



<b>Scenario Name: Opioid Overdose-ER</b>		
●●●●●●●●●●●●●●		
<b>High Fidelity</b> <input checked="" type="checkbox"/>	<b>Low Fidelity</b>	<b>Static Model</b>
<b>Target Group:</b> <input checked="" type="checkbox"/> Student <input checked="" type="checkbox"/> Professional		
<b>Level:</b> <input type="checkbox"/> Advanced <input type="checkbox"/> Intermediate <input type="checkbox"/> Beginner		
<b>Learning Objectives:</b>		
<b>Primary Objectives:</b>		
<ul style="list-style-type: none"> <li>1. Recognize clinical signs of opioid poisoning</li> <li>2. Demonstrate appropriate treatment for opioid poisoning</li> </ul>		
Secondary Objectives:		
<ul style="list-style-type: none"> <li>1. Demonstrate professionalism and communication skills when speaking with consultants and working in team. with ED nurse</li> <li>2. Determine appropriate consult</li> <li>3. Understand how to administer Naloxone</li> </ul>		
<b>Learner Preparation Exercise:</b>  <b>Review:</b> (Insert skills or reading students should review) <ul style="list-style-type: none"> <li>• Naloxone Administration <a href="https://youtu.be/-xTKsHFBXII">https://youtu.be/-xTKsHFBXII</a></li> <li>• Opioid Overdose Crisis: <a href="#">Opioid Overdose Crisis   National Institute on Drug Abuse (NIDA)</a></li> <li>• Opioid Overdose: <a href="#">Opioid Overdose   SAMHSA</a></li> <li>• Review ACLS algorithms: <a href="#">Algorithms for Advanced Cardiac Life Support 2021 (acls.net)</a></li> </ul> <div style="text-align: center;">●●●●●●●●●●●●●●</div> <b>Insert Scenario Summary</b> (Basic overview of Case) Opioid Overdose in 40 yo man who is brought to the ER by a friend.		
Total Time Duration: 60		
Set-up 10 Simulation 20 Debrief 30		

## Initial Subjective Data:

### Background Information:

40-year-old man found unconscious at a bar after work. According to his work colleagues, he was in his usual state of health today. They do not know of any medical problems. He and his colleagues went to a bar to celebrate a new account. He had “a beer” at the bar and went outside. They found him slumped over on the sidewalk. His colleagues called 911 and help arrived in 2-3 minutes. EMS transport time was approximately 3 minutes.

### Past History:

Unknown

.

### Presenting History:

EMS reports that the patient was found by coworkers-no drug paraphernalia at scene. Transport to hospital was 2-3 minutes. Patient was somnolent and difficult to arouse. Due to short transport time, no drugs were given. Patient arrives on O2 via nasal cannula.

From co-worker: No more additional information other than it is thought the patient has a drug problem and has seemed depressed.

## Patient Description and Image

**Name** Justin Sidney

**Age** 40 yo

**B.D.** 10-24-XX

**Gender** Male

**Weight** 165

**Height** 69”

**Allergies** NKDA







Scenario Progression: Admission Information

Initial State: <b>Frame 1</b>		Initial Patient History	
<b>Vital Signs</b> Cardiac Rhythm: Sinus Pulse: 60 Respiratory Rate: 8 Blood Pressure: 100/60 SPO2: 88% Temp: 36.7 Expected actions w/in 3 minutes: <ul style="list-style-type: none"> <li>• Establish safety net (IV, oxygen, cardiac monitor, two large bore IVs, draw blood for labs)</li> <li>• Provide supplemental oxygen</li> <li>• Cardiac monitor</li> <li>• NS IV bolus; ECG</li> <li>• Finger stick glucose = 108 mg/dL; diagnostics should be ordered by this time</li> </ul>		Body System Assessment	Patient Finding
		• Neurological/Sensory	Pupils constricted-Drowsy-arouses to pain
		• Cardiac	Borderline bradycardia
		• Pulmonary	Bradypneic
		• Musculoskeletal	No trauma
		• Gastrointestinal	Decrease BS
		• Genitourinary	
		• Skin/Wound	No needle marks
	• Vocal Complaint	unresponsive	
Correct Action: Naloxone 0.1-0.4 mg IV, IM, or nasally; ideally, if peripheral venous access has been established, IV administration preferred	Move to Frame: 2	• Initial Lab/Diagnostics	Diagnostic labs ordered
Wrong Action: Team Fails to administer Naloxone within 3 minutes	Move to Frame: 3		Finger Stick: Glucose 108

Facilitator Notes: Patient presents drowsy and difficult to arouse. After hearing of possible drug use team should initiate Naloxone treatment. After Naloxone patient volunteers he took “pain” pills with suicidal intent.

