

## Therapeutics Decision-Making (TDM) Examination Candidate information sheet

For the Therapeutics Decision-Making (TDM) Examination, therapeutics is defined as the application of knowledge in the pharmacologic and nonpharmacologic management of medical issues (e.g., acute, chronic) at the level required of a family physician practising independently in Canada.

The TDM Examination is three hours long. Each test form has 40 cases of patient-based scenarios. Each case has one to four questions. There are approximately 100 questions per test form. Regardless of the number of questions, each case is equally important to the total score.

The cases represent common or important presentations from across four dimensions of care:

1. Health promotion and illness prevention
2. Acute illness
3. Chronic illness
4. Safety and adverse effects

The questions assess your critical-thinking and decision-making skills. You will be assessed on your ability to:

- Make specific treatment decisions and provide rationales when asked
- Provide the name of the drug, dose, route, frequency and/or duration for admission orders and prescriptions. In some contexts, you will be asked only for the class of drug.
- List common adverse effects and drug interactions
- Manage common adverse effects and drug interactions
- Advise a patient regarding the management of their medical issue

Cases and questions will also assess your awareness and understanding of alternative therapies, respect for negotiating a therapeutic agreement, and recognition of drug misuse and substance use disorders.

You should always read the information in the clinical scenario carefully. Then, read the questions carefully and enter the most appropriate therapeutic or management options. Responses will be scored according to your understanding of clinical issues and the relevance and appropriateness of your answers.

### Examination tips

#### Format and scoring:

- **Text boxes will be provided to enter your responses.** The number of text boxes will vary for each question.
- **Type in only one response per text box, unless otherwise specified in the question**

- **Provide only the number of responses that are requested.** You will receive points only for the number of responses that are requested in the question. Your responses will be scored in the order they appear in each text box; any remaining responses will not be scored.
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- If you think that no treatment is indicated, please type “No treatment is indicated” in the text box. If the number of responses required for a question (e.g., List 2) is not indicated, use your best judgment when responding to that question.
- Points are not deducted for incorrect responses.

## Management of information

- Focus and coherence
  - **Be brief**
    - Word your responses carefully. Correct answers are usually a single word or a few words.
    - Partial marks will be given for partial information
  - **Be specific**
    - For example, ‘thyroid disease’ is an unacceptable response when ‘hyperthyroidism’ is the correct response
- Drug nomenclature
  - **Some questions ask about a class or type of drug** (e.g.,  $\beta$ -blocker) rather than a specific drug. This will be clearly noted in the question.
  - **Use generic drug or medication names** whenever possible
- Drug dosage, route of administration, frequency and duration of treatment
  - **Read questions carefully** to determine if the drug dose, route of administration, frequency and duration of treatment need to be specified in your answer
  - Do not provide a range (e.g., 5-10 d or 10-20 mg) unless specifically asked
  - When asked to provide a drug dose you should be reasonably confident about the proper dose. No credit is given for an incorrect dose; however, no penalty is assigned for an incorrect dose.
  - Drug dose may be expressed as an actual dose (e.g., 200 mg) or in mg/kg of body weight (some questions will provide the patient’s weight in the clinical scenario)
  - For your reference, a normal value range is provided in parentheses in the case next to the test results (e.g., sodium, 128 mmol/L [135–145]).

## Communication of information

### Spelling, acronyms and abbreviations

- Abbreviations
  - Only use very common abbreviations (e.g., CBC for complete blood count, IV for intravenous). All other abbreviations may not be clear, even for a specific context, and should be written out in full.

- Drug names should be spelled out completely rather than abbreviated. However, some very common abbreviations are acceptable (e.g., ASA, NSAID, SSRI).
- Spelling
  - Correctly spelling of drug names is important
  - Spelling errors will not hurt your score if the error does not interfere with the test marker understanding your answer

## Additional resources

This list of reference materials will help you study for the TDM Examination. We strongly suggest that you review these resources to help you prepare.

The Medical Council of Canada (MCC) does not require candidates to purchase or use any particular resource. The following reference materials may be used by MCC test committees to validate examination questions.

- Canadian Patient Safety Institute. (2020, March). *The safety competencies: Enhancing patient safety across the health professions* (2nd ed.).
- World Health Organization. (2022). *International Statistical Classification of Diseases* (11th revision).
- Alberta Health Services. (2022). *Bugs and Drugs*.
- Wolters Kluwer (2022). *UptoDate*.
- Public Health Agency of Canada. (2022). *Infectious diseases*.
- Public Health Agency of Canada. (2022). *Canadian immunization guide*.
- College of Family Physicians of Canada. (2020, May). Part III: Priority topics and key features. In *Assessment objectives for certification in family medicine* (2nd ed., p.57).
- *Choosing Wisely Canada campaign*. (2020).
- *Canadian Medical Association Journal*. (2022). *Guidelines*.

