Optimising glycaemic control in type 1 diabetes

Voting on published recommendations – Key Question 3: psychological/ behavioural interventions

ROUND 1: RESPONSES

Group members were asked to vote on the acceptability and implementability within NHS Scotland of 10 recommendations published in evidence-based guidelines on the topic of psychological/behavioural interventions for people with type 1 diabetes. The threshold of 70% of respondents indicating acceptance was established a priori as the definition of formal consensus. Results are summarised in the table below. Further details about adaptations and actions are included in the accompanying report.

Recommendation	Acceptable (%)		Implementable (%)			Action
	Yes	No	Yes	Yes, with adaptation	No	
1	100.00%	0%	60.00%	26.67%	13.33%	Include
2	93.33%	6.67%	64.29%	28.57%	7.14%	Include
3	100.00%	0%	86.67%	0%	13.33%	Include
4	100.00%	0%	86.67%	6.67%	6.67%	Include
5	100.00%	0%	93.33%	6.67%	0%	Include
6	100.00%	0%	80.00%	20.00%	0%	Include
7	100.00%	0%	86.67%	6.67%	6.67%	Include
8	100.00%	0%	93.33%	0%	6.67%	Include
9	100.00%	0%	93.33%	6.67%	0%	Include
10	100.00%	0%	93.33%	6.67%	0%	Include

The following responses, potential adaptations and comments were returned.

HYPOGLYCAEMIA UNAWARENESS AND DIABETES DISTRESS

Recommendation 1

Recommendation: People with hypoglycemia unawareness, which can co-occur with fear of hypoglycemia, should be treated using blood glucose awareness training (or other evidence-based intervention) to help re-establish awareness of symptoms of hypoglycemia and reduce fear of hypoglycemia.
[Grade A]

Source guideline: American Diabetes Association Professional Practice Committee. 5. Facilitating Behavior Change and Well-being to Improve Health Outcomes: Standards of Medical Care in Diabetes-2022. Diabetes Care. 2022 Jan 1;45(Supplement_1):S60-82. (recommendation 5.42, page S72)
(https://diabetesjournals.org/care/article/45/Supplement_1/S60/138923/5-Facilitating-Behavior-Change-and-Well-being-to)

Country and date of publication: USA, 2022

Guideline quality rating: Rigour of development 79%, Editorial independence 92%, Stakeholder involvement 55%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

9 voted this recommendation as implementable (60%)

4 voted this recommendation as implementable with adaptations (26.67%)

1 voted this recommendation as not implementable (13.33%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 1:

Table 1: suggested adaptations and responses to recommendation 1

Respondent	Response and comments
6	ADAPTATION - Would be of more practical use to clinical teams if the recommendation were to suggest specific interventions. The ADA guidance cites a systematic review (Yeoh et al) that includes a meta-analysis of 6 interventions. Of these, suspect only DAFNE available in UK?
7	ADAPTATION - Blood Glucose Awareness Training is a US Based educational package and comes at a cost. The HARPdoc programme (UK) was shown to be as effective (https://www.nature.com/articles/s41467-022-29488-x) and in addition the Hypo-COMPASS tool developed in Newcastle

