Improving Treatment Success Rates for Type 2 Diabetes: Balancing Safety, Cost, and Outcome

Physician Continuing Medical Education

Accreditation Statement

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(Universal Activity Number 0809-9999-11-079-H01-P).

Type of activity

Knowledge-based.

Posttest Questions

1. **T2DM treatment and management have become more complex in the past decade. Which of the following factors does not contribute to this added complexity?**
   a. The introduction of multiple new drug classes to treat T2DM
   b. The identification of new physiologic targets beyond beta-cell failure and insulin resistance
   c. Treatment recommendations calling for earlier, more intensive therapy
   d. Safety concerns surrounding metformin and insulin therapy

2. **Which of the following statements regarding the use of incretin therapy for T2DM is not true?**
   a. Two classes of incretin-related therapies are available: GLP-1 receptor agonists and DPP-4 inhibitors
   b. GLP-1 receptor agonists bind to GLP-1 receptors in the pancreas
   c. DPP-4 inhibitors impede the function of the gut enzyme DPP-4
   d. Ideally, GLP-1 receptor agonists and DPP-4 inhibitors should be administered as combination therapy

Method of Participation and Request for Credit

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Media

Journal supplement

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3. **According to American Diabetes Association guidelines, which of the following does not make a patient a good candidate for aggressive A1C lowering?**
   a. Long duration of diabetes
   b. No significant cardiovascular disease risk
   c. Long life expectancy
   d. No history of hypoglycemia

4. **According to the American Association of Clinical Endocrinologists' T2DM guidelines, which treatment is preferred for use in combination therapy, due to its beneficial impact on postprandial glucose excursions, body weight, satiety, and gastric emptying?**
   a. DPP-4 inhibitors
   b. GLP-1 agonists
   c. TZDs
   d. Alpha-glucosidase inhibitors

5. **One of the following does not accurately describe VBID; which of the following statements is not accurate?**
   a. VBID programs are intended to promote the use of treatments that provide high benefits relative to cost
   b. VBID does not discourage patients from utilizing services whose benefits do not justify their cost
   c. VBID is a strategy developed to improve the quality of healthcare while simultaneously reining in spending
   d. VBID initiatives in general tend to focus on chronic disease management and typically target prescription drugs

6. **Which of the following tools are essential for successful VBID rollout?**
   a. An adequate health information technology system
   b. A plan to achieve immediate, short-term cost savings
   c. Identification of disease states to target programmatically
   d. Both a and c

7. **Which of the following statements regarding the "Data, Design, Delivery, and Dividends" model for VBID development for T2DM treatment is not true?**
   a. Plans should "put first things last" and hold off on making budgetary decisions until the project has been implemented
   b. Plans should assess their current clinical data systems
   c. Plans must determine whether levers for implementation will be sequenced, segmented, and/or titrated
   d. Plans must decide how to best implement the levers and address key questions

8. **The US Federal Coordinating Council describes CER as "the conduct and synthesis of systematic research comparing different interventions and strategies to prevent, diagnose, treat and monitor health conditions." Which of the following is not an example of CER?**
   a. Randomized controlled trial
   b. Bayesian mixed-treatment comparison
   c. Cost-benefit analysis
   d. Meta-analysis

9. **All but 1 of the following are true regarding Markov modeling for cost-effectiveness; which of the following statements is not accurate?**
   a. In a Markov model, diseases are broken into several mutually exclusive "states"
   b. Markov modeling is used to characterize random processes over time
   c. Markov modeling is especially useful in chronic disease states
   d. Markov modeling typically runs using a single, computer-generated cycle

10. **Which of the following study types is not considered a type of cost-effectiveness analysis?**
    a. Cost-utility analysis
    b. Pragmatic clinical trial
    c. Cost-benefit analysis
    d. Both b and c

11. **Which of the following statements accurately describes Bayesian MTC analysis?**
    a. Bayesian MTC analysis depends heavily on frequentist statistical approaches
    b. Most randomized controlled trials use Bayesian MTC analysis
    c. Bayesian MTC analysis takes into account the uncertainty surrounding an event as well as uncertainty due to incomplete knowledge or understanding of an event
    d. Bayesian MTC analyses can only be conducted within a direct comparison study

12. **A key function and limitation of Markov modeling is that it is "memoryless." In this context, what does "memoryless" mean?**
    a. In a Markov model, the probability of a patient moving from one disease state to another is not dependent on disease states already experienced
    b. No patient history is maintained in the Markov model until patient death occurs; at this point, patients can be considered to be in multiple model "states"
    c. Markov models can utilize data obtained from randomized controlled trials, but these data are typically eliminated before the Markov cycle completes
    d. The Markov model sometimes has to be restarted to determine which disease state a patient is in