

EPEC pre-/post-test questions with answers and explanations

Module 1

M1-1. Mrs. Lanzini is a 68-year-old widow with 4 living adult children who has advanced congestive heart failure, New York Heart Association class IV, despite optimal afterload reduction and diuretic therapy. During an office visit, after a full discussion, she indicates that she would like her priest to make medical decisions for her in accordance with Catholic doctrine in the event she cannot make decisions for herself. The best advice you should give her is to:

- a. write a letter to the doctor indicating her wishes
- b. complete a statutory living will
- c. complete a Statutory Power of Attorney for Health Affairs
- d. choose one of her children to make decision for her

Answer: c

The question is aimed at determining knowledge. The only legally recognized way that the patient can authorize someone to make medical decisions for her, other than her legal next of kin, is through the Statutory Power of Attorney for Health Affairs. A letter to the doctor would support this choice, and help the physician determine if the power of attorney were acting in her best interests. In most states, a Living Will is only operative if it is determined that she has a terminal illness and is unable to make decisions. She has the ability to choose anyone she wants as an agent; there is no need to choose her child.

M1-2. Mr. Robinson is a 34-year-old pipe fitter who has been admitted with liver failure secondary to hepatitis. He lacks capacity to make decisions for himself. He has not indicated any prior wishes or completed any advance directive form. The physician is best guided by:

- a. duty to prolong life at all cost
- b. medical judgment about what is best
- c. state law governing substituted judgment
- d. the family's wishes even though the physician suspects selfish motives

Answer: c

This question is aimed at the issue of substituted judgment in the absence of written advance directives. Laws governing who makes decisions for the patient in the absence of clear evidence about what the patient wanted vary from state to state. Many, but not all, recognize "next of kin" in the absence of written directives. Although medical judgment is important, it is advisory to the person who has the authority to speak for the patient. This is determined by state law. The family is not always the best decision maker.

- M1-3. Miss Monadnock is a 93-year-old former waitress with osteoarthritis, hypertension, and a prolapsed mitral valve. She completed a Living Will and named her niece as her power of attorney for health affairs some time ago. She was hospitalized for pneumonia, 3 months ago. In accordance with her wishes, she was intubated for 5 days and had an extended period of recovery. She is again living alone in her own home. On what occasion(s) should her plans be revisited?
- at the next suitable office visit
 - when the patient develops moderate atrial fibrillation
 - neither
 - both

Answer: d

This question is aimed at understanding how advance care planning should be woven throughout a care plan. Appropriate times to review advance directives are both when things are going well (particularly after a major health care event) and with new developments. They shouldn't be accomplished once and never reviewed again.

- M1-4. Mr Arteresian is an 84-year-old retired judge recently discharged from the hospital for evaluation of syncope. He completed a Living Will and named his son as his power of attorney for property and health affairs. In the office, he says he would also like to make plans about his funeral and wants to arrange for his body to go to the medical school. Your best response is to:
- tell him to talk to his son
 - note this is the medical record
 - both of the above
 - neither of the above

Answer: c

This question is aimed at the larger sphere of advance planning that is appropriate for patients with advanced disease. His son, as power of attorney for property, will be responsible for his father's affairs after death, including disposition of his body. The information that the son is power of attorney for health affairs and property as well as the father's wishes is useful in the medical record both to ensure that the power of attorney acts in accordance with the patient's best interests and to ensure continuity and communication.

Module 2

- M2-1. Mr Petty is a 58-year-old fast-food worker who had unresectable rectal cancer. The cancer initially disappeared from CT scans after combination chemotherapy and radiotherapy. He has always indicated he has faith in God and the doctor and has never demonstrated much interest in the details of therapy. Yet, he has always made decisions by himself. At the present office visit, he complains of abdominal

discomfort and poor appetite; physical examination shows a large nodular liver. After establishing an appropriate setting, you would next:

- a. tell him cancer has spread to the liver
- b. tell him he's in God's hands now
- c. determine what he understands
- d. determine who he relies on for support

Answer: c

This question is aimed at understanding the steps of information giving. It is best to ascertain the patient's understanding of his situation as well as how much information he wants to know before giving the new medical information. Euphemisms, even well intentioned, won't build a therapeutic relationship for the future. They may be interpreted as abandonment. Finding out his support system is important, but not the best answer to the question.

