

## Pediatric Pain Intervention Practice Questions

Raphael is a 17-year-old male who was seen in ED. Patient was hit by a car and driver did not stop. Reported brief LOC at scene. He was transported from scene to ED via EMS. Upon arrival in the ED, he was AAOx3, GCS was 15. He has complaints of left leg and left arm pain.

1. Upon arrival to the ED, Raphael is complaining of 9/10 pain in his left leg. After his assessment and he is stabilized what should you do?
  - A. Give IV Ketorolac.
  - B. Give IV morphine 0.05mg/kg.
  - C. Give PO acetaminophen.
  - D. Wait to see if his pain gets better.
2. Raphael arrives back from the OR. He is using his pain medication, hydromorphone, appropriately with no side effects. However, to optimize his pain medication, the provider adds IV acetaminophen. What is important to understand about IV acetaminophen?
  - A. It has a ceiling effect.
  - B. It is an adjuvant therapy.
  - C. It is opioid sparing.
  - D. All of the above
3. A few days after his second surgery Raphael complains of burning pain in his left foot. He has multiple medications ordered for pain. Based on your knowledge, which medication could assist in alleviating this type of pain?
  - A. Acetaminophen
  - B. Clonidine
  - C. Gabapentin
  - D. Morphine
4. Raphael has been on hydromorphone for over seven days, and he reports that he feels like the medication is not helping as much as it was a few days ago. He is scheduled for one more surgery tomorrow. You know that he is building up a tolerance. What can you do to help Raphael? Select all that apply.
  - A. Call the provider to change the hydromorphone to an equianalgesic dose of another opioid.
  - B. Call the provider to increase the dose.

- C. Do nothing; he will be okay.
  - D. Tell him that he is imagining that the medication is not helping.
5. Raphael has been taking opioids for over one month. He is healing well from his surgeries and is ready to go into inpatient rehab. What is an important point to remember about taking opioids longer than seven days? Select all that apply.
- A. A weaning plan needs to be initiated.
  - B. Dependence may develop.
  - C. Discontinue the pain medication as he is progressing.
  - D. Repeated doses of opioid medication can lead to addiction. Raphael is becoming addicted.
6. Raphael is now completely healed and no longer requires opioid medication for pain. What is the best way to dispose of his extra medication?
- A. Flush it down the toilet.
  - B. Give it to his friend who recently had knee surgery.
  - C. Keep it in his medicine cabinet at home for future use.
  - D. Throw it in the trash can.
7. The clinician is caring for Jackie, a 12-year-old that is one day post-op from a posterior spinal fusion. Jackie is NPO and is rating her pain as a 7 on a 0 to 10 pain scale. The clinician is aware that the first line of pharmacologic pain management for this child should include:
- A. Adjuvant analgesics
  - B. Opioids
  - C. Non-opioids
  - D. Anti-inflammatory
8. The mother of a child being treated with opioids for sickle cell pain crisis reports to the clinician that the child is still in significant pain after being treated with morphine but is also experiencing severe itching as a side effect of the morphine. The clinician suggests adding a non-opioid medication in combination with the morphine rather than increasing the amount of morphine. This is an effective strategy because of which of the following characteristics of non-opioids?
- A. Ceiling of analgesia
  - B. Equianalgesic
  - C. Opioid-sparing effect
  - D. Tolerance

9. The clinician has been assigned to take care of a 17-year-old male recently diagnosed with chronic musculoskeletal pain. He has been prescribed the antidepressant duloxetine, but states that he doesn't think it is doing anything to help him feel better. His first dose was taken five days ago. Based on your knowledge of how drugs work in the body, you expect that he won't reach full effect of the medication until which of the following occurs?
- A. Another medication is added to create synergy.
  - B. The medication reaches steady state.
  - C. The active metabolites of the drug are managed.
  - D. The half-life decreases allowing for more drug to remain in his system.
10. A 13-year-old has been receiving morphine for two weeks for intractable cancer pain. The current dose of morphine is no longer relieving the child's pain. The mother tells the clinician she is afraid her child is addicted to morphine. The clinician explains to the mother that the child is experiencing which of the following:
- A. Addiction
  - B. Ceiling of analgesia
  - C. Dependence
  - D. Tolerance
11. A 10-year-old male is on the unit post-ATV accident. He has had multiple surgeries; incisions and drainages for an open tibia-fibula fracture and multiple open wounds. The patient has been receiving opioids for about two weeks. He has been transitioned from IV morphine to oral oxycodone. It is one week later, and the fracture is healing well, and wounds are closed. He is now taking a non-opioid for his pain; however, he is experiencing irritability, sweating and diarrhea. These are symptoms of which of the following?
- A. Ceiling of analgesia
  - B. Tolerance
  - C. Dependence
  - D. Withdrawal
12. The clinician is caring for a child with chronic pancreatitis and kidney failure. The child requires opioids for management of her pain. The clinician should consider which of the following when administering pain medication?
- A. The child may require a higher than usual dose.

