician. However, we should not overlook the type of patient we are presented with. There are some situations in which it becomes extremely challenging to use these skills. In these situations we may need to get extra resources (e.g. refer to another service) or to adjust our expectations as to what is a realistic goal. Areas to consider:

**Is the patient excessively distressed?**

Distress can present itself in many different forms: shaking, shouting, crying or remaining silent. If the emotional temperature is high in the consultation it makes this type of work very challenging. In this situation, expressing empathy (through active listening) can be a helpful response. In addition, avoid effortful questions and keep your statements simple. Very often this can allow the strong emotion to subside.

You may also need to consider the frequency and severity of the distress – is this a brief intense moment in the room or an ongoing problem for the patient. If the latter, you may need to consider a mental health assessment. See Appendix for common mental health problems.

**Does the patient struggle with relationships?**

Patients may face interpersonal challenges – that is, they may find it hard to trust people e.g. healthcare professionals. They may expect to be put down, hurt, rejected or abandoned because earlier experiences have taught them that people can’t be trusted. They might reject or be hostile towards you, pushing you away. Alternatively they may become overly dependent or make demands on you. It is very hard to do this work, unless a patient has at least the potential of developing some kind of therapeutic alliance. Again you will need to seek further support from supervision for these cases. Expressing empathy while maintaining your boundaries (e.g. level of contact) will be very important.

**Does the patient have resource limitations?**

Consider whether your patient is lacking vital resources (e.g. transport, housing, child care, money, intellectual capacity or health literacy). This may affect their ability to attend appointments, to store their medication, to prioritise their diabetes or to understand their health needs. In this case, consider support from other agencies/sources e.g. social services, advocate, carer involvement, use of more visual aids. If their needs are more complex, the package of care should reflect this.

In summary, remember to consider the type of patient you are dealing with and the challenges they face. Use this information to evaluate the appropriateness of behaviour
change work at this time. In any situation, you can always rely on your basic
communication skills (O-A-R-S) to minimise resistance and find out what the patient
wants/needs. However, the goal of improved diabetes control needs to be considered
carefully in terms of timing, input from other services and what is a realistic level of
change, given the limitations of each patient. Seek supervision for these more complex
cases and where necessary refer to other services e.g. mental health; social services;
learning disability services. (see Appendix).