M2-2. Mrs Twardowsky is a 62-year-old former cleaning woman with poorly controlled diabetes mellitus and consequent peripheral neuropathy, renal insufficiency, and coronary artery disease. She has advance congestive heart failure that is not responding well to medical therapy. She is not a candidate for interventional approaches. Her daughter asks you not to talk to her about the serious nature of her health because it "would take away all hope." Your best next response is to:

- a. ask daughter more about what kind of hope she would like her mother to have
- b. agree and wait for a future opportune time
- c. disagree and tell the patient the truth
- d. tell the daughter you have to tell the patient the truth

Answer: a

This question is aimed at the physician's response when the family says "don't tell." The best next step is to assess why the family member is making the request. Confronting the family by insisting you will tell or going around them will only create mistrust and likely endanger the therapeutic relationship. Not telling is also not appropriate without ascertaining that is the patient's desire. After talking with the family member, the next aim may be to have a family meeting to ask the patient how she wants medical information handled.

M2-3. Mr Oliver is a 53-year-old farmer with non-small-cell lung cancer metastatic to liver and bone. In talking about the future course of his illness, he begins to cry. His wife is also tearful. Besides having facial tissues available, the next best approach is to:

- a. continue with the discussion
- b. reassure him
- c. be silent
- d. tell them to stop

Answer: c

This question is aimed at the physician's response to strong emotion. Silence is best at first. Telling them to stop crying directly or providing premature reassurance gives them the same message, that you are not interested in supporting them through their emotional response to the news. Continuing with the discussion in spite of tears can also give the same unfortunate message.

M2-4. You are completing a family meeting for a patient with moderately advanced Alzheimer's-type dementia in which you have been describing the nature and likely course of the disease. The patient is unable to participate. In concluding the meeting, it is most important to:

- a. summarize the plan for care
- b. reassure the family that all will be well
- c. tell them to be strong
- d. summarize their decisions about code status

Answer: a

This question is aimed at understanding how to finish the interview. It is best to conclude with a summary of the plan for the next steps. Reassurance that "all will be well" may not, in fact, be true. Avoid unintentional messages to not complain. Although a decision about code status may be part of the plan, it should generally not be a single focus of care and should only be summarized in the context of the total plan of care, including what will be done.

Module 3

M3-1. Mr Bennett is a 43-year-old man status post kidney transplant secondary to lupus erythematosus. He is on chronic immunosuppressive therapy and has chronic pain secondary to multiple arthritides. Although an airline pilot, he has been unable to work for the past year. He might be expected to be suffering in which sphere?

- a. emotional
- b. practical
- c. spiritual
- d. all of the above
- e. none of the above

Answer: d

This question is aimed at understanding the conceptual framework for suffering. He is likely to be suffering not just in the physical sphere (pain), but in emotional, social (practical), and spiritual spheres.

M3-2. Mr Wright is seen in the office for follow-up of his coronary artery disease and diabetes mellitus. During the interview, which comment most suggests psychological distress?

- a. "My leg hurts right here."
- b. "I'm so worried about my wife."
- c. "I don't know how I'll get to my appointment."
- d. "Why did I get this disease?"

Answer: b

This questions is aimed at understanding the meaning of patients' questions in the context of assessing suffering. Worry falls in the psychological distress dimension. Although there is overlap, the other possible answers are focused on the physical (pain), practical (transportation), and spiritual (questions beginning with "Why").

M3-3. Mrs DeGuilio is an 84-year-old woman with rheumatoid arthritis affecting hands, feet, and knees. Today she notes increased swelling and pain in her knees. An important question in pain assessment is:

- a. Have you noticed a fever?
- b. How does it affect your life?
- c. Have you lost weight?
- d. How are you feeling, overall?

