Understanding of Sick Day Rules in People Living with Diabetes

Basi S1, Rai M1 and Saeed MA2,3

1College of Medical and Dental Sciences, University of Birmingham, Birmingham, UK,
2Department of Diabetes, University Hospitals Birmingham, Birmingham, UK,
3School of Clinical and Experimental Medicine, University of Birmingham, Birmingham, UK

BACKGROUND

• There are currently 3.5 million people who have been formally diagnosed with diabetes in the UK and an estimated 549,000 people who are unaware that they have the condition. [1]
• Dysglycaemia during intercurrent illness may make a patient susceptible to acute complications of diabetes such as diabetic ketoacidosis (DKA), hyperglycaemic hyperosmolar state (HHS) and hypoglycaemic coma.
• In order for patients to manage the changes in their blood glucose levels during sickness, education is required.
• NICE, Diabetes UK and TREND UK offer guidelines and leaflets on ‘sick day rules’. [2–5]

AIMS AND METHODS

• This audit assessed the knowledge of patients in the diabetes outpatients department at a large teaching hospital.
• The aim of the audit was to identify any barriers or deficits in the education and understanding of sick day rules.
• Patients with either type 1 (T1DM) or type 2 (T2DM) diabetes answered an anonymous questionnaire regarding management of blood glucose in illness in order to test their knowledge of sick day rules.
• Sick day rules are part of the guidelines published by TREND-UK, which incorporates DAFNE and Diabetes UK guidelines.
• The questionnaire was piloted on a small sample group. We approached 117 patients, 17 of whom were not eligible.

CURRENT NICE GUIDANCE ON DIABETES AND SICK DAY RULES

• Do not stop taking insulin – may need to alter the dose
• Monitor blood glucose levels more frequently – at least every 3 to 4 hours and record the results
• Monitor urine ketones (or blood ketones, if appropriate) – at least every 3 to 4 hours (minimum of 8 times over 24 hours)
  o If urine ketones are over 2+, then contact the GP or Diabetes care team should be contacted immediately
• Aim to drink at least 3 litres (5 pints) of fluid a day to prevent dehydration
• If vomiting and diarrhoea persists, medical advice should be sought immediately
• Maintain a normal meal pattern (some normal meals can be replaced by carbohydrate-containing drinks)
• When feeling better, continue monitoring blood glucose levels until they return to normal.

RESULTS

• 74% had T2DM. 61% were white British. 81% of patients were over the age of 45 years old.
• 19% did not have English as their first language, one-fifth of whom did not communicate in English at all.
• 9.5% of people living with T2DM attended an education course such as DESMOND, whereas 30.8% of people living with T1DM attended a DAFNE course.
• Two-thirds of people living with T2DM and three-quarters of people living with T1DM recalled receiving information regarding their diabetes management when unwell.
• 15.4% of people living with T1DM reported that they would stop taking their insulin if vomiting or not eating, which contradicts current guidelines.

CONCLUSIONS

• The majority of patients have received information regarding sick day rules but are unable to recall them or do not understand them in sufficient detail to implement them.
• Special attention is needed for those who cannot communicate in English.
• The Diabetes UK website does not fully cater for sick day education via their leaflets in other languages. This area of patient education can be optimised.
• More work is required in order to increase numbers attending diabetic education courses such as DESMOND and DAFNE.

References: