Bastrop County ESD #3

PCG Study Scenarios

Answer Key

Trainee-Led Study Group Facilitator Copy

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Running a Trainee-Led Study Group

This key pairs with the PCG Study Scenarios packet. It is written for the trainee who is leading the session, so the group does not need an instructor in the room. The answers are pulled from Version 58 of the Patient Care Guidelines with the section cited after each one. If an answer here and the PCG text ever disagree, the PCG text wins; bring the discrepancy to BCEMS Education so the key can be corrected.

Before the Session

1. Pick one scenario per 30 to 40 minutes of session time. Two scenarios is a full hour. Do not try to run five.
2. The facilitator reads the scenario in the packet and this key ahead of time, and looks up every cited section so the answers are familiar before the group sees them.
3. Everyone brings the PCGs, on a device or printed. The point of the exercise is finding the answer in the document.
4. Rotate the facilitator role each session. The person who leads the scenario learns it best.

Running a Scenario

5. Read the dispatch, scene, presentation, vitals, and history aloud. Stop. Ask the group to name the guideline they expect to work under before anyone opens the packet further.
6. Read the Progression one step at a time. After each step, ask what credential level the action required and what the next credential level up would add. Have someone find the section and read the relevant line.
7. Do the dose math out loud on a whiteboard or paper. Confirm the maximum, the concentration, and the rounding rule against the Formulary every time.
8. Work the Discussion Questions in order. Let the group answer first and find the section before the facilitator reads the model answer. The model answer is for checking, not for reading aloud first.
9. Close with the Facilitator Prompts. These are meant to go one layer past the question and often reach into a guideline the scenario did not name.
10. Compare the group's list of guidelines used against the Relevant PCGs table in the packet. Anything the group used that is not on the table is worth talking about.

How the Answers Are Written

- Each model answer states the guideline's content in plain terms with doses, thresholds, and credential levels included.
- The PCG line under each answer lists the section or sections where the answer lives. Where a section has a labeled subsection (for example, P-2 or High-Risk Refusals), that label is shown so the group can find the exact spot.
- Some questions have no single bright-line answer in the PCGs, such as the balance between blood products and vasopressors in hemorrhagic shock. The key says so directly. Those are the best discussions in the packet.
- Where a patient weight is not stated, the key says so and the group should estimate and show the math rather than skip the calculation.

Ground Rules

- Nobody looks bad for not knowing something. The person who is wrong and opens the PCGs to find out is doing the exercise correctly.
- Stay on the scenario. Side stories about calls are useful only if they end in a section number.
- This key is for training use only and is not a substitute for the current PCGs, OLMC, or a P-3 Supervisor on a real call.

SCENARIO 1 | ANSWER KEY

Witnessed Cardiac Arrest with ROSC

Cardiovascular

Teaching Focus

This scenario is about sequencing. The group should be able to say what happens in each two-minute cycle without looking, then verify the doses and the vector change and DSD rules in 3.1. The second half is the Post-ROSC Checklist in 3.2, which is written as a checklist for a reason.

