Inpatient Management of Type 1 Disordered Eating (T1DE) on the Specialist Eating Disorder Unit

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Introduction

Type 1 Disordered Eating (T1DE) refers to a range of presentations in those with a diagnosis of Type 1 Diabetes that uses one or more of a range of behaviours to control their weight. These behaviours include omission of insulin, restriction of food, over exercise, self-induced vomiting and abuse of laxatives or diuretics. More than one of these compensatory behaviours may be present. The most dangerous of these is insulin restriction, which puts patients at higher risk of the short and long term complications of diabetes.

In 2018, NHS England funded a multi-specialty pilot project, the ComPASSION Project, which sought to establish patient pathways and protocols to best care for patients with T1DE, plus educational material for patients and staff in both mental and physical healthcare settings. The project was a collaborative effort between Royal Bournemouth Hospital and the Dorset Eating Disorder Service in the Wessex region[1]. This poster will focus on our experience of treating patients with T1DE on Kimmeridge Court, the inpatient ward of the Dorset Eating Disorder Service.

Proposed diagnostic criteria for T1DE

People with type 1 diabetes who present **with all 3 criteria:**

1. Disturbance in the way in which one's body weight or shape is experienced or intense fear of gaining weight or of becoming overweight.

2. Recurrent inappropriate direct or indirect* restriction of Insulin (and/or other compensatory behaviour**) in order to prevent weight gain.

*Indirect restriction of insulin refers to reduced insulin need/use due to significant carbohydrate restriction.

** Dietary restriction, self-induced vomiting, laxative use, excessive exercise.

3. Person must present with a degree of insulin restriction, eating or compensatory behaviours that cause at least one of the following:

- Harm to health.
- Clinically significant Diabetes Distress.
- Impairment in areas of functioning.

Summary

T1DE is a disorder which health services are increasingly recognising as a serious illness with significant associated risks. Limited evidence exists to guide the management of these patients. We have piloted a staged approach with the aim of gradually supporting the physical recovery of the patient, whilst helping to develop their autonomy to administer their insulin and overcome their eating disorder cognitions and behaviours.

From our experience, these patients cannot be treated without the close collaboration of diabetes and eating disorder services. We believe this model of multi-specialist working can be taken forward to other areas of medicine.

The process from pre-admission to discharge

Pre-admission preparation

- **Patient**
  It is vital to agree a care plan prior to admission. Describing the process, setting a mutually agreed time limit and giving the person with diabetes time to think about the plan is important, as is giving time for them to ask questions and make suggestions.
  Starting the person with diabetes on either flash glucose monitoring or continuous glucose monitoring is advisable if they are not already using this technology.

- **Unit Staff**
  Asking Registered Mental Health Nurses (RMNs) to manage a complex medical condition where the management plan may change frequently is a huge challenge. Teaching sessions with Diabetes Specialist Nurses (DSNs) are critical prior to admission, so that the RMNs are comfortable in monitoring for potential diabetes related complications during treatment which may or may not require medical hospitalisation. Teaching sessions should also include discussion around the sensitive use of language and terminology.

- **Medication**
  The unit needs to ensure that both insulin and a stock of consumables are available. This may mean liaising with the patient's General Practitioner who regularly prescribes for the patient. It may be necessary to purchase equipment from the local pharmacy which may need to be ordered in advance (Testing strips, needles etc.). Appropriate refrigeration for insulin also needs to be considered.

Management during admission

Physical health risks associated with T1DE are typically related to the acute and chronic effects of insulin omission by the individual, the re-introduction of insulin during treatment, the management of hypoglycaemia, starvation and any alternative compensatory behaviours.

Mental health risks include harm to self or others, self-neglect, vulnerability and healthcare disengagement. Suicide is over-represented in patients with eating disorders[2] so staff must be mindful of this, as patients have access to a lethal means of suicide by insulin overdose.

Standard care of those with type 1 diabetes encourages blood glucose readings of between 4-10mmol/L both before and after meals, with the recommendation that at least 70% of readings should fall within this range[3]. This is achieved through provision of background insulin, which is *always* required even when a person with diabetes is not eating, alongside provision of rapid acting insulin which is required when carbohydrates are consumed.

For those with T1DE, insulin omission is a significant issue. **'Normal' blood glucose targets should be temporarily relaxed** and a gradual, personalised insulin re-introduction care plan should be drawn up with a discussion around speed of insulin increase. Initial doses of insulin are not intended to return the blood glucose levels back to 'normal,' but to switch off the production of ketones and therefore reduce further weight-loss and the risk of diabetic ketoacidosis (DKA).