Answer: b

This question is concerned with pain assessment. The effect of pain on a patient's life is an important component. The other questions may be part of the overall assessment of the patient, but don't relate to the pain assessment.

M3-4. Mrs Patton is a 54-year-old woman with advanced amyotrophic lateral sclerosis and is bedbound with increasing muscle weakness. What question most suggests spiritual suffering?

- a. Why is this happening to me?
- b. How will I pay for my care?
- c. What is likely to happen next?
- d. Will I suffocate?

Answer: a

Assessing spiritual suffering is important. Questions that begin with "Why" are often related to the spiritual dimension. They need to be recognized for what they are—simple answers or biologically based answers (eg, your muscles are weak) will miss the mark. The other possible answers relate to social (financial and practical) and physical (prognosis and symptom management) issues.

Module 4

M4-1. Neuropathic pain is:

- a. usually treated with anti-inflammatory agents
- b. a result of disordered nerve function
- c. due to direct stimulation of intact nociceptors
- d. rarely responsive to opioid analgesics

Answers: b

This question concerns understanding pain pathophysiology. Neuropathic pain is a result of disordered nerve function. It does not result from inflammatory processes and does not relate to ongoing stimulation of intact nociceptors. Opioids are effective in managing neuropathic pain. However, relief is usually incomplete without the addition of adjuvant or coanalgesics.

M4-2. Mrs Martinez is a 42-year-old woman who has breast cancer metastatic to bone and liver. Her pain has been well controlled on sustained-release morphine, 120 mg po bid, for 3 months. Which of the following is most likely to occur as a result of this treatment?

- a. psychological dependence
- b. physical dependence
- c. pharmacologic tolerance
- d. respiratory depression

Answer: b

This question is aimed at understanding pharmacology of opioids. Physical dependence (the appearance of a withdrawal syndrome if the drug is stopped suddenly) should be expected. Now that she is on a stable dose, the dose is unlikely to need to be escalated unless her disease worsens. Progressive pharmacologic tolerance is unlikely. There is no evidence that opioids cause psychological dependence. Respiratory depression in an otherwise well woman should be expected.

M4-3. Mr Martin has locally advanced transitional cell cancer of the bladder with chronic pelvic and abdominal pain. Which of the following is most important in determining the maximum dose of oral morphine during dose titration?

- a. pain relief
- b. respiratory depression
- c. risk of overstepping regulatory limits
- d. strength of pill

Answer: a

This question is aimed at understanding pharmacology of opioids. There is no upper limit to pure agonist opioid analgesics. The dose is limited by side effects. Respiratory

depression is exceedingly uncommon when doses are titrated to pain relief. There are no a priori limits to morphine dose escalation. Pill strength is not an issue —patients may need to take many pills to achieve the desired dose.

M4-4. Pharmacologic tolerance develops to all of the following side effects of opioid analgesics *except*:

- a. constipation
- b. nausea
- c. respiratory depression
- d. sedation

Answer: a

This question is aimed at understanding adverse effects of opioids. Constipation is nearly universal and does not get better with repeated dosing. Pharmacological tolerance develops within days to weeks to the common adverse effects such as nausea and sedation, as well as to the uncommon effect of respiratory depression.

Module 5

M5-1. Dr Arlington is a 54-year-old obstetrician/gynecologist with amyotrophic lateral sclerosis. After an office visit, he asks you to help him commit suicide. You should respond next by saying:

- a. “Tell me more about what you have in mind.”
- b. “I would never do that.”
- c. “Are you having trouble sleeping?”
- d. “Where do you have pain?”

Answer: a

This question is aimed at understanding how to therapeutically respond to requests for PAS. The first step is to clarify precisely what the patient is asking for. This leads to the development of better understanding as well as the foundation of a therapeutic relationship. First telling the patient that you won't do it, or moving too quickly into physical and psychological assessment, will likely miss important information.

