

Diabetes (Type 1) PSP completed 2011	Record type 1	Why is there uncertainty?	Rank in PSP	What is person's age?	Which types of treatments? 1	Which types of treatments? 2	Which types of treatments? 3	Which types of treatments? 4	Which types of treatments? 5	Which types of treatments? 6	Which types of treatments? 7	Which types of treatments? 8	Which types of treatments? 9	Which types of treatments? 10	Original uncertainty	References to reliable up-to-date systematic reviews	Systematic reviews in preparation	Systematic reviews that need updating or extending	Ongoing controlled trials	Which outcomes?	
Can telemedicine be used to raise the use of blood glucose monitoring in adolescent and young people with diabetes in primary care?	Uncertainties identified from patient questions	No relevant systematic reviews identified		Child / Adolescent	Devices	Diagnostic									Can telemedicine be used to raise the use of blood glucose monitoring in adolescent and young people, in particular?					Blood glucose monitoring in adolescent and young people	
Are insulin pens accurate at delivering insulin, even in small doses?	Uncertainties identified from patient questions	No relevant systematic reviews identified		Any age	Devices	Devices									What is the accuracy of pens when delivering small doses?					Accuracy of insulin dose received; adverse effects; acceptability; cost; and use	
Continuous subcutaneous insulin infusion compared with intensive insulin injections	Uncertainties identified from patient questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Drug	Devices									Insulin pumps - who most needs one? (Is their wide use preventing those most in need of getting one)? Who are the best patients to have pumps? (They require motivation/understanding from patients, to get the best benefit from the pump)	Pickup J, Mattick M, Kelly S. Glycaemic control with continuous subcutaneous insulin infusion compared with intensive insulin injections in patients with type 1 diabetes: meta-analysis of randomised controlled trials. <i>BMJ</i> . 2002; 324: 705-708. Fabozzi MM, Kukva YC, Murad MH, Elamin MB, Tabor CC, Morton VM. Clinical review: Hypoglycaemia with intensive insulin therapy: a systematic review and meta-analysis of randomized trials of continuous subcutaneous insulin infusion versus multiple daily injections. <i>J Clin Endocrinol Metab</i> . 2009 Mar; 94(3):729-40. Epub 2008 Dec 16. Coqart J, Green C, Sidhu M, K, Harwell D, Waugh N. Clinical and cost-effectiveness of continuous subcutaneous insulin infusion for diabetes. <i>Health Technology Assessment</i> . 2004; 8(43): 1-186. Parfłowska E, Black M, Douchkov P, Szopkowska A, Szopkowska H. Continuous subcutaneous insulin infusion vs. multiple daily injections in children with type 1 diabetes: a systematic review and meta-analysis of randomized control trials. <i>Pediatric Diabetes</i> . 2006; 10(1): 52-58. Jallat K, Horvath K, Bergfeld A, Grazer T, W, Neeser K, Pleber F, R, and Sienkiewicz A. Continuous subcutaneous insulin infusion versus multiple daily insulin injections in patients with diabetes mellitus: Systematic review and meta-analysis. <i>Diabetologia</i> 51(6): 941-951, 2008. Mukhopadhyay, A, Farnell, T, Fraser, RB, and Ota, B. Continuous subcutaneous insulin infusion vs intensive insulin injections in patients with diabetes mellitus: a systematic review and meta-analysis. <i>Diabetologia</i> 51(6): 941-951, 2008.	Missio M, O'Connor D, Egberts KJ, Shaw J. Continuous subcutaneous insulin infusion (CSII) versus multiple insulin injections for type 1 diabetes mellitus (Protocol). <i>Cochrane Database of Systematic Reviews</i> 2006, Issue 1. Art. No.: CD005103. DOI: 10.1002/14651858.CD005103.			NT00942318	quality of life, HbA1c, hypoglycaemia, adverse effects, increased risk of complications, complications for pregnant women, foetal outcomes, cost-effectiveness
Do different insulin delivery systems allow me to make different lifestyle choices about diet and exercise?	Uncertainties identified from patient questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Drug	Drug									Insulin pumps - who most needs one? (Is their wide use preventing those most in need of getting one)? Who are the best patients to have pumps? (They require motivation/understanding from patients, to get the best benefit from the pump)	Pickup J, Mattick M, Kelly S. Glycaemic control with continuous subcutaneous insulin infusion compared with intensive insulin injections in patients with type 1 diabetes: meta-analysis of randomised controlled trials. <i>BMJ</i> . 2002; 324: 705-708. Fabozzi MM, Kukva YC, Murad MH, Elamin MB, Tabor CC, Morton VM. Clinical review: Hypoglycaemia with intensive insulin therapy: a systematic review and meta-analysis of randomized trials of continuous subcutaneous insulin infusion versus multiple daily injections. <i>J Clin Endocrinol Metab</i> . 2009 Mar; 94(3):729-40. Epub 2008 Dec 16. Coqart J, Green C, Sidhu M, K, Harwell D, Waugh N. Clinical and cost-effectiveness of continuous subcutaneous insulin infusion for diabetes. <i>Health Technology Assessment</i> . 2004; 8(43): 1-186. Parfłowska E, Black M, Douchkov P, Szopkowska A, Szopkowska H. Continuous subcutaneous insulin infusion vs. multiple daily injections in children with type 1 diabetes: a systematic review and meta-analysis of randomized control trials. <i>Pediatric Diabetes</i> . 2006; 10(1): 52-58. Jallat K, Horvath K, Bergfeld A, Grazer T, W, Neeser K, Pleber F, R, and Sienkiewicz A. Continuous subcutaneous insulin infusion versus multiple daily insulin injections in patients with diabetes mellitus: Systematic review and meta-analysis. <i>Diabetologia</i> 51(6): 941-951, 2008. Mukhopadhyay, A, Farnell, T, Fraser, RB, and Ota, B. Continuous subcutaneous insulin infusion vs intensive insulin injections in patients with diabetes mellitus: a systematic review and meta-analysis. <i>Diabetologia</i> 51(6): 941-951, 2008.	Missio M, O'Connor D, Egberts KJ, Shaw J. Continuous subcutaneous insulin infusion (CSII) versus multiple insulin injections for type 1 diabetes mellitus (Protocol). <i>Cochrane Database of Systematic Reviews</i> 2006, Issue 1. Art. No.: CD005103. DOI: 10.1002/14651858.CD005103.			quality of life, HbA1c, hypoglycaemia, adverse effects, increased risk of complications, complications for pregnant women, foetal outcomes, cost-effectiveness	
Do interventions such as educating school staff help children with diabetes live a less restricted life during school time?	Uncertainties identified from patient questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Education and training	Education and training									How do we counter the view that children are considered a health and safety risk in educational settings? Does this matter?	Nichols P, J, Norris S L. A systematic literature review of the effectiveness of diabetes education of school personnel. <i>Diabetes Educator</i> 2002; 26(3): 404-414.				participation in activities, quality of life, HbA1c, treatment concordance, satisfaction with quality and provision of care, self-management of diabetes, psychological health	
Does continuous glucose monitoring in diabetes yield better self-management?	Uncertainties identified from patient questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Diagnostic	Devices									Does continuous glucose monitoring yield better self-management?	McAndrew L, Schwesler S, Burns E, Laverthal H. Does patient blood glucose monitoring improve diabetes control? a systematic review of the literature. <i>Diabetes Educator</i> 2007; 33(6): 991-1011 PMID 18557267				A randomised controlled trial to determine whether family centred structured education improves blood glucose control in adolescents with type 1 diabetes FACTS 2 Family's and Adolescent's Communication and Teamwork Study (NCT00765682). A randomized clinical trial of a secure website shared between patients and providers for blood glucose monitoring in Type 2 Diabetes (NCT012326)	glycaemic control, adverse effects, mortality, long term diabetes-related complications, and quality of life
