

Supplement 1. Diabetes Education Questionnaire with correct responses to knowledge items indicated by underlined italics.

Part 1. Confidence

Please select the ONE BEST response choice that most accurately reflects your opinion for the following nine questions.

I am confident in my knowledge of:

- | | | | | |
|---|-------------------|----------|-------|----------------|
| 1. appropriate use of blood glucose meters. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 2. appropriate frequency and timing of blood glucose self-monitoring. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 3. appropriate use of personal continuing blood glucose monitor(s), i.e. FreeStyle Libre CGM. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 4. how to administer insulin using a syringe. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 5. how to administer insulin using insulin pens. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 6. how to administer GLP-1 receptor agonists. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 7. teaching patients how to detect low blood sugar. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 8. teaching patients how to treat low blood sugar. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |
| 9. teaching patients how to manage high blood sugar. | Strongly DISAGREE | Disagree | Agree | Strongly AGREE |

Part 2. Knowledge

Please select the ONE BEST answer choice for the following nine questions.

1. Which ONE of the following options is correct in regard to changing the depth of puncture made by lancets?
 - a) Lancing devices allow for adjusting the depth of puncture.
 - b) There is no way to change the depth of the puncture made by lancets.
 - c) Decreasing the depth of lancet puncture is not recommended.
 - d) The only way to decrease the puncture depth is to use lancets with shorter needles.
2. Which ONE of the following options is the most appropriate glucose self-monitoring plan for a patient on glargine at bedtime and lispro three times daily with meals?
 - a) Once a day before breakfast
 - b) Fasting every morning, before lunch and dinner, and at bedtime.
 - c) Before breakfast and at bedtime
 - d) Before breakfast, before and after each meal and at bedtime.
3. Which ONE of the following options is true about the FreeStyle Libre continuous glucose monitoring system?
 - a) It needs calibration two times a week.
 - b) Patient needs to scan blood sugars at least three times a day, every eight hours
 - c) It has a unique alert system if blood sugars are low
 - d) You can link it to an insulin pump
4. Which ONE of the following options outlines the most appropriate steps for injecting 10 units of NPH U-100 insulin vial?
 - a) Draw 10 units of NPH into syringe, inject to abdomen.
 - b) Shake vial vigorously until NPH is cloudy, draw 10 units of NPH into syringe, inject to abdomen.
 - c) Mix until NPH is clear, draw 10 units into the syringe, inject to abdomen.

d) Roll vial in hands until consistently cloudy, draw 10 units of air into syringe, inject the air in vial, draw 10 units of NPH into syringe, inject to abdomen.

5. Which ONE of the following options is the correct instruction to provide to a patient who is on Lantus SoloStar® pen 50 units daily?

- a) Lantus SoloStar® pen only dials to 25 units; patient needs to give two injections of 25 units each.
- b) Prime pen before each use, dial to 50 units and inject under the skin.
- c) Prime pen before first use only, dial to 50 units and inject under the skin.
- d) Dial pen to 50 units and inject under the skin.

6. Which ONE of the following options is correct in regard to administering Ozempic® (semaglutide)?

- a) Ozempic® is a single use pen; given once daily; no priming is needed.
- b) Ozempic® is a multi-dose pen; given once daily; no priming is needed.
- c) Ozempic® is a multi-dose pen; given once weekly; each pen needs to be primed only before first use
- d) Ozempic® is available as a multi-dose pen; given once daily; each pen needs to be primed only before first use

7. Which ONE of the following options is correct in regard to hypoglycemia?

- a) Palpitations, sweating, tremors are symptoms of hypoglycemia.
- b) A patient with hypoglycemia may be confused.
- c) It is important to check blood sugar if experiencing any symptoms of low blood sugar.
- d) a, b, and c are all correct.

8. Which ONE of the following options is the MOST APPROPRIATE instruction for a patient with diabetes, who is conscious, to treat a blood sugar of 58 mg/dL?

- a) Inject Glucagon 1mg intramuscularly.
- b) Treat with 4 ounces of juice or soda and re-check blood sugar 15 minutes later
- c) Consume a tablespoonful of peanut butter and a protein bar and recheck blood sugar 15 minutes later
- d) Treat with 4 ounces of juice or soda plus peanut butter and re-check blood sugar 15 minutes later

9. Which ONE of the following options is the MOST APPROPRIATE instruction for an ill patient who has blood sugar in 300s.

- a) Stop using your insulin and go to the emergency department.
- b) Use twice as much insulin that you usually use.
- c) Drink plenty of water, take your diabetes medications, eat your usual meals, check blood sugar every 4 hours. Go to the emergency department if vomiting or blood sugar does not improve.
- d) Drink plenty of water, take your diabetes medications.

Demographics

1. Do you have any experience working with patients with diabetes?
 - a. Yes
 - b. No
2. Which one of the following best describes the setting in which you worked with patients with diabetes?
 - a. Community pharmacy
 - b. Office-based clinic
 - c. Hospital, inpatient
 - d. Hospital, outpatient
 - e. Nursing home
 - f. Health fairs
 - g. Other: (please specify)
3. How long have you been working in this setting(s) in which you worked with patients with diabetes?
 - a. <1 year

- b. 1-5 years
 - c. >5-10 years
 - d. >10-15 years
 - e. >15 years
4. How many diabetes patients did/do you see in a week on average?
- a. 0 to 5
 - b. >5 to 10
 - a. >10 to 15
 - c. >15
5. What is the nature of your experience working with diabetes patients?
- a. Educating patients on administration of their diabetes injectable medications
 - b. Educating patients on blood sugar self-monitoring
 - c. Educating patients on self-managing/problem solving low or high blood sugar
 - d. Other: (please specify)

Supplement 2. Univariable Logistic regression model showing the probability of answering the knowledge question correctly at various levels of confidence. A) Glucose meter use, B) Insulin syringe administration, D) Glucagon like peptide 1 receptor agonist administration, E) Hyperglycemia treatment.

