Diabetes Simulation Based Training Evaluation

POST

Diabetic emergencies can be common in hospital settings with healthcare staff having to identify symptoms, make a diagnosis and treat the condition.

This survey explores the views of healthcare professionals regarding the management of diabetic emergencies and simulation based training and will take 5-10 minutes to complete. The results will be used to inform educational programmes and training packages.

Name:

Section 1: Background (please circle relevant response**)**

Age (years)	21-25 26-30 31-35 36+
Ward	
Gender	Male Female
Profession	Doctor Nurse Pharmacist
Grade (Medical staff)	FY1 FY2 CT/ST Specialty grade Consultant
Grade (Nurse / Pharmacist)	2 4 5 6 7 8a Student

Please read the following statements and circle the response that best represents your opinion. If you have additional comments please provide these in the space provided in the comments section at the end of the survey.

Section 2: Management of hypoglycaemia

Regarding the management of hypoglycaemia	**Key: SD=** Strongly Disagree**, D=** Disagree**, N=** Neutral, **A=** Agree**, SA=** Strongly Agree.				
I feel confident in my ability to recognise symptoms of hypoglycaemia	SD	D	N	A	SA
I believe that I can recognise hypoglycaemia from a blood glucose measurement	SD	D	N	A	SA
I feel confident in my ability to manage a hypoglycaemiac patient	SD	D	N	A	SA
I believe that I know how often to measure blood glucose levels following an episode of hypoglycaemia	SD	D	N	A	SA
I believe that I know how often to repeat hypoglycaemia treatment where appropriate	SD	D	N	A	SA
I believe that I am familiar with the contents of the hypoglycaemia box	SD	D	N	A	SA
I believe that I can determine the difference between a severe and mild hypoglycaemic episode	SD	D	N	A	SA
I believe that I know when to escalate for help in the management of hypoglycaemia	SD	D	N	A	SA
I believe that I know how to access the inpatient adult hypoglycaemia guidelines	SD	D	N	A	SA

Section 3: Management of diabetic ketoacidosis

Regarding the management of diabetic ketoacidosis	**Key: SD=** Strongly Disagree**, D=** Disagree**, N=** Neutral, **A=** Agree**, SA=** Strongly Agree.				
I feel confident in my ability to recognise symptoms of Diabetic Keto Acidosis (DKA)	SD	D	N	A	SA
I feel confident in my ability to manage diabetic ketoacidosis	SD	D	N	A	SA
I believe that I know how to access the inpatient adult DKA guidelines	SD	D	N	A	SA
I believe that I am confident in using the inpatient adult DKA pathway	SD	D	N	A	SA
I feel confident in monitoring blood glucose levels in a patient with a DKA	SD	D	N	A	SA
I feel confident in monitoring blood ketones in a patient with a DKA	SD	D	N	A	SA

Section 4: The simulation based training session

Regarding the diabetes simulation training session	**Key: SD=** Strongly Disagree**, D=** Disagree**, N=** Neutral, **A=** Agree**, SA=** Strongly Agree.				
I am satisfied with the diabetes simulation training programme	SD	D	N	A	SA
I believe that the diabetes simulation based training was a valuable learning experience	SD	D	N	A	SA
I believe that the diabetes simulation based training has enhanced my understanding of the management of hypoglycaemia	SD	D	N	A	SA
I believe that the diabetes simulation based training has enhanced my understanding of the management of DKA	SD	D	N	A	SA
I believe that I learnt as much from observing my peers as if I was involved in the simulation myself	SD	D	N	A	SA
I am satisfied with the amount of time taken to complete the diabetes simulation based training	SD	D	N	A	SA
I would recommend the diabetes simulation training programme to colleagues	SD	D	N	A	SA
I believe that I will apply what I have learnt in clinical practice	SD	D	N	A	SA
I believe that the diabetes simulation based training will improve care of my patients	SD	D	N	A	SA

Please use this section to provide any additional comments:

_____
_____
_____
_____
_____

Multiple Choice Questions

Please read the following questions and choose the most appropriate response by circling your answer(s).

Hypoglycaemia

1. **Following treatment of hypoglycaemia, blood glucose should be rechecked:**

    a. Every 15 minutes for at least 45 minutes and until blood glucose levels are in normal range

    b. Every 30 minutes and for at least 90 minutes and until blood glucose levels are in normal range

    c. Every hour for at least four hours and until blood glucose levels are in normal range

    d. Four times a day for forty-eight hours

    e. Six times a day for forty-eight hours

2. **Which of the following statements regarding hypoglycaemia are correct?**

    a. Symptoms of hypoglycaemia typically include sweating, dry mouth and oliguria with a blood glucose <4

    b. Symptoms of hypoglycaemia typically include confusion, hunger, sweating and tremor with a blood glucose of <5.5

    c. Symptoms of hypoglycaemia typically include sweating, dry mouth and polyuria with a blood glucose of <5.5

    d. Symptoms of hypoglycaemia typically include sweating, dry mouth and polyuria with a blood glucose of <4

    e. Symptoms of hypoglycaemia typically include hunger, sweating and tremor with a blood glucose of <4