Does increasing patient education awareness of new technological developments improve outcomes for patients with diabetes?	Uncertainties identified from patient questions	Relevant reliable up-to-date systematic reviews do not address continuing uncertainties about treatment effects		Any age	Education and training	Devices									How do we ensure that people who have had type 1 diabetes for a long time are aware of new delivery systems, and affected the choices of using them?	Dave SAS, Colquhoun B, Colquhoun R. Individual patient education for people with type 2 diabetes mellitus. <i>Cochrane Database of Systematic Reviews</i> 2009, Issue 1. Art. No.: CD002068. DOI: 10.1002/14651858.CD002068.pub2. Vemuri E, Wani J, Van Royen P, Blot Y, Heamshaw H, Lindermeyer A. Interventions for improving adherence to treatment recommendations in people with type 2 diabetes mellitus. <i>Cochrane Database of Systematic Reviews</i> 2005, Issue 2. Art. No.: CD003638. DOI: 10.1002/14651858.CD003638.pub2. Foster G, Taylor SJC, Eldridge S, Ramsay J, Griffiths CJ. Self-management education programmes by lay leaders for people with chronic conditions. <i>Cochrane Database of Systematic Reviews</i> 2007, Issue 4. Art. No.: CD005108. DOI: 10.1002/14651858.CD005108.pub2. Street C, Cook D, Newman S. A systematic review of psychosocial outcomes following education, self-management and psychological interventions in diabetes mellitus. <i>Patient Education and Counselling</i> . 2003; 51(1): 5-15. Elin S, E. Spreff T, Oltus R, S, Brown A, Pickett J, W, Elsay T, A. Diabetes patient education: a meta-analysis and meta-regression. <i>Patient Education and Counselling</i> . 2004; 53(1): 97-105. van Der Horst F, van der Borne B, Ryzman R, Casabian H. Provider-patient interaction in diabetes care: effects on patient self-care and outcomes. A systematic review. <i>Patient Education and Counselling</i> . 2004; 53(1): 97-105.				choosing the right delivery mechanism, quality of life, HbA1c, cost-effectiveness, psychological effects, treatment concordance, satisfaction with quality and provision of care	

Does involvement of parents in the care plan improve the care of children with diabetes?	Uncertainties identified from patients' questions	Relevant reliable up-to-date systematic reviews do not address continuing uncertainties about treatment effects	Child / Adolescent	Mixed or complex							How do we identify parents' needs?	Couch R, Jatta M, Hayden D M, Houston N, Liang H, Dixon T, Barman E, Spencer C, Mink A, O'Gorman K, Klassen T P. Diabetes education for children with type 1 diabetes mellitus and their families. Rockville, MD, USA: Agency for Healthcare Research and Quality. Evidence Report/Technology Assessment. 166. 2008 Marrin L M. The "relative" efficacy of involving family in psychosocial interventions for chronic illness: are there added benefits to patients and family members? Families Systems and Health 2005; 23(3): 212-228 van Dam H A, van der Hout F A, Knops L, Ruysschaert M, Cabolet H F, van den Borne B H. Social support in diabetes: a systematic review of controlled intervention studies. Patient Education and Counseling 2005; 59(1): 1-12 Armour T A, Norris S L, Jack L, Zhang X, Fropel L. The effectiveness of family interventions in people with diabetes mellitus: a systematic review. Diabetic Medicine 2005; 22(10): 1295-1305	Keogh K, White P, Hevey D, McGilroy, B, and Smith S. (2007) Family-based interventions to improve outcomes in Type 2 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews, 2007, Issue 1. Art No. CD006382, DOI: 10.1002/14651858.	effective care plan, includes education, care planning, quality of life, HbA1c, cost effectiveness, psychosocial health, treatment concordance, satisfaction with quality and provision of care, decision making by patients, decision making by clinicians, self-management of diabetes.		
Does setting national targets for blood glucose levels discourage health professionals setting targets according to individual patients' abilities?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Service delivery							Is there any evidence that target culture is beneficial in treating Type 1 diabetes?				over-medication or under-medication of patients; care for patients, service delivery, quality of life, hypoglycaemia, adverse effects, increased risk of complications.	
Does the method of insulin delivery (injection vs. pump) have any impact on rates of complications?	Uncertainties identified from patients' questions	Relevant reliable up-to-date systematic reviews do not address continuing uncertainties about treatment effects	Any age	Drug	Devices										rates of complications	
Does the pain of blood glucose testing affect the willingness of patients, especially children, to monitor their blood glucose levels?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Child / Adolescent	Devices							What is the role of pain (threshold) in relation to blood glucose testing in children				Changes in monitoring of blood glucose change in diabetes stability, quality of life, glycemic control, quality of life	
How best to prepare people with diabetes for use of an insulin pump	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug	Devices						Who are the best patients to have pumps? (They require motivation/understanding from patients, to get the best benefit from the pump)				change in glycemic control, quality of life	
How can insulin delivery devices, such as pens, be improved to display unambiguously that insulin has been delivered?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices							How can pens be improved to display unambiguously that insulin has been delivered?				Unambiguous delivery of insulin, adverse effects, acceptability, cost.	
How can people identify which is the correct needle length for them when injecting insulin for diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices							How can people identify which is the correct needle length for them?				Effective delivery of injected insulin, adverse effects, acceptability, and cost	
How do I choose which insulin pen is best for me?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices							Is the choice of pen and appropriateness for individuals important – if so why?				Glycaemic control, adverse effects, mortality, long term diabetes-related complications, and quality of life	
How do we get to the real story from people presenting in clinic and how can we tell when they are wanting to or needing to present as complex?	Uncertainties identified from clinicians' questions	Relevant reliable up-to-date systematic reviews do not address continuing uncertainties about treatment effects	Any age	Mixed or complex							How do we get to the real story from people with type 1 diabetes presenting in clinic and when they are wanting to present as complex? + Will HbA1c reflect this? + Change the treatment? + Exploring the compliance? + Self-management – self medicine?	Griffin S J, Kenworthy A L, Veltman M W, Gilard S, Shaw J, Stevens M. Effect on health-related outcomes of interventions to alter the interaction between patients and practitioners: a systematic review of trials. Annals of Family Medicine 2004; 2(6): 595-608 Post D M, Cogoda D J, Miser W F. The other half of the whole: teaching patients to communicate with physicians. Family Medicine 2002; 34(8): 544-552 Wilson A, Crofts S. The relationship between consultation length, process and outcomes in general practice: a systematic review. British Journal of General Practice 2002; 52: 1012-1020 Kenworthy P, Edwards AGK, Hood K, Cadbury N, Ryan R, Proul H, Owen D, MacBeth F, Bulow P, Butler C. Interventions before consultations for helping patients address their information needs. Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No. CD004665, DOI: 10.1002/14651858.CD004665.pub2		honesty, patient-clinician relationship, effective patient self-management, satisfaction with quality and provision of care, treatment concordance, effective treatment care plan, psychosocial health, quality of life, HbA1c, in adults and children, decision making by patients, decision making by clinicians		
How early is early to give statistics for adults with diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug							How early is early to give statistics for people with diabetes?				Cardiac or vascular long term diabetes related complications	
How effective is psychosocial care for people with diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Environmental	Education and training	Psychological therapy	Social care								cost-effectiveness, in adults and children, decision making by patients, decision making by clinicians, self-management of diabetes, quality of life, treatment concordance, increased risk of complications, in all groups including children in school and people being bullied, psychosocial health, HbA1c, satisfaction with quality and provision of care.	