M5-2. A 43-year-old woman with AIDS has aortic, mitral, and tricuspid insufficiency secondary to multiple episodes of endocarditis. She has severe peripheral and pulmonary edema that is poorly controlled with diuretics. She has no appetite or thirst. She is seeking to regain some control as she faces death. What options might she have?

- a. refusing ICU admission and mechanical ventilation
- b. stopping diuretics and starting comfort only care
- c. stopping eating and drinking
- d. all of the above
- e. none of the above

Answer: d

This question is aimed at what is legal and ethical near the end of life. Patient have the right to refuse any treatment, including food and water.

- M5-3. A long-time patient of yours has had several strokes that have left him debilitated and dependent on nurse's aides for feeding and toileting. He has asked you to help him commit suicide. This request should be:
- held privately between the two of you
 - immediately referred to the hospital ethics committee
 - also discussed with other health care colleagues
 - declined without discussing the subject

Answer: c

This question is aimed at understanding how to handle requests for PAS. Discussing requests with other helps to share the emotional burden, as well as bringing additional expertise and perspective. Keeping the discussion completely private runs the risk of transference and countertransference reactions. Yet, there is no need to formally consult an ethics committee. Declining to discuss it at all is likely to miss the unmet need that underlies the request.

Module 6

- M6-1. Mr Arlinsonon is a 32-year-old man who has advanced AIDS. He has lost weight and reports a poor appetite. He sleeps poorly. He reports a lack of energy and spends most of his time at home. During a visit to his physician, he reports feeling hopeless and helpless. He is comfortable talking about the fact that he will die. A clinical suspicion of major depression is most supported by:
- changes in appetite and sleep patterns
 - feelings of hopelessness and helplessness
 - lack of energy
 - comfort in talking about the prospect of death

Answer: b

This question is aimed at understanding the diagnosis of depression in patient with advanced illness. Psychological symptoms such as hopelessness and helplessness are the most sensitive and specific. Changes in appetite, sleep, and lack of energy are common to both depression and the advance stages of most illnesses. Talking about the prospect of dying is a health response to the situation, it is not de facto evidence of depression.

M6-2. To treat a diagnosis of major depression for Mr Arlinson, with a goal of response within a few days, the best initial drug of choice would be:

- a. methylphenidate
- b. amitriptyline
- c. fluoxetine
- d. lorazepam

Answer: a

This question is aimed at understanding the pharmacologic treatment of depression. The psychostimulant methylphenidate acts within days without excessive or worrisome side effects. Amitriptyline is associated with unwanted side effects. Fluoxetine is likely to be effective, but will take several weeks to see an effect. Lorazepam is an anxiolytic sedative, not an antidepressant.

M6-3. Mrs Mugia has advanced osteoarthritis, advanced Alzheimer's-type dementia, and COPD. She has chronic pain in her back, hips, and knees that is moderately well controlled with ibuprofen. She is hospitalized for an exacerbation of her COPD. Her overall level of consciousness has declined. On the third hospital day she begins moaning and crying out. Delirium is:

- a. unlikely
- b. rarely related to medications
- c. sometimes misinterpreted as pain
- d. usually inevitable

Answer: c

This question is aimed at diagnosing delirium. Delirium is very common in those hospitalized with advanced disease. Moaning and crying out, particularly in the setting of diminished level of consciousness, is a frequent sign of delirium. Particularly in the patient with a history of pain, it may be misinterpreted. Although common, delirium is not inevitable, and its treatment should be pursued. She may also need analgesics.

M6-4. Mrs Mugia's agitation worsens, and the goal is to reverse the symptoms of delirium. She is initially best managed with:

- a. midazolam
- b. haloperidol
- c. diazepam
- d. amitriptyline

Answer: b

This question is aimed at understanding the treatment of delirium. Haloperidol, a relatively nonsedating neuroleptic, is the most appropriate when the goal is reversing the delirium. It can be given PO, IV, or SC. IM is possible but not necessary. The benzodiazepines midazolam and diazepam may sedate her, but won't reverse the

delirium. Their use would be appropriate if the goal was to settle symptoms, but not reverse the delirium. Amitriptyline is an antidepressant.