8	ADAPTATION - There are no specific validated training programmes for parents and children.
12	ADAPTATION - I think rewording should be considered as it should be considered as an option should the person wish to pursue. Also tech may alleviate these worries, so it's not a one size fits all. Suggestion of rewording could be similar/ same to NICE guidelines "Consider the Blood Glucose Awareness Training (BGAT) programme for adults with type 1 diabetes who are having recurrent episodes of hypoglycaemia (see also the section on hypoglycaemia awareness and management). **[2015]** There are also novel interventions being developed that are comparable to BGAT training, eg A parallel randomised controlled trial of the Hypoglycaemia Awareness Restoration Programme for adults with type 1 diabetes and problematic hypoglycaemia despite optimised self-care (HARPdoc) | Nature Communications
1	COMMENT - Is this training or an alternative available?
3	COMMENT - Although not widely available there are specific hypo awareness structured education programmes available and therefore this would be implementable within Scotland. Arguably advances in technologies such as CLS will be key in address this issue accepting technology isn't for everyone.
4	COMMENT - Surely anyone with unawareness should also be on either CGM or flash monitoring. Unless they are averse to using such technology. The default should be offering the technology.
5	COMMENT - Limited expertise, resource available within Scotland. I am not sure about the generalisability of the original intervention within routine clinical practice outside the original research teams within the UK.
8	COMMENT - For children, the benefit of HCL pump technology is also key to reducing hypoglycaemia and diabetes distress, and this is also key to achieving this goal. Can they be linked?
10	COMMENT - The evidence doesn't show much difference between formal psychological approaches and standard diabetes education type approaches - the key thing is to have some form of evidence-based approach within pathways.
11	COMMENT - Whilst the main intervention now for hypoglycaemia unawareness should be technology based I can see a place for behavioural interventions in those with fear and distress particularly when this is adversely altering behaviour.
12	COMMENT - The title of this recommendation also states diabetes related distress however no recommendations made……There is literature to support that exploring DRD can be helpful in clinical consultations and there are systematic reviews around psychological approaches used to alleviate DRD.
15	COMMENT - The title of this recommendation is Hypoglycaemia Unawareness and Diabetes Distress. Hypo unawareness is covered by this recommendation, but not diabetes distress, which is a major psychological factor in dealing with type 1 diabetes. Is there evidence for

	including screening for diabetes distress/burnout and taking appropriate action in the guidelines?

DEPRESSION

Recommendation 2

Recommendation: Referrals for treatment of depression should be made to mental health providers with experience using cognitive behavioral therapy, interpersonal therapy, or other evidence-based treatment approaches in conjunction with collaborative care with the patient's diabetes treatment team.
[GRADE A]

Source guideline: American Diabetes Association Professional Practice Committee. 5. Facilitating Behavior Change and Well-being to Improve Health Outcomes: Standards of Medical Care in Diabetes-2022. Diabetes Care. 2022 Jan 1;45(Supplement_1):S60-82. (recommendation 5.46, page S73)
(https://diabetesjournals.org/care/article/45/Supplement_1/S60/138923/5-Facilitating-Behavior-Change-and-Well-being-to)

Country and date of publication: USA, 2022

Guideline quality rating: Rigour of development 79%, Editorial independence 92%, Stakeholder involvement 55%

Additional notes: Most evidence supporting this recommendation involves individuals with type 2 diabetes.

Of 15 respondents:

14 voted this recommendation as acceptable (93.33%)

1 voted this recommendation as unacceptable (6.67%)

9 voted this recommendation as implementable (64.29%)

4 voted this recommendation as implementable with adaptations (28.57%)

1 voted this recommendation as not implementable (7.14%)

14 out of 15 (93.33%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 2:

Table 2: suggested adaptations and responses to recommendation 2

Respondent	Response and comments
5	ADAPTATION - Depends on the resource available for supporting people with diabetes across Scotland. The tools and interventions used needs to recognise the remote and rural settings of people with type 1 diabetes.
7	ADAPTATION - Need to clarify the term 'mental health providers' for Scottish Health Care Professionals. My reading of this guideline is that

	they mean psychiatrists. As this is an area of critical shortage in Scotland we perhaps needs to work with Psychiatry and Health Psychology to determine which model might work in the Scottish context.
12	ADAPTATION - As noted in recommendations, most evidence is based on T2D. I am not aware of any relevant, good quality evidence of interpersonal therapy for people with T1D in the literature so would advise this is removed. If basing evidence on previous recommendations, would be more appropriate to cite this https://www.nice.org.uk/guidance/cg91/chapter/Recommendations#step-2-recognised-depression-in-primary-care-and-general-hospital-settings-persistent than the recommendation from ADA. Could anxiety also be considered?
14	ADAPTATION - Recommendation generally applies to adults and not children.
1	COMMENT - Making a referral is easy, but the current waiting list for treatment in our area is over 2 years.
2	COMMENT - unsure if there is a direct pathway for this in Scotland or via GP?
3	COMMENT - This is a vital recommendation and highlights the importance of mental health teams working in collaboration with diabetes teams. Where this happens the outcomes are much better and this would be an important driver for areas where such services don't exist.
6	COMMENT - The ADA guideline also includes a recommendation for annual screening for depression - is this worth including? I appreciate that access to psychology may make this difficult to implement, but don't think this should be a reason for omitting.
9	COMMENT - Assume ongoing depression not responding to standard treatment and associated with diabetes - maybe needs to be more specific?
10	COMMENT - It's a bit woolly as a recommendation. Obviously a good deal of work has been done on this via the SLWG on diabetes and mental health in Scotland.
11	COMMENT - Currently far from enough psychology resource for this so cannot see it being implementable but should still be recommending!
12	COMMENT - Could anxiety also be considered?