How effective is using 72 hour blood glucose monitoring and educating individuals in the management of type 1 diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Education and training	Devices										A randomised controlled trial to determine whether family centred structured education improves blood glucose control in adolescents with type 1 diabetes (FACTS 2 - Family's and Adolescents' Communication and Teamwork Study (SRCTN875663). A randomised clinical trial of a secure website shared between patients and providers for blood glucose monitoring in Type 2 Diabetes (CTD081200)	Glycaemic control, adverse effects; mortality, long term diabetes-related complications; and quality of life
How many times can you use the same syringe to inject insulin?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices							How many times can you inject with a syringe?				Adverse effects	
How should healthcare professionals balance the treatment needs of children with the involvement of parents?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Child / Adolescent	Mixed or complex							Children's choices + parent attitude - what help clinicians strike the balance in good treatment and care?				effective communication between patient and healthcare professional; joint decision making, effective care plan, psychosocial health, quality of life, HbA1c, hypoglycaemia, risk of complications, treatment concordance, satisfaction with quality and provision of care, decision making by patients, decision making by clinicians, self-management of diabetes	
If I can have my own choice of insulin, and how it is delivered, will diabetes be better controlled?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug							How much would patient choice improve the progression of type 1 diabetes?				Glycaemic control, adverse effects; mortality, long term diabetes-related complications; and quality of life	
															Yermine EJJ, Wang J, Van Royen P, Blot T, Heurtebise H, Lincenoyer A. Interventions for improving adherence to treatment recommendations in people with type 2 diabetes mellitus. Cochrane Database of Systematic Reviews 2005, Issue 2, Art. No. CD006885, DOI: 10.1002/14651858.CD006885.pub2	

Is DAFNE an effective patient education system for people with diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Education and training						Dose Adjustment for Normal Eating (DAFNE) system - does it work? Has there been significant penetration of training? Any analysis of results? Detailed group training may need more resources than available - are there other methods of achieving better self-managed blood glucose control?	Dave SAS, Colquhoun S, Colquhoun R. Individual patient education for people with type 2 diabetes mellitus. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD009268. DOI: 10.1002/14651958.CD009268.pub2. Loveman E, Flannigan G, Clegg A J. The clinical effectiveness of diabetes education models for type 2 diabetes: a systematic review. Health Technology Assessment 2008, 12(16): 1-136. Ellis S E, Sparrow T, Dhillon R S, Brown A, Patten J W, Emswiler T A. Diabetes patient education: a meta-analysis and meta-regression. Patient Education and Counselling 2004, 55(1): 97-105. NICE Technology Appraisal Guidance 60. Guidance on the use of Patient education models for diabetes. April 2003. Loveman E, Cave C, Green C, Rye P, Dunn N, Waugh N. The clinical and cost-effectiveness of patient education models for diabetes: a systematic review and economic evaluation. Health Technology Assessment 2003, 7(2): 1-202. Norris S L, Lau J, Smith S J, Scrimdi C E, Engelgau M M. Self-management education for adults with type 2 diabetes: a meta-analysis of the effect on glycemic control. Diabetes Care 2002, 25(7): 1591-1597. Conabian P, Havelstad C. Patient diabetes education in the management of adult type 2 diabetes. Edmonton, AB, Canada: Alberta Heritage Foundation for Medical Research; Health Technology Assessment; 23 Series A, 2001		ISRCTN9759174	quality of life, HbA1c, hypoglycaemia, risk of complications, cost effectiveness, treatment concordance, satisfaction with quality and provision of care, in adults and children, decision making by patients, decision making by clinicians, self-management of diabetes, in all groups, psychosocial health
Is there any benefit for people with Type 1 diabetes from the addition of metformin to insulin treatment?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Adult	Drug					Should other medicines be introduced if people cannot regulate blood sugar?	Abelshaw S, Asia AM. Metformin added to insulin therapy for type 1 diabetes mellitus in adolescents. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD006891. DOI: 10.1002/14651958.CD006891.pub2		The effect of metformin in overweight patients with dysregulated Type 1 diabetes mellitus NCT0145379	HbA1c, insulin sensitivity, adverse effects, quality of life, all-cause and disease-specific mortality, safety, costs, increased risk of complications.	
Should injectors still be used when injecting insulin for diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices					Synthetic insulin, should we tailor insulin to match pancreatic secretion?				Adverse effects	
Should we tailor synthetic insulin doses to match pancreatic secretion to gain better symptom control?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug										Glycaemic control, adverse effects; mortality; long term diabetes-related complications; and quality of life
There is a need for accurate, continuous, non-invasive blood glucose monitoring in diabetes- how can we achieve this?	Uncertainties identified from clinicians' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Diagnostic					There is a need for accurate, continuous, non-invasive monitoring - how can we achieve this?	McAndrew L, Schneider S H, Burns E, Leverahl H. Does patient blood glucose monitoring improve diabetes control: a systematic review of the literature. Diabetes Educator 2007, 33(6): 991-1011 PMID 18057267		A randomised controlled trial to determine whether family centered structured education improves blood glucose control in adolescents with type 1 diabetes FACTS 2 - Family's and Adolescents' Communication and Teamwork Study ISRCTN89756683	Accurate and effective continuous, non-invasive blood glucose monitoring	
Trials are needed that address the difference between technical blood glucose control in the laboratory and real life experience of blood glucose strips for people with diabetes	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices					Trials are needed that address the difference between technical control in the laboratory and real life experience of blood glucose strips					Glycaemic control, adverse effects; mortality; long term diabetes-related complications; and quality of life
Use of a closed loop system to control diabetes	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug	Devices				What are the benefits of the closed loop system (the pump 'talking' to a blood glucose meter)?					quality of life, HbA1c, hypoglycaemia, adverse effects, increased risk of complications, cost effectiveness
What are the benefits of disposable insulin pens vs. non disposable insulin pens?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices					What are the benefits of disposable pens vs. non disposable?					Glycaemic control, adverse effects; mortality; long term diabetes-related complications; and quality of life