M6-5. Mrs Yokohama is 98 year old with multi-infarct dementia. She is mostly nonverbal and has 24-hour help at home. Her caregiver complains that the patient is agitated and calls out at night, but is somnolent during the day. She thinks she is anxious and wants you to give her something to “calm her down.” The best choice would be:

- a. trazodone
- b. amitriptyline
- c. diazepam
- d. diphenhydramine

Answer: a

This question is aimed at understanding the treatment of anxiety/agitation. There often seems to be day/night reversal. Of the medications listed, trazodone is best because it is a hypnotic with anxiolytic properties and it is well tolerated in the elderly and very ill. Amitriptyline, while sedating, will have undesirable anticholinergic side effects. Diazepam has a long half-life and is unlikely to be effective. Diphenhydramine, while initially sedating, will have undesirable anticholinergic side effects and is unlikely to have any sustained effect on anxiety and agitation. Neuroleptic medications might also be appropriate.

Module 7

M7-1. Mr Lee is a 58-year-old grocer who was recently diagnosed with stage IV non–small-cell lung cancer that is not operable and who is in the office today. He would like to live as long as possible. On average, chemotherapy will prolong life by 6 weeks; it is not known to be curative. At this visit, it would be best to:

- a. avoid discussing dying
- b. identify the additional priorities
- c. support the hope of living a long time
- d. introduce the concept of hospice

Answer: b

This question is aimed at understanding how to set appropriate goals. There are many possible goals of therapy—Mr Lee has identified only one. It would be best to identify additional goals and priorities. Avoiding any discussion of dying or supporting unrealistic hope is unlikely to lead to appropriate decision making. Although discussing the role of hospice care is appropriate, it is unlikely to be the next best thing to discuss.

M7-2. Mrs Gupta is a 74-year-old matriarch of a large and devoted family. She has advanced diabetes mellitus and severe renal insufficiency. She has been mostly homebound, where she lives with her daughter and her family. Gangrene of her

right foot has developed. After discussing the reasons for amputation and the risks and benefits of amputation, the most important factor is the:

- a. patient's viewpoint
- b. chances for renal failure
- c. likelihood of successful operation
- d. family's viewpoint

Answer: a

This question is aimed at understanding how priorities are set when determining goals of care. Although it is possible to pursue a goal of prolonged life with an operation that many would consider appropriate, it is the competent patient's viewpoint that is most important. Although the family may play an important role, it is the patient's viewpoint that is most important.

M7-3. Mr McCullough is an 89-year-old accountant who has been in a nursing home for 2 years with a diagnosis of dementia. He lacks decision-making capacity. He was recently hospitalized for pneumonia thought to be secondary to aspiration. In considering the placement of a gastrostomy tube, the physician is best guided by:

- a. the power of attorney for health affairs
- b. the hospital ethics committee
- c. the closest family member even though the patient has given power of attorney to a non-family member
- d. the Living Will

Answer: a

This question is aimed at understanding how to set goals when the patient lacks decision-making capacity. The power of attorney for health affairs makes the surrogate decision maker the legally recognized individual with authority to provide guidelines to the physician. The Living Will is unlikely to be operative as his situation is not imminently terminal. The family member has no standing in the presence of a legitimate power of attorney for health affairs. There is no need for the hospital ethics committee.