**A 79-year-old woman presents to the clinic with chronic back pain that is adequately treated with acetaminophen. A radiograph reveals generalized osteopenia, an L2 compression fracture, and wedging of the thoracic vertebrae.**

1. What class of medication may be prescribed for this patient? Indicate 1.
2. What nonpharmacologic intervention should be considered for this patient? Indicate 1.
3. What potential long-term serious adverse effect of this class of medication should be disclosed to this patient before prescribing? Indicate 1.
4. What is a contraindication to this class of medication? Indicate 1.

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### Answer key

#### Question 1

Bisphosphonate

#### Question 2 (Any 1 of the following)

1. Fall prevention advice/strategies.
2. Physical activity.
3. Weight-bearing exercise.

#### Question 3

Osteonecrosis of the jaw or just osteonecrosis

#### Question 4 (Any 1 of the following)

1. Esophagus abnormalities (e.g., Barrett esophagus, esophageal motility abnormalities [achalasia, stricture]).
2. Chronic kidney disease.
3. Impaired renal function.
4. Inability to stand/sit for more than 30 minutes after drug ingestion.

**A 56-year-old woman presents to the clinic for follow-up after a recent hospital discharge. She had been hospitalized for a stroke. While in hospital, several new medications were added to her drug regimen.**

1. What strategies will help this patient's adherence to her new medication regimen?  
List 6.

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### Answer key

#### Question 1 (Any 6 of the following)

1. Use generic or lower-cost drugs (reduce cost of drugs).
2. Refer her for social assistance (help with purchase, if necessary).
3. Discuss adverse effects carefully.
4. Provide careful instructions and good patient education about the illness and the treatment.
5. Give written instructions in plain language.
6. Suggest timing aids/reminders/routines/blister packs or a dosette.
7. Choose medications with less frequent dosing—once daily, if possible.
8. Reduce the number of drugs. If possible, avoid polypharmacy or therapeutic duplication.
9. Use a single pharmacy.
10. Engage the patient's family members as a reminder.
11. Engage the patient in their choice of medication.
12. Schedule follow-up visits. Ensure the patient is able to follow up urgently if adverse effects or questions arise.

**A 68-year-old woman presents to the clinic with a 24-hour history of symptoms consistent with progressive, isolated, left-sided facial nerve paralysis.**

1. What drugs should be prescribed? List 2, each from a different class (drug name, dose, route, frequency, and duration are required).
2. What advice should be given regarding eye care for this patient? List 3.
3. What is the optimal time frame from symptom onset to treatment initiation to achieve maximum benefit?

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### Answer key

#### Question 1 (Any 2 of the following)

1. Prednisone 50 mg PO once daily for 7 days.
2. Valacyclovir 1000 mg PO TID for 7 days.  
Synonyms:
  - Famciclovir 500 mg PO TID for 7 days
  - Acyclovir 800 mg PO 5 times daily for 7 days

#### Question 2

1. Liberal use of lubricating drops throughout the day.
2. Lubricating ointment to be used at night.
3. Tape the eye closed at night while sleeping.

#### Question 3

3 days (72 hours)

**A 23-year-old woman presents to the clinic with a history of mild asthma symptoms, often exacerbated by exercise.**

1. What class and medication are recommended as first-line management for this patient? Indicate 1 class and drug name. Give a rationale for your response.
2. You prescribe this medication. What behaviours or actions may adversely affect the intended outcome of the treatment that you have prescribed? List 3.
3. What measures can this patient take to minimize asthma symptoms? List 3.

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### Answer key

#### Question 1

Short-acting  $\beta$ 2 agonist; Salbutamol

Rationale: Mild asthma mostly triggered by exercise

#### Question 2 (Any 3 of the following)

1. Not getting the prescription filled.
2. Taking the drug at the incorrect time (not using inhaler before exercise).
3. Forgetting to use medication.
4. Incorrect inhaler technique.

#### Question 3 (Any 3 of the following)

1. Avoid known allergens and/or irritants.
2. Avoid smoking.
3. Learn about asthma triggers, symptoms, and therapy (patient education/self-management).
4. Regularly use a  $\beta$ 2 agonist prior to exercise.