What are the benefits/harm of having higher glycaemic control to reduce long term adverse events?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Drug					Are there any studies into the benefits/harm of having higher glycaemic control to reduce events?					Short and long term benefits of adverse events of higher glycaemic control
What are the best forms of insulin for treating type 1 diabetes?	Uncertainties identified in research recommendations	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Drug						Hovath R, Jellier K, Bergholt A, Ebrahimi SM, Hovath M, Jacobson E, Nix A, Bittensheim H. Intermediate acting versus long acting insulin for type 1 diabetes mellitus. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD008297. DOI: 10.1002/14651958.CD008297.pub2. Richter B, Nesses G. Human insulin versus animal insulin in people with diabetes mellitus. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD003816. DOI: 10.1002/14651958.CD003816.pub2. Sieberhofer A, Frank A, Bergholt A, Jellier K, Hovath K, Nashed M, Ghazir R, Prieber TR. Short acting insulin analogues versus regular human insulin in patients with diabetes mellitus. Cochrane Database of Systematic Reviews 2006, Issue 2. Art. No.: CD003287. DOI: 10.1002/14651958.CD003287.pub2			Glycaemic stability of insulin aspart versus insulin lispro in insulin therapy NCT00426287 The effect of insulin analogues and human insulin on the incidence of severe hypoglycaemia in Hypoglycaemia pose Type 1 diabetic patients NCT00460566 Effects of Insulin detemir and Neutral protamine Hagedorn (NPH) insulin on beta-pancreatic Metabolism: a study in persons with Type 1 diabetes NCT00826860 A phase II randomized, open label, 2-way crossover safety study of subcutaneously injected prandial INSULIN PH20 NP compared to insulin analog insulin in patients with type 1 diabetes NCT00833568	
What are the best injection sites for delivering insulin for diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices										Glycaemic control, adverse effects; mortality; long term diabetes-related complications; and quality of life
What are the long term complication rates associated with the various forms of insulin used to treat diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Drug						Hovath R, Jellier K, Bergholt A, Ebrahimi SM, Ghazir R, Prieber TR, Sieberhofer A, Frank A, Bergholt A, Jellier K, Hovath K, Nashed M, Ghazir R, Prieber TR. Short acting insulin analogues versus regular human insulin in patients with diabetes mellitus. Cochrane Database of Systematic Reviews 2006, Issue 2. Art. No.: CD003287. DOI: 10.1002/14651958.CD003287.pub2. Vaid M, Jacobson E, Nix A, Bittensheim H. Intermediate acting versus long acting insulin for type 1 diabetes mellitus. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD008297. DOI: 10.1002/14651958.CD008297.pub2. Richter B, Nesses G. Human insulin versus animal insulin in people with diabetes mellitus. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD003816. DOI: 10.1002/14651958.CD003816.pub2. Ray K K, Kozlowski-Grebasz S R, Wajsbu S, Swankman R, Nethercott S, Priedl D, Engou S, Sator N. Effect of intensive control of glucose on cardiovascular outcomes and death in patients with diabetes mellitus: a meta-analysis of randomised controlled trials. Lancet 2009, 373: 1562-72	Burman S, Holleman F, Hoekstra J, De Vries H. Long-acting insulin analogues versus another long acting insulin analogue for type 2 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews 2007, Issue 1. Art. No.: CD006383. DOI: 10.1002/14651958.CD006383	Lawson M L, Gerson H C, Tsai E, Orman B. Effect of intensive therapy on early macrovascular disease in young individuals with type 1 diabetes: a systematic review and meta-analysis. Diabetes Care 1999;22(supplement 2):B35-B39		Long-term complication rates (greater than 10 weeks)
What is the correct needle length for injecting insulin for diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices					What lengths of needles are available?					Effective delivery of injected insulin; adverse effects; acceptability; and cost
What is the optimal level of blood glucose monitoring for the individual with diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Diagnostic					What is the optimal level of blood glucose monitoring for the individual?	McAndrew L, Schneider S H, Burns E, Leverahl H. Does patient blood glucose monitoring improve diabetes control: a systematic review of the literature. Diabetes Educator 2007, 33(6): 991-1011 PMID 18057267		A randomised controlled trial to determine whether family centered structured education improves blood glucose control in adolescents with type 1 diabetes FACTS 2 - Family's and Adolescents' Communication and Teamwork Study ISRCTN89756683	Accurate and effective continuous, non-invasive blood glucose monitoring	

What treatments are helpful for diabetic hand and foot complications? What will be the potential benefits to people with diabetes of Smart insulin?	Uncertainties identified from patients' questions No relevant systematic reviews identified	No relevant systematic reviews identified	Adult Any age	Exercise Drug	Drug	Complementary therapies	Devices											Change in diabetic hand complications
Which types of psychosocial interventions are effective for people with diabetes?	Uncertainties identified from patients' questions No relevant systematic reviews identified	No relevant systematic reviews identified	Any age	Environmental	Education and training	Psychological therapy	Social care											Glycaemic control, adverse effects, mortality, long term diabetes-related complications, and quality of life
Who should be offered psychosocial care: those who have poor diabetes management or all people with diabetes?	Uncertainties identified from patients' questions No relevant systematic reviews identified	No relevant systematic reviews identified	Any age	Education and training	Environmental	Social care	Psychological therapy											Quality of life, HbA1c, increased risk of complications, cost-effectiveness, treatment concordance, satisfaction with quality and provision of care, in adults and children, decision making by clinicians, self-management of diabetes, in all groups including psychosocial health
Who should be offered psychosocial care: those who have poor diabetes management or all people with diabetes?	Uncertainties identified from patients' questions No relevant systematic reviews identified	No relevant systematic reviews identified	Any age	Environmental	Education and training	Psychological therapy	Social care											Quality of life, HbA1c, increased risk of complications, cost-effectiveness, treatment concordance, satisfaction with quality and provision of care, in adults and children, decision making by clinicians, self-management of diabetes, in all groups, psychosocial health
Do educational programmes/training packages, for people with diabetes and their carers, help control the condition, reduce anxiety and provide greater awareness of the complications of the condition?	Uncertainties identified from patients' questions Existing relevant systematic reviews are not up-to-date	Existing relevant systematic reviews are not up-to-date	Any age	Education and training														Knowledge, social support, self-efficacy, emotional outcomes, behavioural outcomes, clinical outcomes, need to determine the effects of HbA1c on resource utilisation.
