**Continuing Education Test**

**Bedside Glucose Testing in Critically Ill Patients and Understanding Diabetes Testing: Where Are We, and Where Are We Going? April 2017**

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**Test Questions**

Circles must be filled in, or test will not be graded. Shade circles like this: ☐ Not like this: ❌

1. **The benefit(s) of using handheld bedside glucose meters include:**
   - [ ] a. portability and ease of use.
   - [ ] b. the fact that small samples of blood are required.
   - [ ] c. quick turnaround time of results.
   - [ ] d. all of the above

2. **Factors that contribute to potentially erroneous bedside glucose results in the critically ill include:**
   - [ ] a. low hematocrit level, vasopressor presence, ascorbic acid, capillary blood specimen dilution.
   - [ ] b. high hematocrit level, vasopressor presence, vitamins, capillary blood specimen dilution.
   - [ ] c. low WBC count, low hematocrit level, high blood pressure, blood specimen dilution.
   - [ ] d. low hematocrit level, high blood pressure, vitamins, capillary blood specimen dilution.

3. **What consideration(s) is/are used to define a critically ill status?**
   - [ ] a. the patient’s location in a healthcare institution.
   - [ ] b. the patient’s health condition.
   - [ ] c. a combination of the patient’s location in a healthcare institution and the patient’s health condition.
   - [ ] d. none of the above

4. **Currently, the FDA has cleared one commercially available handheld blood glucose meter for capillary measurement in the critically ill population of patients.**
   - [ ] a. True
   - [ ] b. False

5. **The use of handheld blood glucose meters in critically ill patients is a practice that is considered:**
   - [ ] a. endorsed.
   - [ ] b. validated.
   - [ ] c. off-label.
   - [ ] d. accredited.

6. **According to CMS rules, off-label use of devices should result in:**
   - [ ] a. a change to high complexity testing.
   - [ ] b. only RNs performing the test.
   - [ ] c. a higher frequency of running QC within a 24-hour period.
   - [ ] d. all of the above

7. **The use of an off-label device requires appropriate measures to be taken that require validations, personnel training, competency, and periodic method evaluations of the device.**
   - [ ] a. True
   - [ ] b. False

8. **Disregard for the standards set in place for off-label use can lead to potential:**
   - [ ] a. discredited lab reputation.
   - [ ] b. CLIA license default.
   - [ ] c. federal intervention.
   - [ ] d. all of the above

9. **The CDC states that, in addition to the diabetic population, the number of Americans with prediabetes is estimated to be more than:**
   - [ ] a. 45 million people.
   - [ ] b. 66 million people.
   - [ ] c. 75 million people.
   - [ ] d. 88 million people.

10. **According to the article by Dr. Zakowski, what percent of the total worldwide healthcare expenditure is allocated to diabetes?**
    - [ ] a. 4 percent
    - [ ] b. 9 percent
    - [ ] c. 12 percent
    - [ ] d. 16 percent

11. **It is estimated that most people with prediabetes will develop type 2 diabetes within ____ years.**
    - [ ] a. 2
    - [ ] b. 5
    - [ ] c. 7
    - [ ] d. 10

12. **Significant complications experienced by people with diabetes include heart disease, stroke, retinopathies, blindness, and kidney disease.**
    - [ ] a. True
    - [ ] b. False

13. **Which are the most common testing methods used to diagnose and monitor diabetes?**
    - [ ] a. fasting plasma glucose and hemoglobin A1c
    - [ ] b. fasting plasma glucose and plasma insulin levels
    - [ ] c. hemoglobin A1c and plasma insulin levels
    - [ ] d. none of the above

14. **Factors that interfere with fasting plasma glucose (FPG) testing include all but the following:**
    - [ ] a. fasting noncompliance
    - [ ] b. exercise
    - [ ] c. thalassemia
    - [ ] d. acute illness/stress

15. **Non-fasting glucose values are most appropriately used to manage which condition(s)?**
    - [ ] a. average long-term glucose levels
    - [ ] b. acute hyperglycemia
    - [ ] c. hypoglycemia
    - [ ] d. b and c

16. **Any condition that shortens or lengthens red cells’ average lifespan has the potential to give false-high or false-low hemoglobin A1c levels.**
    - [ ] a. True
    - [ ] b. False

17. **The analytical variable(s) of concern that may affect hemoglobin A1c results is/are:**
    - [ ] a. manual dilution errors
    - [ ] b. interfering substances in the specimen
    - [ ] c. manual pretreatment of specimen before testing
    - [ ] d. all of the above

18. **Which organization(s) has/have endorsed the use of hemoglobin A1c for diabetes screening and diagnosis?**
    - [ ] a. ADA
    - [ ] b. Endocrine Society
    - [ ] c. WHO
    - [ ] d. all of the above

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