Discussion Questions

#	Question and Model Answer
1	**The store AED pads were anterior/lateral. What is the primary pad placement under the PCGs, and when should the crew make the change?** Primary pad placement for manual defibrillation is Anterior/Posterior. The change should happen when the crew takes over from the AED, ideally during compressions so it does not add a pause. Compressions are limited to interruptions under 10 seconds. *PCG: 3.1 (VF/pVT, P-1); 8.22*
2	**Epinephrine timing differs between shockable and non-shockable rhythms. State the dose, the timing, and the maximum for each pathway in an adult.** Adult dose is 1 mg IV/IO of 1:10,000. Asystole/PEA: give once as soon as possible within the first 3 to 5 minutes of CPR, repeat every 8 to 10 minutes to a maximum of 3 mg. The Epi Infusion - Cardiac Arrest at 40 mcg/min may be used in place of repeat pushes and lasts 25 minutes. VF/pVT: give once after the second defibrillation and withhold further epinephrine unless the rhythm changes to a non-shockable rhythm. *PCG: 3.1 (P-1); 9.16*
3	**Your crew is at the third shock with one monitor on scene. What is required after the third defibrillation, and what triggers dual sequential defibrillation once the second monitor arrives?** After the third defibrillation without a second monitor, change vectors and maintain that change until a second monitor arrives. Once a second monitor is on scene, dual sequential defibrillation is indicated if the patient remains in VF/pVT on or after the second shock. DSD is a P-2 skill. *PCG: 3.1 (VF/pVT, P-2); 8.11*
4	**Walk through the Post-ROSC Checklist in order. What are the hemodynamic goals, and what is the first-line vasopressor for an adult?** Do not move the patient for at least 10 minutes and do not remove cardiac monitoring for movement unless absolutely necessary. Checklist: bilateral large bore IV access; functional advanced airway (iGel or ETT, exchange for ETT if SGA concerns); OG tube; ventilator. Goals: MAP above 80 mmHg, SpO2 above 94%, EtCO2 35 to 45 mmHg. Adults: norepinephrine first at 0.05 to 0.15 mcg/kg/min, titrated every 5 minutes, then epinephrine infusion if needed. Push-dose epinephrine 5 to 20 mcg bridges while the infusion is prepared. Obtain a 12-lead at 10 minutes post-ROSC and repeat every 5 to 10 minutes. Use an IV pump whenever possible. *PCG: 3.2; 7.21; 9.35*

#	Question and Model Answer
5	**The 10-minute post-ROSC 12-lead shows an inferior STEMI. What additional lead is required, and where does this patient go?** V4R is required for any patient with elevation in II, III, and aVF. Destination is a STEMI/ROSC - Adult facility from 1.10. The Bastrop FSEDs and Ascension Seton Smithville do not carry that designation. *PCG: 3.7 (P-1); 1.10*
6	**If the patient had remained in VF after amiodarone, what antiarrhythmic comes next and at what dose? What P-2 medication follows that?** Lidocaine 2% at 1 to 1.5 mg/kg IV/IO, maximum 100 mg (P-1). The P-2 agent that follows is magnesium sulfate at 50 mg/kg, maximum 2 g per dose and 4 g total, diluted in 100 mL D5W over 10 minutes, repeated 5 minutes after the infusion completes until the dysrhythmia stops. *PCG: 3.1 (VF/pVT, P-1 and P-2); 9.29; 9.31*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask the group to state the pediatric differences: 15:2 compressions with BVM until an advanced airway, epinephrine 0.01 mg/kg every 3 to 5 minutes in asystole/PEA, amiodarone 5 mg/kg.
- Ask why the airway was limited to NRB and OPA until three responders were on scene.
- Ask what the amiodarone ROSC dose is if it was not given during the arrest, and why the maintenance infusion must be mixed in D5W.
- Ask which reversible causes in 3.1 carry a medication (calcium channel blocker overdose, hyperkalemia, prolonged wide complex arrest) and the calcium before bicarbonate flush rule.

SCENARIO 2 | ANSWER KEY

Inferior STEMI with Right Ventricular Involvement

Cardiovascular

Teaching Focus

The purpose here is the 5-minute 12-lead, the V4R requirement, and the nitroglycerin contraindications that live in the formulary rather than the guideline. The group should leave understanding that the phrase SIGNIFICANT CONTRAINDICATIONS - CHECK FORMULARY is a required step, not a suggestion.