M7-4. Mrs LeBlanc is a 63-year-old housewife with squamous cell cancer that has metastasized to her right axilla. It causes her intense pain with movement. She has declined an operation that might relieve her pain. No further radiation or chemotherapy is thought to be helpful. Hospice referral has been advised. Her husband insists that she not give up hope. An appropriate response is to:

- a. tell him there is no hope for cure
- b. tell him there is always room for a miracle
- c. ask him what he is hoping for
- d. ask him to delay talking with the hospice

Answer: c

This question is aimed at understanding how to negotiate goals with family member. Physicians should approach families with the same approach as for patients. Probe with an open ended question that permits him to describe what he is hoping for and his understanding and expectations for the future. Telling him bluntly there is no hope for cure, or fostering unrealistic hope is unlikely to be therapeutic. Putting off plans to help cope with reality will only promote crisis-oriented interventions.

Module 8

M8-1. Mrs Kuzel is a 43-year-old nurse who was the driver in a motor vehicle accident. She is brought to the emergency department comatose with multiple contusions and lacerations. Her husband, who was not involved in the accident, arrives. The extent of her injuries is not yet known. After stabilizing the patient, the emergency room physician should:

- a. wait until more is known in order to give information
- b. withhold information to maintain hope
- c. discuss information, including uncertainty
- d. have the nurse discuss the condition

Answer: c

This question is aimed at understanding how to communicate in the setting of sudden illness and uncertainty. It is best to discuss information, even if much remains unknown. Waiting and withholding information is not likely to help the husband cope in the long run. These tasks shouldn't be delegated.

M8-2. Ms Shega is a 21-year-old woman who has a history of right lower quadrant pain localizing at McBurney's point. The surgical team thinks she has a ruptured appendix and needs immediate surgery. However, she is refusing consent and the surgical team asks you to join the conversation because you know her better. She seems panicked. You should next:

- a. tell her she has no choice; it is a life-and-death matter
- b. tell her mother that she needs to talk to her daughter to find out why she won't have the operation
- c. reassure her that you will be available to her at any time
- d. ensure that she is of clear mind and understands the risks, benefits, and alternatives to the operation

Answer: d

This question is aimed at understanding how to set goals when there is some anxiety and urgency. The most important next step is to ensure that the patient has the capacity to make decisions and has an accurate understanding of her situation. Threatening her with the gravity of the decision is unlikely to allay her panic. Reassurance of your continued

involvement, and involvement of others who know her well, will also be important, but not the most important next step.

M8-3. Mr Anderson is a 74-year-old former attorney who arrives in the emergency department short of breath and minimally responsive. He does not have decision-making capacity. He has extensive small-cell lung cancer that is recurrent despite chemotherapy and radiotherapy. His wife says, “He is a fighter and wanted everything done,” when discussing plans for chemotherapy and radiation. You would now stabilize the patient. After discussing his poor prognosis, you would next want to discuss with his wife:

- a. a time-limited trial of ventilatory support
- b. resuscitation status
- c. care directed only at comfort
- d. his goals for care in view of the poor outlook

Answer: d

This question is aimed at understanding how to set goals when the patient lacks decision-making capacity. First establish goals in light of the present information using the decision maker or person granted power of attorney for health issues, who is most able to speak for the patient, in this case, his wife. Previous expressions of priorities may no longer be appropriate. After setting general goals, discussion of various treatments may be appropriate.

M8-4. In discussing uncertainty, it is best to:

- a. reassure the patient and family that all will be well
- b. warn the family that the outcome is likely to be poor
- c. discuss possible outcomes, including likelihood
- d. say that only God knows what will happen

Answer: c

This question is aimed at understanding how to set goals when there is uncertainty. It is best to discuss all possible outcomes, not just the worst or best. It is rarely helpful to foster unrealistic hope with reassurances that “all will be well” when it isn’t likely. Similarly, it is unhelpful to only paint the gloomiest picture, or to distance oneself completely from all responsibility.

Module 9

M9-1. Mrs Magilicuddy is a 93-year-old seamstress with hemiparesis due to several previous strokes and hypertension. She was intubated and admitted to the ICU after another large hemorrhagic stroke. Three weeks have passed. Her family, who has cared for her at home, is continuously at her bedside and expects her to wake up as she has done in the past. In addressing possible withdrawal of ventilation, indicate that continued ventilation:

- a. is futile
- b. is standard treatment
- c. is a treatment option
- d. requires an ethics consult

Answer: c

This question is aimed at understanding how to set goals when there is disagreement. Identifying all of the options for the patient's care, rather than stressing what won't be done or calling in the "ethics police," is a better first option. Continued ventilation in the face of poor prognosis is not standard.