Does Berberifonin (form of vitamin B1) prevent diabetes complications?	Uncertainties identified from patients' questions Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Drug														Incidence of complications, change in symptoms, adverse effects, acceptability to patient or carers, and costs. Secondary outcomes: Long-term (later more than three months) change in pain intensity or impairment measured as for the primary outcome. Short-term and long-term (defined as above) change in neurophysiological systems measured by a validated scale. Short-term and long-term (defined as above) change in nerve conduction study (NCS) parameters: peak latency of sensory nerve action potential (SNAP) of the median and sural nerves, SNAP amplitude of the median and sural nerves, nerve conduction velocity (NCV) of the median and sural nerves, distal latency of compound motor action potential (CMAP) of the median and common peroneal nerves, CMAP amplitude of the median and common peroneal nerves. If the data on the common peroneal nerve were not available, the data on another lower extremity motor nerve were used. Serious adverse events as a result of treatment within three months and after three months. Serious adverse events are those defined as follows:
Does communication training (for example motivational interviewing techniques) for diabetes specialists improve type 1 diabetes control?	Uncertainties identified from patients' questions Existing relevant systematic reviews are not up-to-date	Existing relevant systematic reviews are not up-to-date	Any age	Education and training	Psychological therapy													Future trials should also specifically assess the effects of interventions other than healthcare provider training, such as changes in the organisation of care, in promoting patient-centred care in the clinical consultation. More attention needs to be paid to the methodological quality of studies, particularly where cluster randomisation is used. A widely acceptable definition of patient-centred care that can operationalise it in effectiveness studies needs to be developed. There is currently no gold standard measure for patient-centredness, and this area needs further work in order to develop valid, reliable and appropriate tools to assess the effects of interventions to promote patient-centred care on consultation processes (Mead 2005). Ways of involving healthcare consumers in the design, planning and delivery of interventions to promote patient-centred care need to be explored. In particular, the outcomes assessed in evaluations of interventions to promote patient-centred care should include measures of issues seen as important by consumers for quality of care. Outcomes: A number of processes and outcomes might be affected by interventions that aim to improve patient-centredness in the incidence of long term complications
Does reducing glucose variability reduce long term complications of type 1 diabetes even when average levels are not reduced?	Uncertainties identified from clinicians' questions No relevant systematic reviews identified	No relevant systematic reviews identified	Any age	Diet	Drug													This is an indicative uncertainty. This or a similar submission has been made by Patient5, Professional9. Henderson WR, FitzGerald JM. Intensive insulin therapy and strict glucose control for critically ill patients. Protocol. Cochrane Database of Systematic Reviews 2005, Issue 3. Art. No.: CD005366. DOI: 10.1002/14651858.CD005366

How can awareness of and management of hypoglycaemia in type 1 diabetes be improved?	Uncertainties identified from patients' questions	Existing relevant systematic reviews are not up-to-date	6	Any age	Education and training						Diabetes Ranking 6	Thomas D, Elliott EJ. Low glycaemic index, or low glycaemic load, diets for diabetes mellitus. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD002066. DOI: 10.1002/14651858.CD002066.pub2 Fabiani M, Kufya YC, Masad MH, Elamir MB, Tabiri CC, Moroni VM. Hypoglycaemia with continuous subcutaneous insulin infusion versus multiple daily injections. Journal of Clinical Endocrinology and Metabolism 2009 94(3):729-40. PMID: 1908167			Glycaemic control as measured by glycosylated haemoglobin, adverse effects. Secondary outcomes: insulin action (fasting plasma insulin, insulin sensitivity, insulin area under the curve, total insulin released per day, insulin-to-glucose ratio) mortality (for example diabetes and cardiovascular related mortality, like angina pectoris, myocardial infarction, stroke, peripheral vascular disease, neuropathy, erectile dysfunction, amputation); quality of life (using a validated instrument)
How can insulin dosage best be adjusted around exercise and/or stress?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Service delivery							Komatsu WR, Andriolo RB, Azeiteiro TN, Oliveira MM, Din SA. Physical exercise for type 1 diabetes mellitus. (Protocol). Cochrane Database of Systematic Reviews 2010, Issue 2. Art. No.: CD008354. DOI: 10.1002/14651858.CD008354			Management of symptoms, change in symptoms, adverse effects or complications; acceptability to patient or carer; and costs
How can non-invasive real-time Continuous Glucose Monitoring for diabetes be achieved?	Uncertainties identified from patients' questions	No relevant systematic reviews identified		Any age	Diagnostic							This is an indicative uncertainty. This or a similar submission has been made by: Paten=12, Care=3, Professional=2			Monitoring of blood glucose; incidence of complications; change in symptoms; adverse effects or complications; acceptability to patient or carer; and costs
How do we achieve social and geographical equality of care in type 1 diabetes?	Uncertainties identified from patients' questions	Existing relevant systematic reviews are not up-to-date		Any age	Service delivery							This is an indicative uncertainty. This or a similar submission has been made by: Paten=4, Professional=1	Ghani RL, Weeramanthi TS, Knight SS, Balke RS. Specialist outreach clinics in primary care and rural hospital settings. Cochrane Database of Systematic Reviews 2003, Issue 4. Art. No.: CD003798. DOI: 10.1002/14651858.CD003798.pub2 Murray E, Burns J, See Tai S, Lai R, Hazzahri I. Interactive Health Communication Applications for people with chronic disease. Cochrane Database of Systematic Reviews 2005, Issue 4. Art. No.: CD004274. DOI: 10.1002/14651858.CD004274.pub4	1. Access (perceived by patients, measured across determinants: related access (total attendance and attendance rates)); 2. Quality of care (guideline-consistent referral and treatment; adherence to treatment); 3. Health outcomes; 4. Patient and provider satisfaction; 5. Use of hospital and primary care services (investigations, consultations, inpatient and outpatient treatment); and 6. Costs (per patient costs, cost effectiveness, opportunity costs and harms). Measures of health outcomes, and their absence, measures of access to care and quality of care, are regarded as primary outcomes for the purpose of this review. Patient satisfaction is very important but will, at least in part, be determined by access, quality and clinical outcome factors, and is often measured using non-standardised scales. Independent of clinical outcomes, the use of health services and costs vary considerably with local factors and are of relatively little assistance to policy makers. Cost effectiveness, however, is regarded as an important outcome.	
How effective is Dose Adjustment For Normal Eating (DAFNE) in diabetes?	Uncertainties identified from carers' questions	No relevant systematic reviews identified		Any age	Diet	Service delivery						This is an indicative uncertainty. This or a similar submission has been made by: Paten=3, Care=4, Professional=1, Non-staged=1, Other=1			Management of symptoms; change in symptoms; adverse effects or complications; acceptability to patient or carer; and costs
How tightly controlled do fluctuations in blood glucose levels need to be to reduce the risk of developing complications in people with type 1 diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	7	Any age	Drug	Devices					Diabetes Ranking 7	Masli ML, Egberts KJ, Pappa M, D'Amico D, Shaw J. Continuous subcutaneous insulin infusion (CSII) versus multiple insulin injections for type 1 diabetes mellitus. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD006913. DOI: 10.1002/14651858.CD006913.pub2	Adami GG, Grange M, Langley J. Glucose-insulin-potassium (GIK) and tight-glycaemic control (TTC) versus standard therapy insulin for critically ill patients. (Protocol). Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD006875. DOI: 10.1002/14651858.CD006875	Change in complications;	
Is a closed loop system effective?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Devices							This is an indicative uncertainty. This or a similar submission has been made by: Paten=15, Care=4	Lampend MW, Hout L, De Vries H, Wierink M, Mudde AH, Bur AL, Schooten RJP.M. Continuous glucose monitoring systems for type 1 diabetes mellitus. (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD008101. DOI: 10.1002/14651858.CD008101		Management of symptoms; change in symptoms; adverse effects or complications; acceptability to patient or carer; and costs
Is a pancreas transplant effective?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects		Any age	Surgery							This is an indicative uncertainty. This or a similar submission has been made by: Paten=3, Care=3, Professional=1	Ganaway KS, Kot R, Patel B, Davitts BR. Somatostatin analogues for pancreatic surgery. Cochrane Database of Systematic Reviews 2010, Issue 2. Art. No.: CD007370. DOI: 10.1002/14651858.CD007370	Citation Pascual J, Galvao C, Querada C, Royvalta A, Zamora J. Steroid avoidance or withdrawal for pancreas and kidney transplant recipients. (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD007969. DOI: 10.1002/14651858.CD007969. Kaba K, Banovic P, Webster AC, Chapman JR, Craig JC. Antibody immunosuppression for pancreas and kidney/pancreas transplant recipients. (Protocol). Cochrane Database of Systematic Reviews 2004, Issue 1. Art. No.: CD004681. DOI: 10.1002/14651858.CD004681. Huang SB, Zhuo N, Li S, Long D, Qian X, Li Y. Tacrolimus for simultaneous kidney pancreas transplant recipients. (Protocol). Cochrane Database of Systematic Reviews 2006, Issue 3. Art. No.: CD006120. DOI: 10.1002/14651858.CD006120	Postoperative mortality, re-operation;
Is an artificial pancreas for type 1 diabetes (closed loop system) effective?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	3	Any age	Devices						Diabetes Ranking 3	Ebery B, Mundy L, Hiller JE. Closed loop insulin delivery system (artificial pancreas) for management of hypoglycaemia in type 1 diabetes. Adelaide Adelaide Health Technology Assessment (AHTA). Horizon Scanning Preprints Summer Volume 2010		Symptoms, adverse effects, quality of life, cost	
Is it safe to continue insulin analogues in pregnancy in type 1 diabetes?	Uncertainties identified from patients' questions	Existing relevant systematic reviews are not up-to-date		Adult	Drug							This is an indicative uncertainty. This or a similar submission has been made by: Paten=1, Research recommendation=1	Sieberhofer A, Plank J, Berghold A, Jeller K, Neuhart K, Haram M, Uehlinger R, Pauer TR. Short acting insulin analogues versus regular human insulin in patients with diabetes mellitus. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD003287. DOI: 10.1002/14651858.CD003287.pub4	Glycaemic control (for example glycosylated haemoglobin, fasting plasma glucose, 24 hour glucose profile), number of overall, severe (for example requiring third party help) and non-severe hypoglycaemic episodes (subdivided by time of day of occurrence); quality of life assessment, ideally using a validated instrument like the Diabetes Treatment Satisfaction Questionnaire. Secondary outcomes: number and severity of adverse events (for example local reactions, necrobiosis, chondrocallosity), diabetic complications (neuropathy, retinopathy, nephropathy, other diabetes related complications) diabetes related mortality (death from myocardial infarction, stroke, peripheral vascular disease, renal disease, hypoglycaemia, hypoglycaemia, sudden death); total mortality, costs.	