A **step-wise approach** is recommended to **allow time for psychological adjustment** and also to **reduce the risk of treatment related complications** e.g. electrolyte shifts, treatment induced retinopathy and neuropathy which can occur if blood glucose levels are reduced rapidly[4]. With time, the aim is to progressively increase insulin doses to achieve the recommended targets, which may be achieved in some cases beyond the point of discharge from the inpatient unit.

Where total energy or carbohydrate intake has been restricted, establishing a **half portion refeeding meal plan alongside a small starting dose of insulin** would be considered safe. Refeeding vitamins as per national guidance are recommended[5]. The monitoring of electrolytes, particularly during the first week of re-feeding as an inpatient, is extremely important. Refeeding bloods (including renal function, magnesium and phosphate) were checked on day 0, 2 and 5 of the 14 day refeeding protocol. Local guidance for correcting blood levels if abnormal electrolytes are identified should be followed.

An insulin plan for when the patient is physically unwell, known as **'sick day rules',** and contact details for the diabetes team and local out of hours support should be well documented in the care plan. Special attention must be paid to the risk of insulin oedema, pseudo-hypoglycaemia (symptoms of hypoglycaemia felt at higher blood glucose levels) and the emergence of alternative compensatory behaviours as insulin doses are slowly increased.

Re-insulinisation and improvement in physical health can sometimes be associated with a deterioration in mental health, making regular emotional and psychological support an integral part of all care plans.

Discharge

A multi specialist **Discharge Planning Meeting** should be arranged to agree a safe discharge plan, taking into account both the physical and mental health needs when transferring care back into the community. A stepdown in care initially with **day leave from the inpatient ward,** to a **Day Service** following discharge may be appropriate. **Follow-up sessions** with the Dietitian, Diabetes Team and Eating Disorder Practitioner should be in place prior to discharge. **Supportive phone calls** in the first few days following discharge can aid transition into the community and may moderate the immediate risks.

The Multi-Specialty Multi-Disciplinary Team

All members of the multi-disciplinary team involved in the care of someone with T1DE should have an understanding of both specialist areas- diabetes and eating disorders. People living with diabetes are experts in their own self-management and have highlighted that it is difficult to engage with healthcare professionals who are not well versed on the condition. The same is true in terms of eating disorders and understanding the cognitions and firmly held beliefs which drive their behaviours.

The Consultant Diabetologist
The role of the consultant diabetologist is to work closely with the other members of the multi-disciplinary team to oversee the re-introduction of insulin and offer support with the monitoring of the individual's physical health. With the use of continuous glucose monitoring, the consultant diabetologist can review glucose profiles remotely, see the impact of treatment changes and offer advice accordingly. Being part of fortnightly ward rounds helps the person with T1DE appreciate that their diabetes is as important as their mental health in their journey towards recovery. Having two senior clinicians present can be both reassuring and validating. It reinforces the seriousness of the condition, but can also re-assure the individual that all aspects of their care are being considered.

The Diabetes Specialist Nurse
The DSN can be in regular contact with the team and the person with T1DE to address practical issues with the delivery of the re-insulinisation care plan. We found it useful having a DSN present on shifts where insulin being given for a week at least, to support the dosing and administration of insulin by the unit staff.

The Dietitian
The role of the dietitian is to manage refeeding, to formulate the inpatient meal plan and to help the person with diabetes to establish a normalised pattern of eating. Additional work may focus on supporting the patient in tolerating changes in weight and shape, providing strategies such as food management to challenge previously excluded foods and education around the person's energy requirements for weight restoration.

The Consultant Psychiatrist
The consultant psychiatrist leads on risk management and the treatment of comorbid psychiatric illnesses. They support the nursing team to create safe care plans to help patients manage anorexic thoughts and behaviours that may be present. They are also in a position to consider the use of the Mental Health Act.

The Registered Mental Health Nurse
The RMN is responsible for delivery of the care plan and supporting the patient emotionally, as they challenge their fear of weight gain. It can be helpful to consider a staged approach in order to support the person to move forward with re-engaging with taking their insulin and with eating and drinking. This may involve staff initially undertaking blood glucose monitoring, ketone testing, preparing and observing insulin administration and food preparation with the patient gradually taking on these responsibilities over time.

The Psychologist
Weekly support and debriefing meetings facilitated by the psychologist may be valuable for staff that may feel out of their depth. Developing a formulation to guide therapy and to enable understanding of behaviours and emotions is invaluable in the in-patient setting. Areas of focus include the feelings of shame and embarrassment that individuals often experience. Psychological therapy may help address diabetes distress, which we common saw in our cohort of people with T1DE.

References

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