Discussion Questions

#	Question and Model Answer
1	**The patient took 162 mg of aspirin 30 minutes ago. What does the PCG direct for the remaining dose?** If the patient has taken less than 324 mg since symptom onset, administer the full 324 mg (four 81 mg tablets). The dose is withheld only if the patient has taken the full 324 mg within 1 hour of patient contact. Aspirin is EMT level. *PCG: 3.7 (EMT); 9.6*
2	**What are the STEMI ECG criteria in the PCGs, and what confusers must be absent before the crew calls a STEMI?** Greater than 1 mm ST elevation in 2 or more anatomically contiguous leads. V1 and V2 alone are not used unless there is reciprocal depression in II, III, aVF or hyperacute T-waves without LVH or LBBB. Confusers that must be absent: LVH, benign early repolarization, pericarditis, LBBB, ventricular paced rhythm. Inferior STEMI may still be called in the presence of LBBB. *PCG: 3.7 (P-1); 8.1*
3	**Why is V4R required in this patient, and how does the result change the crew's medication decisions?** V4R is required whenever there is elevation in II, III, and aVF. A positive V4R indicates right ventricular infarction, which is a listed contraindication to nitroglycerin. This patient's bradycardia and borderline pressure reinforce that. *PCG: 3.7 (P-1); 9.34*
4	**List the nitroglycerin contraindications from the formulary that apply to this patient right now.** Right ventricular infarction (positive V4R). Her MAP of 72 is above 65 and her HR of 54 is above 50, so those thresholds are not met on arrival, though both are close. Nitroglycerin also requires SBP above 100 and MAP above 65 for repeat dosing. The P-2 should withhold nitroglycerin on the RV finding alone. *PCG: 9.34 (Contraindications); 3.7 (P-2)*
5	**When her BP drops to 84/50 en route, which guideline governs the response, and what is the first agent while preparing an infusion?** Cardiogenic Shock (3.10.1) governs. Push-dose epinephrine 5 to 20 mcg IV/IO, repeated every 2 to 3 minutes, bridges while a vasoactive infusion is prepared. Norepinephrine 0.05 to 0.15 mcg/kg/min to start. Fentanyl is dosed conservatively in a hypotensive patient; the pain guideline directs preserving hemodynamics. *PCG: 3.10.1; 7.21; 5.7; 9.18; 9.35*

#	Question and Model Answer
6	**Which facilities in the Approved Transport Destinations list are STEMI/ROSC capable? What role does a Bastrop FSED play in this call?** STEMI/ROSC - Adult designations in 1.10: Ascension Seton Hays, Ascension Seton Austin, Dell Seton, St. David's Heart Hospital, St. David's Medical Center, St. David's South Austin, St. David's North Austin, Ascension Seton Williamson, and St. David's Round Rock. The Bastrop FSEDs are not STEMI centers and should not be used for this patient. *PCG: 1.10*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask the group what changes if the 12-lead is transmitted and the STEMI/CVA line is used, and which facilities list that number.
- Ask what symptomatic bradycardia treatment looks like in 3.3 if her rate drops further and she becomes unstable.
- Ask why pads are placed on a patient who is awake and talking.

SCENARIO 3 | ANSWER KEY

Anaphylaxis Refractory to IM Epinephrine

Medical

Teaching Focus

Two things matter most. First, the definitions in 5.1 decide whether the patient gets diphenhydramine or epinephrine, and this patient meets anaphylaxis on arrival. Second, the escalation rule: two IM doses without improvement moves the P-1 to push-dose and infusion epinephrine.

Discussion Questions

#	Question and Model Answer
1	**State the PCG definitions for Allergic Reaction and Anaphylaxis. Which criteria does this patient meet on arrival?** Allergic Reaction: exposure plus one involved body system (cardiovascular, GI, integumentary, respiratory). Anaphylaxis: exposure plus hypotension, OR exposure plus two or more body systems, OR an allergic reaction that fails to respond or worsens. This patient has hypotension plus integumentary, respiratory, and cardiovascular involvement. *PCG: 5.1*
2	**What are the adult and pediatric IM epinephrine doses, the repeat interval, and the trigger to escalate beyond IM dosing?** Adult 0.5 mg IM of 1:1,000; pediatric 0.15 mg IM. Repeat every 5 minutes as needed until symptom relief. After two doses without improvement, consider push-dose epinephrine or an epinephrine infusion. IM epinephrine is EMT level. *PCG: 5.1 (EMT); 9.15*
3	**Calculate the push-dose epinephrine dose and the starting epinephrine infusion rate for this 80 kg patient. Describe how push-dose epinephrine is mixed.** Push-dose: 1 mcg/kg = 80 mcg (8 mL of the 10 mcg/mL mix), maximum 100 mcg, repeat every 2 to 3 minutes until the infusion is running. Mix: 1 mL of epinephrine 1:10,000 into 9 mL NS for 10 mcg/mL. Infusion: 0.5 mcg/kg/min = 40 mcg/min, maximum 1 mcg/kg/min (80 mcg/min), using the 1 mg in 1 mL concentration. *PCG: 5.1 (P-1); 9.18; 9.17*
4	**Which of the adjuncts in this scenario are EMT level, EMT-A level, and P-1 level?** EMT: diphenhydramine PO, albuterol, ipratropium, IM epinephrine. EMT-A: diphenhydramine IV/IO/IM (diluted for IV), fluid bolus 10 to 20 mL/kg. P-1: dexamethasone 0.6 mg/kg max 10 mg diluted in 100 mL over 10 min, magnesium 40 mg/kg max 2 g over 10 min, push-dose and infusion epinephrine, TXA for angioedema. *PCG: 5.1; 9.13; 9.10; 9.31*