Is metformin, when added to insulin to reduce insulin resistance, effective for the treatment of type 1 diabetes?	Uncertainties identified in research recommendations	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Drug																		Abdulgaffar S, Atia AM. Metformin added to insulin in type 1 diabetes mellitus in adolescents. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD006161. DOI: 10.1002/14651958.CD006161.pub2	Chen HS, Liu J, Wang W. Insulin sensitizing agents for preventing the progression of diabetic kidney disease (Protocol). Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No.: CD006741. DOI: 10.1002/14651958.CD006741														Glycaemic control measured by glycosylated haemoglobin (HbA1c) and postprandial glucose; adverse effects of metformin (for example nausea, diarrhoea); health-related quality of life if measured by a validated instrument. Secondary outcomes: change in insulin dose; change of body mass index (BMI) or body weight or both; change of serum lipids; change in peripheral insulin sensitivity (assessed by a euglycaemic hyperinsulinaemic clamp); costs of metformin therapy; mortality and morbidity - (all-cause and diabetes related).			
Is stem cell therapy effective in the treatment of diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Vaccines and biologics																		This is an indicative uncertainty. This or a similar submission has been made by: Patient=22, Case=6, Professional=3, Not stated=1, Research recommendation=1, QInco=1														Management of symptoms; change in symptoms; adverse effects or complications; acceptability to patient or carers; costs.				
What are the benefits and adverse effects of statins in diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Adult	Drug																		This is an indicative uncertainty. This or a similar submission has been made by: Patient=11																Death from all causes; fatal and non-fatal CHD, CVD and stroke events; combined endpoint fatal and non-fatal CHD, CHD and stroke events; change in blood total cholesterol concentration; revascularisation; adverse events; effect on life expectancy.		
What are the benefits of Angiotensin converting enzyme inhibitors (ACE) or Angiotensin II Receptor Antagonists (ARBs) in managing type 1 diabetes?	Uncertainties identified from patients' questions	Existing relevant systematic reviews are not up-to-date	Any age	Drug																		This is an indicative uncertainty. This or a similar submission has been made by: Patient=6, Case=1, Professional=2, Not stated=1, Research recommendation=1																Death (all causes); Death (cardiovascular); ESRD; Doubling of creatinine; Number of patients who develop microalbuminuria (i.e. progression from normo- to microalbuminuria) Albuminuria (mg/24 h or 7g/mmol); maculohaematuria (mg/24 h or 7g/mmol) or proteinuria (mg/24 h) at end of treatment or change between beginning and end of treatment. Urinary albuminuria ratio (ratio between albumin/mmol creatinine). Blood pressure (mmHg) (systolic, diastolic, mean arterial pressure (MAP)) at end of treatment and change between the beginning and end of treatment. Lipid profile; Glycaemic control (HbA1c %)		
What are the best insulin delivery methods, other than injections?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Devices																		This is an indicative uncertainty. This or a similar submission has been made by: Patient=24, Case=7, NS2 Professional=1 Other=1																	Hypoglycaemia; mortality; diabetes late complications and other adverse effects; using validated scales; and cost effectiveness. Secondary outcomes: HbA1c; daily mean blood glucose; fasting blood glucose; post-prandial blood glucose; weight; daily insulin requirement.	
What are the best treatments and prevention strategies for foot ulcers in people with type 1 diabetes?	Uncertainties identified in research recommendations	Existing relevant systematic reviews are not up-to-date	Adult	Exercise	Drug	Diet	Devices	Physical Therapy	Surgery													This is an indicative uncertainty. This or a similar submission has been made by: Patient=1, Professional=1, Research recommendation=5																		Proportion of ulcers completely healed; Change in total ulcer area (either absolute or percentage change); Time to complete healing or reduced size; Signs and symptoms of clinical infection; Secondary outcome: Ulcer re-occurrence rate; Adverse effects of treatment; Quality of life; Costs; Hospital admissions; Amputation; Death.
What are the characteristics of the best type 1 diabetes patient education programmes (from diagnosis to long term care) and do they improve outcomes?	Uncertainties identified from clinicians' questions	No relevant systematic reviews identified	4	Any age	Education and training																	Diabetes Reviewing 4																	Content of patient education programme; symptoms; adverse effects; quality of life; adverse effects; cost.	
What are the cognitive and psychological effects of living with type 1 diabetes?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	5	Any age	Education and training	Psychological therapy																Diabetes Reviewing 5																Cognitive and psychological symptoms; adverse events; acceptability; quality of life.		
What are the long and short term effects of hypoglycaemia?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Diagnostic																		This is an indicative uncertainty. This or a similar submission has been made by: Patient=4, Case=1,																Long and short term effects; complications or adverse effects.		