- B. The child may require a lower than usual dose.
- C. The child should require the usual recommended dose.
- D. The child should not be receiving opioids.

13. Brendan is a 9-year-old post-clavicle fracture repair patient. He is tolerating meals without any complaints of nausea or vomiting. What is the preferred route for administering opioids for pain management?

- A. Intramuscular
- B. Intravenous
- C. Oral
- D. Transdermal

14. Madeline is a 13-year-old who had a Nuss procedure done to correct pectus excavatum. Her pain has been managed well with IV morphine and now with PO oxycodone and acetaminophen. She is ready for discharge. She will be sent home with a prescription for oxycodone. Her mom would like to know how to dispose of the unused medication if there is any left over.

- A. Give the medication away.
- B. Throw the medication in the trash.
- C. Mix with coffee grounds or cat litter and then throw in trash.
- D. Keep to use next time.

### Pediatric Pain Intervention Practice Questions Answers

Raphael is a 17-year-old male who was seen in ED. Patient was hit by a car and driver did not stop. Reported brief LOC at scene. He was transported from scene to ED via

EMS. Upon arrival in the ED, he was AAOx3, GCS was 15. He has complaints of left leg and left arm pain.

1. Upon arrival to the ED, Raphael is complaining of 9/10 pain in his left leg. After his assessment and he is stabilized what should you do?
  - A. Give IV Ketorolac.
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  - C. Give PO acetaminophen.
  - D. Wait to see if his pain gets better.

### That is correct!

Raphael's pain needs to be treated. He has sustained serious injury and requires a strong pain medication. IV morphine is the medication of choice. Acetaminophen alone will not manage his pain. Ketorolac, a nonsteroidal anti-inflammatory drug, is not appropriate currently because of the potential for an increased risk of bleeding.

2. Raphael arrives back from the OR. He is using his pain medication, hydromorphone, appropriately with no side effects. However, to optimize his pain medication, the provider adds IV acetaminophen. What is important to understand about IV acetaminophen?
  - A. It has a ceiling effect.
  - B. It is an adjuvant therapy.
  - C. It is opioid sparing.
  - D. All of the above

### That is correct!

Acetaminophen is a non-opioid medication used as an adjuvant therapy for its opioid sparing effects as well as its mild to moderate pain relief. Acetaminophen has a ceiling effect, which refers to a medication dose beyond which there is no additional analgesic effect.

3. A few days after his second surgery Raphael complains of burning pain in his left foot. He has multiple medications ordered for pain. Based on your knowledge, which medication could assist in alleviating this type of pain?
  - A. Acetaminophen
  - B. Clonidine
  - C. Gabapentin
  - D. Morphine

### That is correct!

Gabapentin is classified as an anticonvulsant used for neuropathic pain, such as his burning foot pain. Clonidine is an Alpha 2–Adrenergic agonist and may be used in combination with opiates for the relief of severe pain not relieved with opiates alone. Acetaminophen is used for mild to moderate pain. Morphine is an opiate used for moderate to severe pain.

4. Raphael has been on hydromorphone for over seven days, and he reports that he feels like the medication is not helping as much as it was a few days ago. He is scheduled for one more surgery tomorrow. You know that he is building up a tolerance. What can you do to help Raphael? Select all that apply.
  - A. Call the provider to change the hydromorphone to an equianalgesic dose of another opioid.
  - B. Call the provider to increase the dose.
  - C. Do nothing; he will be okay.
  - D. Tell him that he is imagining that the medication is not helping.

### That is correct!

Pain is whatever the patient says it is. Raphael is building up a tolerance to the medication. You need to call the provider to either increase the dose or change to a different opioid.

5. Raphael has been taking opioids for over one month. He is healing well from his surgeries and is ready to go into inpatient rehab. What is an important point to remember about taking opioids longer than seven days? Select all that apply.
  - A. A weaning plan needs to be initiated.
  - B. Dependence may develop.
  - C. Discontinue the pain medication as he is progressing.
  - D. Repeated doses of opioid medication can lead to addiction. Raphael is becoming addicted.

### That is correct!

Raphael has been receiving opioids for over one month for his fractures and multiple surgeries. He has developed a dependence on the medication and must be weaned off the medication to prevent the physical symptoms of withdrawal. The medications should not be abruptly stopped. Addiction is characterized by behaviors such as compulsive use of a drug despite harm.

6. Raphael is now completely healed and no longer requires opioid medication for pain. What is the best way to dispose of his extra medication?

- A. Flush it down the toilet.
- B. Give it to his friend who recently had knee surgery.
- C. Keep it in his medicine cabinet at home for future use.
- D. Throw it in the trash can.

**That is correct!**

Hydromorphone is on the FDA's approved list of medications that can be flushed down the toilet when no longer needed for pain. All other options are an inappropriate usage of opioid storage.