#	Question and Model Answer
5	**The patient becomes unresponsive and requires BVM support. What algorithm applies and what are its key steps?** The AMAX4 algorithm (7.1) applies to anaphylaxis and asthma patients who are unconscious and require bag-valve mask support. The published algorithm centers on maximal adrenaline, maximal oxygenation and ventilation, and moving rapidly through airway steps within minutes rather than waiting for medications to take effect. Refer to the algorithm figure in 7.1 for the exact flow. *PCG: 5.1; 7.1*
6	**What are the conditions on TXA administration for angioedema in the PCG?** Adult only (not indicated under age 16). 2 g IV/IO over 3 minutes. Do not give before epinephrine. Do not delay transport for TXA. *PCG: 5.1 (Angioedema, P-1); 9.47*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what changes if the patient had only hives and nausea with a normal blood pressure.
- Ask the group to explain why diphenhydramine must be diluted before IV administration.
- Ask which ACE inhibitor detail in the Angioedema section matters for medication history taking.

SCENARIO 4 | ANSWER KEY

Pediatric Severe Asthma

Airway / Breathing

Teaching Focus

Weight-based math and maximums. The severity table drives the first move, and the group should catch that dexamethasone hits its adult maximum before the weight-based number does. The refusal at the end is deliberate.

Discussion Questions

#	Question and Model Answer
1	**Using the Asthma/COPD severity table, which findings place this child in the Severe category?** Severe: SpO2 below 90%, EtCO2 above 45 mmHg, low tidal volume, wheezing or diminished breath sounds. This patient has SpO2 86%, EtCO2 52, shallow respirations, and diminished bases. *PCG: 2.1 (severity table)*
2	**Calculate the doses for this 30 kg patient: IM epinephrine, magnesium sulfate, dexamethasone, and push-dose epinephrine. Which of these hit a maximum before the weight-based number?** IM epinephrine 0.15 mg (pediatric fixed dose). Magnesium 40 mg/kg = 1,200 mg, in 100 mL D5W over 10 minutes (max 2 g). Dexamethasone 0.6 mg/kg = 18 mg, capped at the 10 mg maximum. Push-dose epinephrine 1 mcg/kg = 30 mcg (3 mL of the 10 mcg/mL mix), max 100 mcg. Epinephrine infusion 0.5 mcg/kg/min = 15 mcg/min. Section 0.5 states no pediatric weight-based dose may exceed the adult maximum. *PCG: 2.1; 0.5; 9.15; 9.31; 9.10; 9.18; 9.17*
3	**What is the pediatric SBP threshold for CPAP, and does this patient meet it? What contraindication becomes relevant as she fatigues?** Pediatric SBP must be above 70 + (2 x age in years) = 88 mmHg. Her SBP of 104 meets it. As she fatigues, altered level of consciousness becomes a relative contraindication and respiratory arrest is an absolute contraindication. Direct Connect CPAP is EMT level; ventilator BiPAP is P-1. *PCG: 2.8*
4	**Which pediatric vital signs in the 7.11 reference table would you compare against these findings?** For 6 to 12 years: HR 60 to 110, SBP 100 to 120, DBP 60 to 75, RR 16 to 22. Her HR of 142 and RR of 38 are well outside the range. A falling respiratory rate toward the reference range in a tiring child is a warning sign rather than improvement. *PCG: 7.11*
5	**Mother wants to refuse transport after the child improves. Why is this a high-risk refusal under the PCGs, and who must be consulted?** Pediatric patients who have received a corticosteroid (dexamethasone) are listed as a high-risk refusal after EMS treatment. High-risk refusals require consultation with a P-3 Supervisor on scene or on a recorded line, or OLMC on a recorded line, before the refusal is obtained. This also assumes the child stabilized enough for refusal to be on the table. *PCG: 1.8 (High-Risk Refusals; Refusal after Medical Treatment)*

