1. **EMT OPTIONAL SKILL**
   Naloxone Intranasal

2. **Cell Phones and Pagers**
   Be courteous to your classmates! Please set your cell phones and/or pagers to silent or turn them off.

3. **Course Outline**
   Introduction and Overview
   Lecture
   Break
   Lecture and Review
   Break
   Written Test
   Break
   Skills Demonstration and Practice
   Skills Competency Test and Course Evaluation

4. Optional EMT Skills may only be performed while on duty with an approved optional skills BLS provider.

5. Once an SJCEMSA Accredited Paramedic arrives at scene, that Paramedic will provide all further ALS patient care. No EMT Optional Skills will be performed or authorized in the presence of an SJCEMSA Accredited Paramedic.

6. **Course Objective**
   Participants should be able to identify patients with suspected opiate overdose and administer Naloxone as appropriate.

7. **Medical Control Philosophy**
   “Don’t rush to do in the field what I won’t rush to do in the ED” – Dr. R. Buys

8. **Medical Control Philosophy, cont.**
   Optional skills EMTs in San Joaquin County deliver health care according to local policies.
   He/she is individually responsible for adherence to these standards.

9. **Medical Control**
   Two categories:
   - Online
   - Offline
Offline Medical Control

Optional skill EMTs will administer Naloxone intranasal from a standing order per SJCEMSA Policy No. 5542, BLS Poisoning and Overdose

Opiate

Definition

Opiates are a group of drugs that are used for treating pain. They are derived from opium which comes from the poppy plant.

Naloxone

Definition

Naloxone is not effective against respiratory depression due to non-opioid drugs.

Common Causes of Opiate Overdose

Accidental overdose – taking too many

Mix opioids together

Combining opioids with alcohol or sedative medication

Abuse of the drugs (take them without a prescription or for long periods of time)

Due to their effect on the part of the brain which regulates breathing, opioids in high doses can cause respiratory depression and death.

Respiratory Rates

Normal rate of adults is 12-20 per minute.

Hypoventilation is rate of <10 times per minute.

Hyperventilation is rate of >30 times per minute.

Common Opioids

Vicodin

OxyContin (Oxycodone)

Codeine

Methadone

Morphine

Heroin

Fentanyl

Signs & Symptoms

The severity of symptoms varies based on the amount of the opioid taken.

Altered level of consciousness

Respiratory depression

Apnea (absent breathing)

Pinpoint (constricted) pupils

Changes in heart rate
Pinpoint (constricted) pupils
Changes in heart rate

Sign... pinpoint pupils

Personal Protective Equipment
Scene Safety

SJCEMSA Policy No. 5503, BLS Routine Medical Care

SJCEMSA Policy No. 5504, BLS Patient Assessment – Primary Survey

SJCEMSA Policy No. 5505, BLS Patient Assessment – Secondary Survey

SJCEMSA Policy No. 5520, BLS Respiratory Distress

SJCEMSA Policy No. 5542, BLS Poisoning and Overdose

Profile of Naloxone
Overview

Indications
- History of opioid use or a high index of suspicion of opioid use
- Respiratory depression
- Altered level of consciousness

High Index of Suspicion....

Differential Diagnosis
Definition: The process of differentiating between two or more conditions that share similar signs or symptoms.
- Hypoglycemia (low blood sugar)
- Sepsis
- Bradycardia (slow heart rate)
- Cardiac arrest

Contraindications
None

Relative Contraindications
Relative Contraindications

Hypersensitivity

29  Side/adverse Effects

Naloxone may precipitate withdrawal in patients receiving opioids.

1  Agitation
   □ Nausea
   □ Vomiting
   □ Sweating
   □ Tachycardia
   □ Increased BP
   □ Tremulousness

2  Ventricular fibrillation
   □ Dyspnea
   □ Pulmonary edema
   □ Abdominal cramps
   □ Diarrhea
   □ Cardiac arrest

30  Route of Administration

Intranasal spray via the Mucosal Atomization Device (MAD).

31 

32  Dosages (Intranasal – IN)

   Adult:  2mg (1mg each nostril intranasal)
   □ May repeat once for total max dose 4mg

   Pediatric:  0.1mg/kg intranasal (half dose in each nostril)
   □ For example: 10kg child receives 0.5mg in each nostril
   □ Do not exceed 2mg

   A pediatric patient is 14 years or younger

   Pediatric patients shall be administered only one (1) dose of Naloxone

33  Calculating medication dosages for pediatric patients - Naloxone  0.1mg/kg

34  Mechanisms of Medication Action

Opioid antagonist; prevents or reverses effects of opioids, including respiratory depression, sedation, and hypotension, by competing for the mu, kappa, and sigma opiate receptor sites in the CNS, with the greatest affinity for the mu receptor.

   The effects of naloxone last about 30-45 minutes.
in the CNS, with the greatest affinity for the mu receptor.