3. **Which of the following statements is correct?**
    a. The ward hypoglycaemia box contains glucose tablets only

    b. The ward hypoglycaemia box contains glucose tablets, gluco-juice and glucose gel

    c. The ward hypoglycaemia box contains glucose tablets, glucose gel and lucozade

    d. The ward hypoglycaemia box contains glucose tablets, glucose gel and glucagon

    e. The ward hypoglycaemia box contains glucose tablets, glucose gel and intravenous glucose

4. **Which of the following statements regarding severity of hypoglycaemia is true?**

    a. A hypoglycaemic patient who is confused and aggressive has mild hypoglycaemia

    b. A hypoglycaemic patient who is unable to swallow has moderate hypoglycaemia

    c. A hypoglycaemic patient who is conscious and able to swallow has mild hypoglycaemia

    d. A hypoglycaemic patient who is unconscious has moderate hypoglycaemia

    e. A hypoglycaemic patient who is disoriented has severe hypoglycaemia

5. **Regarding the treatment of hypoglycaemia, which of the following statements are true:**

    a. An unconscious patient could be treated with oral glucose gel, massaged into their gums

    b. Severe hypoglycaemia could be treated with 1mg intravenous glucagon injection

    c. Severe hypoglycaemia could be treated with 100mL intravenous 5% glucose

    d. Severe hypoglycaemia could be treated with 100mL intravenous 10% glucose

    e. Severe hypoglycaemia could be treated with 100mL intravenous 20% glucose

Diabetic ketoacidosis

1. **Typical symptoms of diabetic ketoacidosis can include:**

    a. Polyuria, thirst, haematuria, fever, and vomiting

    b. Polyuria, haematuria, drowsiness, fever and vomiting

    c. Polyuria, thirst, weight loss, vomiting and dehydration

    d. Polyuria, haematuria, weight loss, diarrhoea and rash

    e. Polyuria, haematuria, weight loss, vomiting and dehydration

2. **Which of the following set of blood values would most likely suggest diabetic ketoacidosis:**

    a. Blood glucose 12mmol/L, pH 7.38, Bicarbonate 19mmol/L, Ketones 1.1

    b. Blood glucose 12mmol/L, pH 7.25, Bicarbonate 12mmol/L, Ketones 3.1

    c. Blood glucose 14mmol/L, pH 7.31, Bicarbonate 17mmol/L, Ketones 2.1

    d. Blood glucose 18mmol/L, pH 7.31, Bicarbonate 15mmol/L, Ketones 2.1

    e. Blood glucose 21mmol/L, pH 7.38, Bicarbonate 17mmol/L, Ketones 2.1

3. **Which of the following would be an appropriate initial treatment for a diabetic ketoacidosis?**

    a. 1L NaCl 0.9% over 8 hours and an intravenous insulin infusion if potassium level > 3.5mmol/L

    b. 1L NaCl 0.9% over 6 hours and an intravenous insulin infusion if potassium level > 3.5mmol/L

    c. 1L NaCl 0.9% over 4 hours and an intravenous insulin infusion if potassium level > 3.5mmol/L

    d. 1L NaCl 0.9% over 2 hours and an intravenous insulin infusion if potassium level > 3.5mmol/L

    e. 1L NaCl 0.9% over 1 hour and an intravenous insulin infusion if potassium level > 3.5mmol/L

4. **Which of the following TWO statements are correct**

    a. An intravenous insulin infusion should be stopped when the blood glucose is between 4-12mmoL/L and the patients regular insulin started at the next meal time

    b. An intravenous insulin infusion should be stopped when the patient is ready to eat and their regular insulin started the following morning

    c. An intravenous insulin infusion should be stopped and a glucose potassium insulin infusion (GKI) started when the blood glucose levels are less than 15mmol/L

    d. Once your patient is ready to eat and the blood glucose levels are 4-12mmol/L, start their regular meal time insulin and stop the intravenous insulin infusion or GKI 30-60 mins later

    e. Once blood glucose levels are between 4-12mmol/L, an intravenous insulin infusion should be stopped and a glucose potassium insulin infusion started.

5. **Which of the following TWO insulins should be continued with an intravenous insulin infusion?**

    a. Novomix insulin

    b. Apidra insulin

    c. Toujeo insulin

    d. Humulin M3 insulin

    e. Levemir insulin

Thank you for completing the survey

Please return completed surveys to Mark Rowson once completed Mark.rowson@sthk.nhs.uk