EATING DISORDERS

Recommendation 3

Recommendation: Integrated intensive specialist care with the combined involvement of diabetes professionals and mental health professionals with experience in managing eating disorders is recommended to support people with type 1 diabetes and an eating disorder or compulsive insulin omission for weight control. Some patients may benefit from a specialist inpatient eating disorders service.
[STRONG RECOMMENDATION]

Source guideline: Scottish Intercollegiate Guidelines Network (SIGN). Eating disorders 2022. (SIGN publication no. 164). [January 2022, revised August 2022]. (section 8.1, page 22)
(https://www.sign.ac.uk/media/1987/sign-164-eating-disorders-v2.pdf)

Country and date of publication: UK, 2022

Guideline quality rating: Rigour of development 88%, Editorial independence 89%, Stakeholder involvement 94%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

13 voted this recommendation as implementable (86.67%)

0 voted this recommendation as implementable with adaptations (0%)

2 voted this recommendation as not implementable (13.33%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 3:

Table 3: suggested adaptations and responses to recommendation 3

Respondent	Response and comments
1	COMMENT - Very limited availability of inpatient beds for eating disorders in children.
3	COMMENT - There will be a challenge in implementing this recommendation but this cohort are one of the most 'at risk' with T1DM and as such is a very important recommendation.
7	COMMENT - I'm not sure this is fully implementable. Do we have sufficient access to specialist in patient eating disorders services? or even to specialists in this area?

15	COMMENT - If this recommendation is already in a SIGN guideline 164, what is the benefit of repeating it in this guideline?

Recommendation 4

Recommendation: Healthcare professionals should consider managing control of insulin administration alongside psychological interventions to address motivation, distress tolerance and to build trusting relationships with professional and lay carers [CONDITIONAL RECOMMENDATION]

Source guideline: Scottish Intercollegiate Guidelines Network (SIGN). Eating disorders 2022. (SIGN publication no. 164). [January 2022, revised August 2022]. (section 8.1, page 22)
(https://www.sign.ac.uk/media/1987/sign-164-eating-disorders-v2.pdf)

Country and date of publication: UK, 2022

Guideline quality rating: Rigour of development 88%, Editorial independence 89%, Stakeholder involvement 94%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

13 voted this recommendation as implementable (86.67%)

1 voted this recommendation as implementable with adaptations (6.67%)

1 voted this recommendation as not implementable (6.67%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 4:

Table 4: suggested adaptations and responses to recommendation 4

Respondent	Response and comments
10	ADAPTATION - Would need more information here - not clear what exactly is being recommended.
1	COMMENT - Insufficient availability of psychologists to deliver this at present.
7	COMMENT - we need to consider the training elements to implement this. For this to be effective it should be integral to clinical care in which case the wider team need training in these approaches.

8	COMMENT - We need the staff!
14	COMMENT - this specifically related to persons with eating disorders and diabetes, so affects a very small number of people.
15	COMMENT - Same question as for R3, what is the benefit of repeating a recommendation which is already in a SIGN guideline? We could use this 'slot' for a recommendation which is not already stated elsewhere in SIGN.

Recommendation 5

Recommendation: Members of diabetes professional teams should be alert to the possibility of bulimia nervosa, anorexia nervosa and disordered eating in adults with type 1 diabetes with:

- over-concern with body shape and weight
- low BMI
- hypoglycaemia
- suboptimal overall blood glucose control.

[STRONG RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG17 - Type 1 diabetes in adults: diagnosis and management (recommendation 1.15.42, page 45) (https://www.nice.org.uk/guidance/ng17/resources/type-1-diabetes-in-adults-diagnosis-and-management-pdf-1837276469701)

Country and date of publication: UK, 2022

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Additional notes: See also NICE's guideline on eating disorders. [2017, amended 2020] (https://www.nice.org.uk/guidance/ng69)

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

14 voted this recommendation as implementable (93.33%)

1 voted this recommendation as implementable with adaptations (6.67%)

0 voted this recommendation as not implementable (0%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 5:

Table 5: suggested adaptations and responses to recommendation 5

Respondent	Response and comments
6	ADAPTATION - Would be good to include additional practical info on how to identify individuals, as per NICE guideline section 2.1 - include link to this?
3	COMMENT - Delighted to see a significant focus on disordered eating and insulin omission within the recommendations. As before strong endorse this recommendation.
8	COMMENT - Also true of children and young people - what is the definition of adults in this context? 16 years or 18 yrs?

Recommendation 6

Recommendation: Think about making an early (or if needed, urgent) referral to local eating disorder services for adults with type 1 diabetes with an eating disorder. [CONDITIONAL RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG17 - Type 1 diabetes in adults: diagnosis and management (recommendation 1.15.43, page 46) (https://www.nice.org.uk/guidance/ng17/resources/type-1-diabetes-in-adults-diagnosis-and-management-pdf-1837276469701)

Country and date of publication: UK, 2022

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

12 voted this recommendation as implementable (80%)

3 voted this recommendation as implementable with adaptations (20%)

0 voted this recommendation as not implementable (0%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 6:

Table 6: suggested adaptations and responses to recommendation 6

Respondent	Response and comments
5	ADAPTATION - Depends on the access to specialist Eating disorder services in the region.
8	ADAPTATION - I am less sure about this as not involved in any adult diabetes care.
10	ADAPTATION - Often eating disorder clinics do not have expertise in diabetes. I would suggest such referrals are made in collaboration with mental health professionals with experience in diabetes.
3	COMMENT - There is a challenge in that many board areas within Scotland do not have the existing infrastructure to support this recommendation. Many diabetes teams have to go via the GP for referral to generic mental health services who then in turn screen for an ED. This often misses the key role that T1DM and insulin omission has in this instance so supporting more collaboration between ED teams and diabetes HCPs will be vital.
4	COMMENT - In what context though, assume this relates to the previous question.
7	COMMENT - none in addition to those already raised.
11	COMMENT - Duplication (SIGN and NICE)

Recommendation 7

Recommendation: Offer specific family-based behavioural interventions, such as behavioural family systems therapy, if there are difficulties with diabetes-related family conflict.
[STRONG RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG18 - Diabetes (type 1 and type 2) in children and young people: diagnosis and management (recommendation 1.2.111, page 27)
(https://www.nice.org.uk/guidance/ng18/resources/diabetes-type-1-and-type-2-in-children-and-young-people-diagnosis-and-management-pdf-1837278149317)

Country and date of publication: UK, 2015 (2022 update)

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

13 voted this recommendation as implementable (86.67%)

1 voted this recommendation as implementable with adaptations (6.67%)

1 voted this recommendation as not implementable (6.67%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 7:

Table 7: suggested adaptations and responses to recommendation 7

Respondent	Response and comments
8	ADAPTATION - We need some tools to help us determine who needs this help. Seeing a psychologist in clinic would be helpful for those with diabetes related family conflict will help decide who needs to progress to family based interventions as v hard for diabetes Drs to know who will be accepted for such a programme.
1	COMMENT - Again, very limited access to psychology services makes access to therapy limited.
2	COMMENT - Don't think systemic family therapy currently exists in Scotland but certainly used often in England in this context

3	COMMENT - Taking a holistic family centred approach to this issue is key and as such this is an excellent recommendation.
6	COMMENT - The recommendation is implementable, but whether or not there is sufficient capacity within CAMHS is another matter. We would currently struggle to offer this intervention.
10	COMMENT - This seems reasonable but is not an area I am hugely familiar with
15	COMMENT - T1D affects the whole family.