Frame 2-Improved		Change in Patient Condition	
<p><b>Vital Signs</b></p> <p>Cardiac Rhythm: Sinus Rhythm</p> <p>Pulse: 72</p> <p>Respiratory Rate: 10</p> <p>Blood Pressure: 110/74</p> <p>SPO2: 94% on high flow nasal cannula</p> <p>Correct Actions:</p> <ul style="list-style-type: none"> <li>• Naloxone Drip</li> <li>• Transfer to ICU</li> <li>• Behavioral Health Consult</li> </ul>		Body System Assessment	Patient Finding
		• Neurological/Sensory	Agitated, belligerent
		• Cardiac	
		• Pulmonary	
		• Musculoskeletal	
		• Gastrointestinal	
		• Genitourinary	
		• Skin/Wound	
		• Vocal Complaint	Why am I here-why did you save me?
		• New Lab Reports	UA Tox Screen <b>positive</b> for opiates. Chest X-ray and CT scan of head: Normal ECG: Sinus Brady, 57, normal intervals and axis, no ischemic changes. CBC: WBC 11,700/mm <sup>3</sup> Hemoglobin 14.2 g/dL, Hematocrit 43.2% Platelets 297,000/mm <sup>3</sup> CHEM: Sodium 142 mEq/L, Potassium 3.9 mEq/L, Glucose 122 mg/dL, BUN 18 mg/dL, Creatinine 1.1 mg/dL
Correct Action : ICU transfer	Move to Frame: END		
Wrong Action : Send home	Move to Frame: 3		