#	Question and Model Answer
6	**Who may provide consent for this minor before the mother arrives?** Implied consent covers a minor whose parent is not present in an emergency. Substituted consent may also come from an adult sibling, aunt, uncle, or grandparent; the school if it holds written authorization from a person with the right to consent; an adult with actual care, control, and possession of the child holding written authorization; or a peace officer who has lawfully taken custody. *PCG: 1.8 (Implied Consent; Substituted Consent)*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what the Mild and Moderate tiers add at each level, and why fluids appear at the Moderate tier.
- Ask the group to describe the pediatric ventilator BiPAP settings in 2.8 and the EPAP caution for asthma.
- Ask when the P-2 would move from CPAP to Drug Assisted Intubation and what the checklist says about pediatric positioning.

SCENARIO 5 | ANSWER KEY

Acute Decompensated Heart Failure

Cardiovascular

Teaching Focus

The blood pressure category picks the pathway, the 12-lead comes before any nitrate, and the formulary contraindications can take nitroglycerin off the table entirely. Enalaprilat exists in this guideline for exactly this kind of patient.

Discussion Questions

#	Question and Model Answer
1	**List the Direct Connect CPAP inclusion criteria and the absolute contraindications. Does this patient qualify?** Inclusion: awake, oriented, maintains own airway; signs consistent with heart failure, pulmonary edema, COPD, hypoxemic respiratory failure, or asthma; adult SBP above 90; able to fit the mask. Absolute contraindications: respiratory arrest, active vomiting, suspected pneumothorax, hemodynamic instability, airway obstruction, tracheostomy or recent esophageal anastomosis. He qualifies. Start at PEEP 5 cmH2O and titrate. *PCG: 2.8; 8.10*
2	**What blood pressure category does this patient fall into under 3.9, and what treatment sequence does the guideline lay out for that category?** Hypertensive (SBP above 180). For normotensive and hypertensive patients the P-2 sequence is: a) nitroglycerin 0.4 mg SL, repeat every 5 minutes with SBP above 100 and MAP above 65; b) nitroglycerin 200 mcg IV, may repeat once after 5 minutes; c) nitroglycerin infusion 10 to 200 mcg/min starting at 80 mcg/min, titrated to MAP above 65; d) enalaprilat 1.25 mg IV. *PCG: 3.9 (P-2)*
3	**Why does the 12-lead have to come before any nitroglycerin in this guideline?** Every nitroglycerin entry in 3.9 carries the flag After 12-lead ECG. The guideline also requires evaluating for cardiac ischemia. An inferior STEMI with RV involvement or an unstable rhythm would change the plan before any vasodilator is given. *PCG: 3.9; 9.34*
4	**The patient took tadalafil last night. Find the nitroglycerin contraindication that applies and explain what that leaves the P-2 as an option.** Concurrent use with a PDE-5 inhibitor (avanafil, sildenafil, tadalafil, vardenafil) is a listed contraindication to nitroglycerin. That removes options a through c. The P-2 is left with enalaprilat 1.25 mg IV/IO as the vasodilator, along with CPAP. *PCG: 9.34 (Contraindications); 3.9 (P-2, d); 9.14*
5	**If the patient had presented with an SBP of 88, which guideline would govern the call and what would the first vasoactive agent be?** Hypotensive (SBP below 100) patients are managed under Cardiogenic Shock (3.10.1). Push-dose epinephrine 5 to 20 mcg bridges while norepinephrine is prepared at 0.05 to 0.15 mcg/kg/min. Norepinephrine and nitroglycerin may be used together to hold an adequate pressure. *PCG: 3.9; 3.10.1; 7.21*