☐ The effects of naloxone last about 30-45 minutes.
☐ Multiple doses may be required as the duration of action of most opioids is greater than that of naloxone.

35 □ **Aseptic Technique**

Definition: A procedure used by medical staff to prevent the spread of infection. The goal is to reach asepsis, which means an environment that is free of harmful microorganisms.

36 □ **Before administering ALWAYS ASK...**

“Are you allergic to any medication?”

37 □ Pre Administration Considerations:

If possible, remove the source of the opiate. Examples would be removing transdermal opioid patches (morphine, fentanyl) from the patient’s skin, or removing a suspected heroin needle from a patient’s arm.

*Removing the source of the opiate does not include inducing the patient to vomit.*

38 □ **Transdermal Patches**

39 □ **Transdermal Patches, cont.**

40 □ **Steps of administration**

1. Take universal body/substance isolation precautions.
2. Perform scene size-up.
3. Perform primary survey.
4. Provide supplemental oxygen or respiratory support as needed.
5. Remove any transdermal opioid patches or hypodermic needles.
6. Determine if the indications for the administration of naloxone have been met.
7. Ask the patient if they are allergic to any medications.
8. Check for correct medication, concentration, integrity of container, dosage and expiration date.
9. Remove the syringe from the vial adapter.
10. Attach the MAD Nasal Device to the syringe via the luer lock connector.
11. Use the free hand to hold the occiput of the head stable, place the tip of the MAD snugly against the nostril aiming slightly up and outward (toward the top to the ear).
12. Rapidly depress the syringe plunger to administer 1mg of medication into the first nostril.
13. Reposition and repeat steps 11 & 12, administering the remaining 1mg of medication into the second nostril.
13. Reposition and repeat steps 11 & 12, administering the remaining 1mg of medication into the second nostril.
14. Dispose of the syringe and MAD in sharps container.
15. Continue monitoring of patient and observing for improvement or worsening of the patient’s respiratory distress.

16. Complete the secondary survey.
17. Evaluate the need to repeat second dose of naloxone administration.

What's wrong with this picture?

If the patient’s condition does not improve within 2-3 minutes after administering the initial dose of naloxone, or if the patient’s condition worsens (increasing respiratory depression, decreasing mental status), may repeat a second dose (for adults only).

The total maximum dose not to exceed 4mg of naloxone for adults and 2mg of naloxone for pediatrics.

Cardiopulmonary Resuscitation (CPR)
30:2 vs. MICR
BLS Medical Cardiac Arrest - Adult
EMS Policy No. 5511

On-going Care
- Continue to support respirations as necessary which may include positive pressure ventilation via bag-valve mask (BVM) and supplemental oxygen;
- Monitor for signs and symptoms of shock (hypoperfusion);
- Complete BLS Secondary Survey

Transfer of Care to Transporting Unit
- Found
- Did
- Have

Document
Complete your patient care record!

Case Scenario
Practice Case #1
You respond to an unconscious 24 year old female who is found lying on her bed at home; she has a hypodermic needle inserted into her arm. Her pupils are pinpoint and she does not respond to painful stimuli. Upon assessment of vital signs, her blood pressure is 110/70, pulse is 60, respiratory rate is 2 per minute, and skin signs are pale, warm and moist.
is 60, respiratory rate is 2 per minute, and skin signs are pale, warm and moist.

What is the first action you should take?

52  Case Scenario
   Practice Case #1 - Answer
   This patient is apneic as evidenced by her respiratory rate of 2. The appropriate initial action is to open the airway, assess, maintain and administer oxygen via bag valve mask.

   Therapeutic interventions to support the patient’s airway, breathing, and circulation should be initiated prior to removing opioids (in this case the hypodermic needle) and the administration of naloxone.

53  Case Scenario
   Practice Case #2
   You respond to the home of a diabetic hospice patient with cancer. He has a slightly decreased mental status and constricted pupils. His wife checked his blood glucose level prior to calling 9-1-1 and it is 170mg/dl (normal range is 80-120mg/dl). The patient was at his baseline mental status until his wife applied a transdermal fentanyl patch that was recently prescribed for pain control. The patient has a blood pressure of 130/80, pulse of 70, a respiratory rate of 18 with adequate chest rise and fall (tidal volume), and skin signs that are pink, warm and dry.

   What is your next intervention?

54  Case Scenario
   Practice Case #2 - Answer
   This patient has stable vital signs with good skin signs and naloxone is not indicated at this time, but there must be a high index of suspicion that respiratory depression may occur as evidenced by the fact that the patient had a slight decrease in mental status from his baseline, after the application of the transdermal fentanyl patch.

   Monitor the patient’s respiratory rate and tidal volume carefully, and if respiratory depression occurs, then remove the transdermal fentanyl patch and administer naloxone.

55  Optional EMT Skills may only be performed while on duty with an approved optional skills BLS provider.

56  Questions?