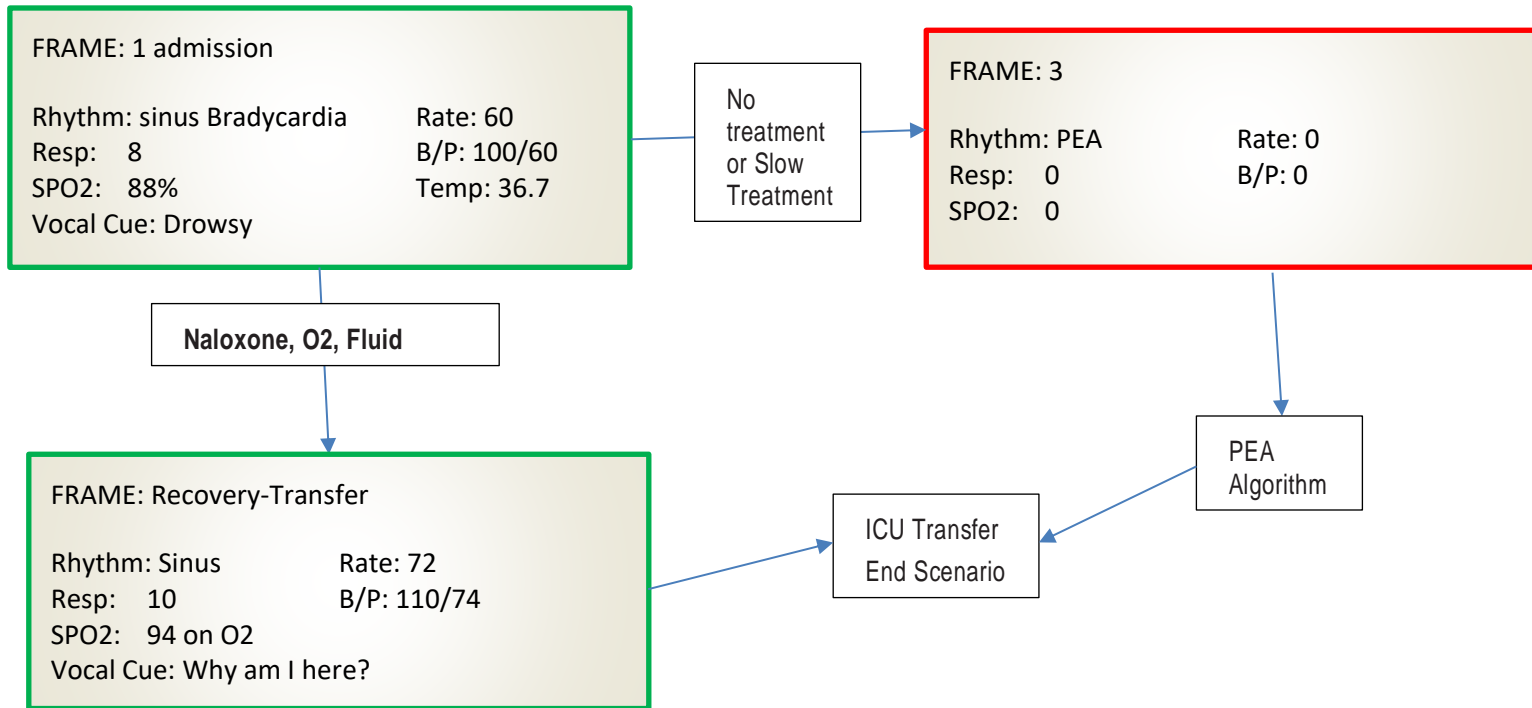
**Facilitator Notes:**

Opioid overdose managed with naloxone. Because opioids have a longer half-life than naloxone, this gentleman is a candidate for a naloxone drip. It is common for patients who are experiencing opioid withdrawal to become belligerent and combative. Precautions should be made to avoid danger to staff. A psychiatric consult should be scheduled and patient monitored in ICU.

Frame 3		Change in Patient Condition	
		Body System Assessment	Patient Finding
<b>Vital Signs</b> Cardiac Rhythm: PEA Pulse: 0 Respiratory Rate: 0 Blood Pressure: 0 SPO2: 0  Actions: Because bradycardia resulting from opioid overdose was not addressed—patient moves into PEA.		• Neurological/Sensory	
		• Cardiac	
		• Pulmonary	
		• Musculoskeletal	
		• Gastrointestinal	
		• Genitourinary	
		• Skin/Wound	
		• Vocal Complaint	
		• Initial Lab/Diagnostics	
		Correct Action: Follow ACLS PEA algorithm	Move to Frame: END
Wrong Action	Move to Frame:		

**Facilitator Notes:** Because opioid overdose was not treated quickly the patient moved into Cardiac Arrest with Pulseless Electrical Activity—students should follow the ACLS PEA algorithm.

Scenario Progression Algorithm:





## **PATIENT ACTOR INFORMATION**

### **Patient Actors Roles:**

Friend

### **Suggested Dialogue for each Actor**

“I didn’t know him that well”

“He seemed a little down lately”

“I don’t know much about him”

### **Key Points to emphasize:**

Friend Can’t provide much information—sorry he didn’t know him better





## Debriefing Points:

Instructors should developed a structured debriefing and develop questions related to:

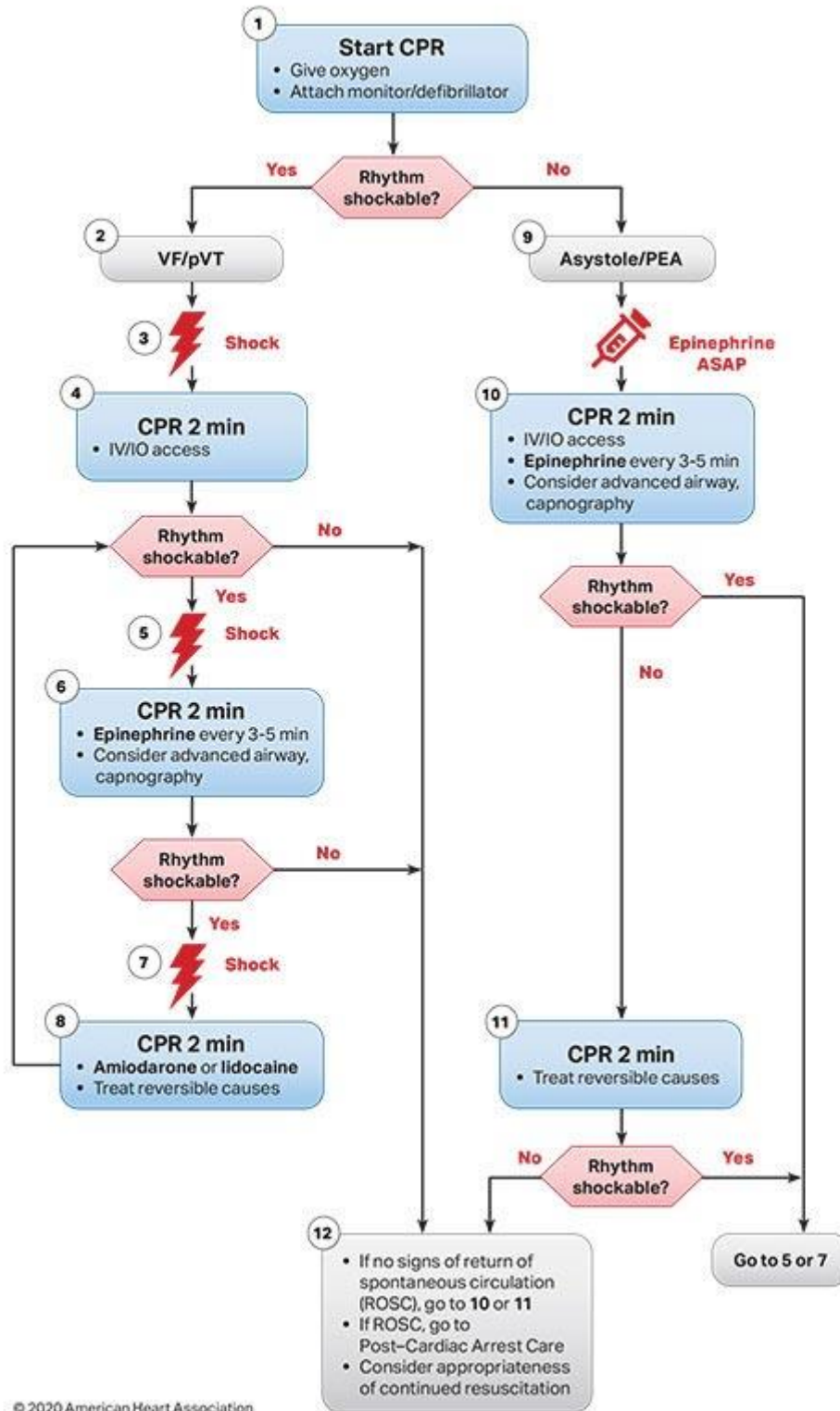
1. Print Objectives here:
  1. Recognize clinical signs of opioid poisoning – How quickly was it apparent that the patient was unstable with possible opioid overdose?
  2. Was there sufficient history to determine cause of respiratory depression?
  3. Were there any issues with naloxone administration
  4. Was the team able to demonstrate professionalism and communication skills when speaking with consultants and working in team.
  5. Were you able to determine appropriate consultation/labs
2. Teamwork
  - a. What were the team roles and who was the leader?
  - b. Was the workload distributed?
  - c. Did the team have a shared mental model?
  - d. Was communication clear and effective?
  - e. Mutual Respect for team and patient
3. Patient Safety – Patient started on naloxone drip for sustained action against opioids. Refer to psychiatry to address depression and suicide attempt.