M9-2. In a meeting with Mrs Magilicuddy's family, it is best to begin by:

- a. asking about their understanding
- b. telling the medical condition
- c. telling them care is futile
- d. asking them to discontinue therapy

Answer: a

This question is aimed at understanding how to discuss treatments when there is conflict. Begin by asking about their understanding of diagnosis and prognosis. Starting an interview with open-ended questions where the family does most of the talking is a far more effective strategy than telling them information they may not be in a position to understand or accept. If there is hostility or disagreement, it is best to have it on the table.

M9-3. Mrs Magilicuddy's family related that the last time she was intubated, a physician told them they should disconnect the ventilator because she was unlikely to recover. The physician conducting the meeting might next want to explore:

- a. trust of the medical system
- b. belief in science
- c. family relationships
- d. belief in miracles

Answer: a

This question is aimed at understanding how to discuss treatment when there is disagreement. Even though it may feel "dangerous," it is best to explore areas where there is distrust, rather than to gloss over it. Focusing the interview in areas of biomedical science, other family, or religion does not address issues of mistrust.

M9-4. In approaching conflict over medical futility, which should be the last action among the following?

- a. consult chaplaincy
- b. consult ethics committee
- c. transfer care to another physician
- d. transfer care to another facility

Answer: d

This question is aimed at understanding a fair-process approach to settling conflict. Involving other disciplines, consulting other colleagues, including the ethics committee, or transferring care to another physician should precede transfer to another facility.

Module 10

M10-1. When a patient is treated with morphine for breathlessness, the drug is titrated to:

- a. respiratory rate
- b. pulse oximetry
- c. patient's relief
- d. oxygen concentration

Answer: c

This question is aimed at understanding how to symptomatically treat breathlessness. Patient self-report is the gold standard. Neither respiratory rate, pulse oximetry, nor blood oxygen concentration will tell you whether breathlessness is relieved.

M10-2. Which of the following antiemetics acts primarily at dopamine receptors?

- a. haloperidol
- b. ondansetron
- c. meclizine
- d. scopolamine

Answer: a

This question is aimed at understanding the pathophysiology of nausea and vomiting. Haloperidol is a potent dopamine antagonist. Ondansetron antagonizes serotonin. Meclizine is an antihistamine. Scopolamine is an anticholinergic.

M10-3. Which of the following is a stimulant laxative at conventional doses?

- a. psyllium
- b. docusate
- c. senna
- d. sorbitol

Answer: c

This question is aimed at understanding the treatment of constipation. Only senna is a stimulant laxative in this list. Psyllium is a bulk-forming laxative. Docusate at conventional doses is a stool softener. Sorbitol is an osmotic laxative.

M10-4. Which of the following antidiarrheal agents acts through opioid receptors?

- a. diphenoxylate
- b. atropine
- c. bismuth
- d. octreotide

Answer: a

This question is aimed at understanding how to symptomatically treat diarrhea.

Diphenoxylate is a synthetic opiate commonly available in combination with atropine, an anticholinergic. Octreotide is a synthetic analog of somatostatin.

Module 11

M11-1. Mrs Montanez is a 64-year-old woman with hypertension, diabetes, and renal failure who has required dialysis for the past 6 years. She has been increasingly debilitated and leaves the house only to come to dialysis appointments. She has been admitted to the hospital with a large hemorrhagic stroke. Although she is awake, she does not have the capacity to make decisions. In discussing the continuation of dialysis with her family, the physician should begin by:

- a. telling the patient and family about the current condition
- b. telling the patient and family the benefits and burdens of dialysis
- c. asking what they understand about her current condition
- d. asking what they understand about dialysis

Answer: c

This question is aimed at understanding how to discuss treatment decisions of withdrawing or withholding therapy. Begin with asking the patient/family what they understand about her condition before telling any new information. Although asking about dialysis is important, it is more focused question that should come after a more general open-ended question.