Recommendation 8

Recommendation: Consider a programme of behavioural intervention therapy or behavioural techniques for children and young people with type 1 diabetes, if there are concerns about their psychological wellbeing. Choose a type of therapy based on what the child or young person needs help with:

- health-related quality of life – for example, counselling or cognitive behavioural therapy (CBT), including CBT focused on quality of life
- adherence to diabetes treatment – for example, motivational interviewing or multisystemic therapy
- blood glucose management if they have high HbA1c levels (above 69 mmol/mol [8.5%]) – for example, multisystemic therapy.

[CONDITIONAL RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG18 - Diabetes (type 1 and type 2) in children and young people: diagnosis and management (recommendation 1.2.112, page 27) (https://www.nice.org.uk/guidance/ng18/resources/diabetes-type-1-and-type-2-in-children-and-young-people-diagnosis-and-management-pdf-1837278149317)

Country and date of publication: UK, 2015 (2022 update)

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

14 voted this recommendation as implementable (93.33%)

0 voted this recommendation as implementable with adaptations (0%)

1 voted this recommendation as not implementable (6.67%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 8:

Table 8: suggested adaptations and responses to recommendation 8

Respondent	Response and comments
1	COMMENT - Access to services makes this difficult to implement.
8	COMMENT - It would be good to assess who has these issues and whether they reduce or not when access to HCL pumps.
15	COMMENT - Is this therapy being provided from within the diabetes team, or outwith?

Recommendation 9

Recommendation: Refer children and young people with type 1 diabetes and suspected anxiety or depression promptly to child mental health professionals.
[STRONG RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG18 - Diabetes (type 1 and type 2) in children and young people: diagnosis and management (recommendation 1.2.115, page 27)
(https://www.nice.org.uk/guidance/ng18/resources/diabetes-type-1-and-type-2-in-children-and-young-people-diagnosis-and-management-pdf-1837278149317)

Country and date of publication: UK, 2015 (2022 update)

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

14 voted this recommendation as implementable (93.33%)

1 voted this recommendation as implementable with adaptations (6.67%)

0 voted this recommendation as not implementable (0%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 9:

Table 9: suggested adaptations and responses to recommendation 9

Respondent	Response and comments
8	ADAPTATION - We need some simple baseline measures of this - do we agree to ask an annual validated questionnaire?

EATING DISORDERS

Recommendation 10

Recommendation: For children and young people with type 1 diabetes and an eating disorder, offer joint management involving their diabetes team and child mental health professionals.
[STRONG RECOMMENDATION]

Source guideline: National Institute for Health and Care Excellence (NICE). NG18 - Diabetes (type 1 and type 2) in children and young people: diagnosis and management (recommendation 1.2.118, page 28)
(https://www.nice.org.uk/guidance/ng18/resources/diabetes-type-1-and-type-2-in-children-and-young-people-diagnosis-and-management-pdf-1837278149317)

Country and date of publication: UK, 2015 (2022 update)

Guideline quality rating: Rigour of development 98%, Editorial independence 100%, Stakeholder involvement 98%

Of 15 respondents:

15 voted this recommendation as acceptable (100%)

0 voted this recommendation as unacceptable (0%)

14 voted this recommendation as implementable (93.33%)

1 voted this recommendation as implementable with adaptations (6.67%)

0 voted this recommendation as not implementable (0%)

15 out of 15 (100%) respondents voted that this recommendation was acceptable so consensus has been reached. This recommendation will be included in the draft guideline. The psychology/behavioural interventions subgroup will discuss the context in Scotland and any supporting information which may help with implementation.

Respondents' suggested adaptations and other comments are detailed in table 10:

Table 10: suggested adaptations and responses to recommendation 10

Respondent	Response and comments
5	ADAPTATION – All these psychological interventions depend
3	COMMENT - Another strong recommendation highlighting the importance of close links between diabetes and MH teams.