### Tips for Debriefing

1. Learner focused
2. Allow enough time for learning (2-3 times the scenario length)
3. Focus on the process not the individual
4. Keep the debriefing positive



Adult Cardiac Arrest Algorithm (VF/pVT/Asystole/PEA)



CPR Quality
<ul style="list-style-type: none"> <li>• Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.</li> <li>• Minimize interruptions in compressions.</li> <li>• Avoid excessive ventilation.</li> <li>• Change compressor every 2 minutes, or sooner if fatigued.</li> <li>• If no advanced airway, 30:2 compression-ventilation ratio.</li> <li>• Quantitative waveform capnography               <ul style="list-style-type: none"> <li>- If PETCO<sub>2</sub> is low or decreasing, reassess CPR quality.</li> </ul> </li> </ul>
Shock Energy for Defibrillation
<ul style="list-style-type: none"> <li>• <b>Biphasic:</b> Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.</li> <li>• <b>Monophasic:</b> 360 J</li> </ul>
Drug Therapy
<ul style="list-style-type: none"> <li>• <b>Epinephrine IV/IO dose:</b> 1 mg every 3-5 minutes</li> <li>• <b>Amlodarone IV/IO dose:</b> First dose: 300 mg bolus. Second dose: 150 mg.</li> <li>• <b>Lidocaine IV/IO dose:</b> First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.</li> </ul>
Advanced Airway
<ul style="list-style-type: none"> <li>• Endotracheal intubation or supraglottic advanced airway</li> <li>• Waveform capnography or capnometry to confirm and monitor ET tube placement</li> <li>• Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions</li> </ul>
Return of Spontaneous Circulation (ROSC)
<ul style="list-style-type: none"> <li>• Pulse and blood pressure</li> <li>• Abrupt sustained increase in PETCO<sub>2</sub> (typically ≥40 mm Hg)</li> <li>• Spontaneous arterial pressure waves with intra-arterial monitoring</li> </ul>
Reversible Causes
<ul style="list-style-type: none"> <li>• Hypovolemia</li> <li>• Hypoxia</li> <li>• Hydrogen ion (acidosis)</li> <li>• Hypo-/hyperkalemia</li> <li>• Hypothermia</li> <li>• Tension pneumothorax</li> <li>• Tamponade, cardiac</li> <li>• Toxins</li> <li>• Thrombosis, pulmonary</li> <li>• Thrombosis, coronary</li> </ul>

© 2020 American Heart Association