What effect do carbohydrates have on blood glucose levels?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Diet	Diagnostic																	This is an indicative uncertainty. This or a similar submission has been made by: Patient=17, Case=4, Professional=5, Not stated=1, Research recommendation=1																	Glycaemic control as measured by glycosylated haemoglobin, fructosamine, glycosylated serum albumin or other test measuring glycosylated proteins; adverse effects. Secondary outcomes: insulin action (fasting plasma insulin, insulin sensitivity, insulin area under the curve, total insulin released per day), insulin-to-glucose ratio), mortality (for example diabetic and cardiovascular related mortality, the angina pectoris, myocardial infarction, stroke, peripheral vascular disease, neuropathy, retinopathy, nephropathy, erectile dysfunction, amputation); quality of life (using a validated instrument); costs;	

<p>What impact do changing hormones have on blood glucose levels in women with type 2 diabetes?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Adult</p>	<p>Diagnostic</p>																																		
<p>What is the best method to prevent hyperglycaemia and reduce incidence of ketoacidosis?</p>	<p>Uncertainties identified from clinicians' questions</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Any age</p>	<p>Education and training</p>	<p>Diet</p>	<p>Drug</p>																																
<p>What is the best support for family carers of people with type 1 diabetes?</p>	<p>Uncertainties identified from carers' questions</p>	<p>Existing relevant systematic reviews are not up-to-date</p>	<p>Any age</p>	<p>Psychological therapy</p>																																		
<p>What is the best way to prevent and treat hypoglycaemia in diabetes?</p>	<p>Uncertainties identified from clinicians' questions</p>	<p>No relevant systematic reviews identified</p>	<p>Any age</p>	<p>Drug</p>	<p>Vaccines and biologicals</p>																																	
<p>What is the best way, for people with type 1 diabetes, to manage their weight?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Any age</p>	<p>Exercise</p>	<p>Drug</p>	<p>Diet</p>	<p>Surgery</p>																															
<p>What is the effect of different types of exercise on blood sugar levels?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Any age</p>	<p>Exercise</p>	<p>Diagnostic</p>																																	
<p>What is the role of phosphodiesterase inhibitors in erectile dysfunction in type 1 diabetes?</p>	<p>Uncertainties identified in research recommendations</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Adult</p>	<p>Drug</p>																																		
<p>What techniques could be developed to check blood sugar levels other than finger prick testing?</p>	<p>Uncertainties identified from patients' questions</p>	<p>No relevant systematic reviews identified</p>	<p>Any age</p>	<p>Diagnostic</p>	<p>Devices</p>																																	

<p>What treatments, including psychological support services, are effective to manage the psychological effects of type 1 diabetes?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Existing relevant systematic reviews are not up-to-date</p>	<p>Any age</p>	<p>Psychological therapy</p>																											<p>education programmes in a number of areas. We need the research recommendations for future research: Long-term studies exploring outcomes beyond as chronic. Biological measures of disease control or biomarkers (such as cholesterol levels, glycemic control). Clarification of the importance and meaning of self-efficacy. Investigation of the under-representation of men. Studies in children and adolescents. Clarification of healthcare use outcomes. Cost-effectiveness studies. Exploration of disease-specific interventions. Variations in the components of interventions, for example including clinician-delivered elements. Qualitative studies to explore how participants experience the intervention; eg what aspects of the courses do participants like/dislike, why do people drop out, why is attendance low? Ideally trials should be consistent in reporting relevant outcomes so that results of behavioural interventions for chronic disease can be more easily combined and the body of research is more informative. In all cases, we recommend that researchers avoid using weak designs, in particular before-and-after studies, and utilize randomised controlled trials.</p>
<p>Which insulin regime, 1, 2, 3 or 4 times daily is most effective?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Existing relevant systematic reviews are not up-to-date</p>	<p>Any age</p>	<p>Service delivery</p>																											<p>Glycaemic control (assessed primarily through measurements of glycosylated haemoglobin, as well as fasting plasma glucose or fasting blood glucose, and others), adverse effect profile (primarily hypoglycaemia - defined as low glucose measurements or hypoglycaemic related symptoms), as well as episodes of nocturnal and severe hypoglycaemia, weight gain, and other, treatment related mortality (hypoglycaemia or hypoglycaemia), diabetes related mortality (death from myocardial infarction, stroke, peripheral vascular disease, renal disease or sudden death) and all-cause mortality, were considered. Secondary outcomes: long term diabetes-related complications: non fatal myocardial infarction, angina pectoris, heart failure, stroke, peripheral vascular disease, renal failure, amputation (of at least one digit), vitreous haemorrhage, retinal photocoagulation, blindness in one eye or bilateral extension, or neuropathy health-related quality of life (ideally measured using a validated instrument).</p>
<p>Which insulin (including Lantus) are safest and have the fewest adverse effects (for example weight gain)?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Existing relevant systematic reviews are not up-to-date</p>	<p>Any age</p>	<p>Drug</p>																											<p>Glycaemic control (assessed primarily through measurements of glycosylated haemoglobin, as well as fasting plasma glucose or fasting blood glucose, and others), adverse effect profile (primarily hypoglycaemia - defined as low glucose measurements or hypoglycaemic related symptoms), as well as episodes of nocturnal and severe hypoglycaemia, weight gain, and other, treatment related mortality (hypoglycaemia or hypoglycaemia), diabetes related mortality (death from myocardial infarction, stroke, peripheral vascular disease, renal disease or sudden death) and all-cause mortality, were considered. Secondary outcomes: long term diabetes-related complications: non fatal myocardial infarction, angina pectoris, heart failure, stroke, peripheral vascular disease, renal failure, amputation (of at least one digit), vitreous haemorrhage, retinal photocoagulation, blindness in one eye or bilateral extension, or neuropathy health-related quality of life (ideally measured using a validated instrument). COCHRANE SR: Short acting insulin analogues versus regular human insulin in patients with diabetes mellitus.</p>
<p>Which treatments are beneficial in managing retinopathy in diabetes?</p>	<p>Uncertainties identified from patients' questions</p>	<p>Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects</p>	<p>Adult</p>	<p>Drug</p>	<p>Devices</p>																										<p>Development of any retinopathy where none previously existed; (2) the development or progression of macular oedema with clinical significance as defined by the Early Treatment Diabetic Retinopathy Study (ETDRS); and (3) the development of proliferative diabetic retinopathy or the recurrence of active proliferative diabetic retinopathy (Borris 1995). Secondary outcomes: mortality (all-cause mortality, diabetes related mortality (death from myocardial infarction, stroke, peripheral vascular disease, renal disease, hyper- or hypoglycaemia or sudden death)), morbidity (all-cause mortality, as well as diabetes and cardiovascular related morbidity, for example angina pectoris, myocardial infarction, stroke, peripheral vascular disease, neuropathy, vitreous haemorrhage, retinal photocoagulation, blindness in one eye or bilateral extension, or neuropathy health-related quality of life).</p>

How can non-invasive, accurate, real-time continuous glucose monitoring be achieved?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	Any age	Devices															Langendam MW, Hoijt L, De Vries H, Wentink M, Mustafa AH, Butt AL, Scholten RJPM. Continuous glucose monitoring systems for type 1 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD008101. DOI: 10.1002/14651858.CD008101	Glycaemic control; quality of life; complications and adverse effects; cost adverse effects; specific diabetes complications; among pregnant women birth weight, macrosomia and congenital malformations of the fetus; perinatal complications; CGM derived glycaemic control (with blinded CGM for the control group); nocturnal hypoglycaemic episodes; glucose levels less than 3.9 mmol/L (mean area under CGM curve, number of episodes or both); glucose levels equal or greater than 10 mmol/L (mean area above CGM curve, number of episodes or both); death (all causes); costs overstates, effect modifiers and confounders; potential effect modifiers: patients with hypoglycaemia; unawareness (failure to recognize autonomic warning symptoms before the development of neuroglycopenia (Cryz 2004)); patients with poorly controlled diabetes (defined as HbA1c > 8.0%). Timing of outcome measurement. Analyses will be performed for measurements performed at least 6 months follow-up (short-term effects); six months, 1, 2, 5 and 10 years follow-up (long-term effects); *Primary outcomes