M11-2. Survival to discharge from a general inpatient hospital after CPR for patients already hospitalized outside of a monitored setting is:

- a. 1%-4%
- b. 5%-10%
- c. 15%-20%
- d. 25%-30%

Answer: a

This question is aimed at understanding accurate data that should underpin decision making. A reasonable goal of resuscitation is to have the person able to leave the hospital. The outcome of unwitnessed (and unmonitored) arrests in the hospital setting is very poor.

M11-3. Feeding tubes are associated with all the following *except*:

- a. aspiration pneumonia
- b. infection
- c. GI obstruction
- d. empyema

Answer: d

This question is aimed at understanding accurate data that should underpin decision making. Feeding tubes are associated with clinically significant rates of infection and GI obstruction. They don't reduce the risk of aspiration pneumonia. They have not been reported to cause empyema.

M11-4. When withdrawing a ventilator and providing sedation, which pair of drug classes should be used?

- a. opioid and benzodiazepine
- b. opioid and antihistamine
- c. benzodiazepine and antihistamine
- d. antimuscarinic and antihistamine

Answer: a

This question is aimed at understanding how to pharmacologically manage and prevent symptoms in the setting of withdrawing a ventilator. The chief symptoms are breathlessness and anxiety. The best drug classes are, respectively, opioids and benzodiazepines.

Module 12

M12-1. Mr Larsson is a 62-year-old building maintenance worker who is dying of advanced congestive heart failure. He has not had much pain during his illness. He has been unconscious most of the past 24 hours. The nurse calls to report that he has begun to moan. The family is very distressed. This is most likely to be:

- a. terminal delirium
- b. crescendo pain
- c. spiritual distress
- d. depression

Answer: a

This question is aimed at understanding how to manage the last hours of living. This condition is most likely terminal delirium. Pain does not suddenly appear in the last hours of life. Although spiritual distress and depression could be operative, it is too late to do anything about them. The goal is to settle the patient for as peaceful a death as possible that will not sear the family's memory.

M12-2. Miss Montaldo is dying. She has been essentially comatose for the past 12 hours. Her family is at her bedside stroking her hair. However, over the past hour they have noticed a “choking or gurgling” sound in her throat. The most likely medication to be helpful is:

- a. morphine
- b. scopolamine
- c. diphenhydramine
- d. lorazepam

Answer: b

This question is aimed at understanding how to manage symptoms at the end of life. Accumulation of bronchial secretions is common, and commonly misinterpreted by family and caregivers as “choking.” A medication with a drying effect like scopolamine is most appropriate.

M12-3. Mr Cianci is a 45-year-old former football player who is dying of advanced testicular cancer. He is in the hospital, most somnolent, but has periods of lucidity which his wife and children cherish. His urine output has declined over the past 48 hours. He has 4+ pitting edema to his thighs bilaterally. You should:

- a. increase IV fluids
- b. administer IV dopamine
- c. discontinue IV fluids
- d. administer morphine

Answer: c

This question is aimed at understanding how to manage symptoms at the end of life. He has edema that he cannot mobilize. IV fluids will not help the urine output and will worsen the edema. Although morphine may help pain, it makes more sense to minimize the edema by not exacerbating it.

M12-4. Mr Barnard has had good pain control with regular doses of morphine. He is now unconscious and near death and has begun to moan and be restless. You should administer:

- a. oxygen
- b. morphine
- c. scopolamine
- d. lorazepam

Answer: d

This question is aimed at understanding how to treat symptoms in the last hours of life. He most likely has terminal delirium; there is no reason to suppose an increase in pain. The goal is to settle the delirium. Therefore, lorazepam is the best choice. Morphine may, because of accumulating metabolites, actually make the situation worse.