7. The clinician is caring for Jackie, a 12-year-old that is one day post-op from a posterior spinal fusion. Jackie is NPO and is rating her pain as a 7 on a 0 to 10 pain scale. The clinician is aware that the first line of pharmacologic pain management for this child should include:
- A. Adjuvant analgesics
  - B. Opioids
  - C. Non-opioids
  - D. Anti-inflammatory

**That is correct!**

Opioids are indicated for moderate to severe acute pain. Additionally, the preferred route would be intravenous as the child is NPO. Adjuvant analgesics, non-opioids or anti-inflammatories may be used in combination with an opioid to increase the effectiveness of pain management but would not be effective alone in a child with a pain rating of 7 who had surgery yesterday.

8. The mother of a child being treated with opioids for sickle cell pain crisis reports to the clinician that the child is still in significant pain after being treated with morphine but is also experiencing severe itching as a side effect of the morphine. The clinician suggests adding a non-opioid medication in combination with the morphine rather than increasing the amount of morphine. This is an effective strategy because of which of the following characteristics of non-opioids?
- A. Ceiling of analgesia
  - B. Equianalgesic
  - C. Opioid-sparing effect
  - D. Tolerance

**That is correct!**

When non-opioids are used in conjunction with opioids, less opioid is required to relieve the same amount of pain. This is called the opioid-sparing effect. The result may be less opioid side effects, such as itching, and better pain control.

9. The clinician has been assigned to take care of a 17-year-old male recently diagnosed with chronic musculoskeletal pain. He has been prescribed the antidepressant duloxetine, but states that he doesn't think it is doing anything to help him feel better. His first dose was taken five days ago. Based on your knowledge of how drugs work in the body, you expect that he won't reach full effect of the medication until which of the following occurs?
- A. Another medication is added to create synergy.
  - B. The medication reaches steady state.**
  - C. The active metabolites of the drug are managed.
  - D. The half-life decreases allowing for more drug to remain in his system.

**That is correct!**

When a new drug is introduced, it takes time to develop its full effects. This is because drug administration and drug elimination need to be equal, providing for a steady state of effect. Peak effect and half-life must be considered to provide a steady state, reducing peaks and valleys in the pain management.

10. A 13-year-old has been receiving morphine for two weeks for intractable cancer pain. The current dose of morphine is no longer relieving the child's pain. The mother tells the clinician she is afraid her child is addicted to morphine. The clinician explains to the mother that the child is experiencing which of the following:
- A. Addiction
  - B. Ceiling of analgesia
  - C. Dependence
  - D. Tolerance**

**That is correct!**

Tolerance occurs when repeated administration of an opioid results in the given dose no longer being effective. Higher doses will be required to achieve the same amount of pain relief.

11. A 10-year-old male is on the unit post-ATV accident. He has had multiple surgeries; incisions and drainages for an open tibia-fibula fracture and multiple open wounds. The patient has been receiving opioids for about two weeks. He has been transitioned from IV morphine to oral oxycodone. It is one week later,

and the fracture is healing well, and wounds are closed. He is now taking a non-opioid for his pain; however, he is experiencing irritability, sweating and diarrhea. These are symptoms of which of the following?

- A. Ceiling of analgesia
- B. Tolerance
- C. Dependence
- D. Withdrawal

**That is correct!**

These are symptoms of withdrawal. Manifestations of withdrawal include CNS manifestations such as irritability, GI disturbances such as diarrhea and nausea and autonomic dysfunction such as sweating and fever. Additionally, behavioral changes such as anxiety can occur. When a patient has been requiring opioids for a period of time, it is necessary to slowly decrease the drug. Additional medication may be required to help with the withdrawal period.

12. The clinician is caring for a child with chronic pancreatitis and kidney failure. The child requires opioids for management of her pain. The clinician should consider which of the following when administering pain medication?
- A. The child may require a higher than usual dose.
  - B. The child may require a lower than usual dose.
  - C. The child should require the usual recommended dose.
  - D. The child should not be receiving opioids.

**That is correct!**

It will be important for the clinician to determine if the ordered opioid is excreted by the kidneys and if it is, the clinician should start with a lower than usual dose for the child with kidney failure.

13. Brendan is a 9-year-old post-clavicle fracture repair patient. He is tolerating meals without any complaints of nausea or vomiting. What is the preferred route for administering opioids for pain management?
- A. Intramuscular
  - B. Intravenous
  - C. Oral
  - D. Transdermal

**That is correct!**

Oral medication is the preferred route and is effective only if the patient can tolerate oral intake.

14. Madeline is a 13-year-old who had a Nuss procedure done to correct pectus excavatum. Her pain has been managed well with IV morphine and now with PO oxycodone and acetaminophen. She is ready for discharge. She will be sent home with a prescription for oxycodone. Her mom would like to know how to dispose of the unused medication if there is any left over.

- A. Give the medication away.
- B. Throw the medication in the trash.
- C. Mix with coffee grounds or cat litter and then throw in trash.
- D. Keep to use next time.

**That is correct!**

Unused medication should be disposed properly. Medication should be mixed with something non-edible and then thrown in the trash. Do not share medication or take medication that is not prescribed for you.

From "Pain Management: Pharmacological Management of Pediatric Pain" by the Children's Hospital Association.