Insulin delivery methods, other than injection.	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Devices															Maso ML, Egberts KJ, Pige M, O'Connor D, Shaw J. Continuous subcutaneous insulin infusion (CSII) versus multiple insulin injections for type 1 diabetes mellitus. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD005103. DOI: 10.1002/14651858.CD005103.pub2	Glycaemic control; adverse effect; treatment related mortality; diabetes related mortality; long term diabetes related complications; non-fatal myocardial infarction; angina pectoris; heart failure; stroke; peripheral vascular disease; renal failure; amputation of at least one digit; vitreous haemorrhage; retinal photocoagulation, blindness in one eye or contact extraction; or neuropathy; health-related quality of life
Is insulin pump therapy effective? (immediate v deferred pump, and comparing outcomes with multiple injections)	Uncertainties identified from patients' questions	No relevant systematic reviews identified	2	Any age	Devices					Diabetes Review 2									Langendam MW, Hoijt L, De Vries H, Wentink M, Mustafa AH, Butt AL, Scholten RJPM. Continuous glucose monitoring systems for type 1 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD008101. DOI: 10.1002/14651858.CD008101	Hypoglycaemia, mortality, diabetes side complications and other adverse effects using validated scales, and cost effectiveness. Secondary outcomes: HbA1c, daily mean blood glucose, fasting blood glucose, post-prandial blood glucose, weight, daily insulin requirement
Is it possible to constantly and accurately monitor blood sugar levels, in people with type 1 diabetes, with a discrete, discrete, non-invasive, implant for example?	Uncertainties identified from patients' questions	No relevant systematic reviews identified	1	Any age	Devices					Diabetes Review 1									Langendam MW, Hoijt L, De Vries H, Wentink M, Mustafa AH, Butt AL, Scholten RJPM. Continuous glucose monitoring systems for type 1 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD008101. DOI: 10.1002/14651858.CD008101	Effects of continuous glucose monitoring systems compared with each other, and compared to conventional self-monitoring of blood glucose in patients with type 1 diabetes mellitus
What are the effects of stress on glucose levels in people with type 1 diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Drug															Tsai H, Song B, Flansfy V. Interventions for ketosis during labor. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD004230. DOI: 10.1002/14651858.CD004230.pub2	Management of diabetes; adverse effects; quality of life, costs
What impact do changing hormones, for example during menstruation, pregnancy and menopause, have on blood glucose levels in women with type 1 diabetes?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Adult	Drug															McIntosh P, Crowther CA, Simmonds L, Muller P. Different intensities of glycaemic control for pregnant women with pre-existing diabetes. Cochrane Database of Systematic Reviews 2010, Issue 9. Art. No.: CD008540. DOI: 10.1002/14651858.CD008540.pub2	Maternal - Hypertension requiring changes in management during pregnancy. Pre-eclampsia. Mode of birth (normal vaginal birth, operative vaginal birth, caesarean section). Neonatal - Perinatal (fetal and neonatal) and perinatal mortality. Congenital fetal anomaly. Death or mortality composite (artificially defined by death, e.g. infant death, shoulder dystocia, bone fracture or nerve palsy). Maternal Mortality. Hypoglycaemia requiring treatment during pregnancy. Cardiovascular events. Glycaemic control achieved (e.g. blood glucose or HbA1c concentrations). Induction of labour. Augmentation of labour. Perinatal trauma. Pregnancy-induced hypertension. Weight gain during pregnancy. Postpartum haemorrhage. Postpartum infection. Placental abruption. Depression. Anxiety. Breastfeeding. Satisfaction with treatment/management. Diabetic ketoacidosis. Neonatal - Large-for-gestational age (birthweight greater than 90th centile; or as defined by individual trial). Macrosomia (greater than 4000 g or as defined by individual trial). Shoulder dystocia. Bone fracture. Nerve palsy. Caesarean section as a result of birth.
What is the benefit of insulin therapy for the treatment of type 1 diabetes?	Uncertainties identified from clinicians' questions	No relevant systematic reviews identified	Any age	Drug															This is an indicative uncertainty. This or a similar submission has been made by Patient1. Professor1 in Ranked 21 in Diabetes PSP	Glycaemic control; adverse effect; treatment related mortality; diabetes related mortality; long term diabetes related complications; non-fatal myocardial infarction; angina pectoris; heart failure; stroke; peripheral vascular disease; renal failure; amputation of at least one digit; vitreous haemorrhage; retinal photocoagulation, blindness in one eye or contact extraction; or neuropathy; health-related quality of life
What is the best way for people with type 1 diabetes, to manage their weight?	Uncertainties identified from patients' questions	Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	Any age	Education and training	Exercise	Physical therapies	Psychological therapy												Thomas D, Elliott EJ. Low glycaemic index, or low glycaemic load, diets for diabetes mellitus. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD006256. DOI: 10.1002/14651858.CD006256.pub2	Behaviour changes; change in weight; change in glycosylated haemoglobin (HbA1c) level; insulin use (fasting plasma insulin, insulin sensitivity, insulin area under the curve, total insulin released per day; insulin-to-glucose ratio); morbidity (for example diabetes and cardiovascular related morbidity like angina pectoris, myocardial infarction, stroke, peripheral vascular disease, neuropathy, retinopathy, nephropathy, axonal dysfunction, amputation); quality of life (using a validated instrument); costs; mortality
What makes self management successful for some people with type 1 diabetes and not others? What treatments are effective in managing neuropathy?	Uncertainties identified from clinicians' questions Uncertainties identified from patients' questions	No relevant systematic reviews identified Reliable up-to-date systematic reviews have revealed important continuing uncertainties about treatment effects	9 Adult	Any age Drug	Education and training					Diabetes Review 9									Lim MPT, Hughes RAC, Witten PJ. Dexamethasone for treating painful neuropathy or chronic pain. Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD007115. DOI: 10.1002/14651858.CD007115.pub2	Self management of symptoms; adverse effects; acceptability; quality of life; cost Change in pain.

Which insulins are safest and have the fewest adverse effects?	Uncertainties identified from patients' questions	Existing relevant systematic reviews are not up-to-date	10	Any age	Drug										Diabetes Ranking 10	<p>Vaith M, Jacobson E, Nri A, Bitterman H. Intermediate acting versus long acting insulins for type 1 diabetes mellitus. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD006207. DOI: 10.1002/14651858.CD006207.p442</p> <p>Saberwalder A, Faria J, Bergsht A, Jellie K, Kovach K, Naranjo M, Gheer R, Plaber TR. Short acting insulin analogues versus regular human insulin in patients with diabetes mellitus. Cochrane Database of Systematic Reviews 2006, Issue 2. Art. No.: CD003287. DOI: 10.1002/14651858.CD003287.p444</p> <p>Richter B, Nelles G. Human insulin versus animal insulin in people with diabetes mellitus. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD003816. DOI: 10.1002/14651858.CD003816.p443</p>				Safety, adverse effects (short and long term), weight gain
Why is the better (but more expensive) insulin pumps and continuous glucose monitoring systems not more available for the treatment of type 1 diabetes, even though they would save the NHS money in the long term due to lower incidence of related conditions/complications?	Uncertainties identified from patients' questions	No relevant systematic reviews identified		Any age	Devices												Langendam MW, Hooff L, De Vries H, Wenthorst M, Muisel AH, Bui AL, Schellevis RFPM. Continuous glucose monitoring systems for type 1 diabetes mellitus (Protocol). Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD008101. DOI: 10.1002/14651858.CD008101			Glycaemic control, adverse effect, treatment related mortality, diabetes related mortality, long term diabetes related complications, nonfatal myocardial infarction, angina pectoris, heart failure, stroke, peripheral vascular disease, renal failure, amputation of at least one digit, vitreous haemorrhage, retinal photocoagulation, blindness in one eye or cataract extraction, or neuroathy, health related quality of life