#	Question and Model Answer
6	**What are the four things every acute pulmonary edema patient must be evaluated for?** New cardiac murmur, new renal failure, cardiac ischemia, and arrhythmia. *PCG: 3.9 (P-2)*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask the group what the atrial fibrillation with RVR means for the decision to cardiovert or rate control, and which guideline they would look at (3.4 or 3.6).
- Ask how the crew should manage mask removal for sublingual medications while on CPAP.
- Ask what the ventilator CPAP settings and alarm settings are in 2.8 for a P-1.

SCENARIO 6 | ANSWER KEY

Acute Stroke with Large Vessel Occlusion Findings

Medical

Teaching Focus

Time, screening, and blood pressure. The group should be able to recite the labetalol rules, and should recognize that a stroke center with the right designation is the destination even when a closer facility exists.

Discussion Questions

#	Question and Model Answer
1	**What is the last known well time, and how does it factor into destination selection?** Last known well is 1105, when her friend saw her normal. Onset time is part of the required history of present illness, and a patient who is a possible reperfusion candidate should go to a Stroke Center. The VAN findings push toward a Level I (Comprehensive) or Level II (Advanced) center capable of thrombectomy. *PCG: 5.12 (EMT); 1.10*
2	**When does the PCG require a VAN assessment, and what findings in this patient make it positive?** If any CPHSS component is abnormal, complete a VAN assessment. VAN is positive with arm weakness plus any of vision, aphasia, or neglect. She has arm drift (weakness), unintelligible speech (aphasia), and a gaze deviation (vision component). The scoring tool is linked in 7.15. *PCG: 5.12 (EMT); 7.15*
3	**What are the blood pressure treatment thresholds for suspected stroke, and how many confirmatory readings are required before labetalol?** Treat when SBP is above 220 OR DBP is above 120, confirmed with at least 3 readings taken more than 5 minutes apart. Her three readings all exceed both thresholds. *PCG: 5.12 (P-2)*
4	**State the labetalol dose, administration time, repeat interval, maximum total, and the limit on how far the pressure may be reduced.** 10 to 20 mg IV/IO over at least 2 minutes. Repeat at 20 mg every 10 minutes to a maximum of 300 mg. Continue until BOTH SBP is below 220 and DBP is below 120. Do not reduce the pressure by more than 25% of the initial reading. Check the formulary contraindications. Not indicated in pediatrics. *PCG: 5.12 (P-2); 9.26*
5	**The patient seizes with IV access already in place. What is the midazolam dose and route for that situation?** Adult with IV/IO established before the seizure: midazolam 5 mg IV/IO. If there had been no access, 10 mg IM/IN. Then repeat the neurologic exam and reassess glucose during the postictal period. *PCG: 5.11; 5.12; 9.32*

#	Question and Model Answer
6	**Which destinations in 1.10 carry a stroke designation, and what is the difference between a Level III (Primary) and a Level II (Advanced) center for this patient?** Level I (Comprehensive): Dell Seton, St. David's Medical Center. Level II (Advanced): Ascension Seton Austin, Ascension Seton Williamson. Level III (Primary): Ascension Seton Hays, BSW Buda, BSW Pflugerville, St. David's South Austin, St. David's North Austin, St. David's Round Rock. Level IV (Acute Stroke Ready): BSW Taylor. A Primary center gives thrombolytics; a Comprehensive or Advanced center can perform thrombectomy for a large vessel occlusion. *PCG: 1.10*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask why the IV must be at or above the wrist and at least 20 gauge.
- Ask what the crew should do if a single reading of 230/125 is followed by 205/110.
- Ask what the transport position and airway management look like for a stroke patient who is drooling.

SCENARIO 7 | ANSWER KEY

Opioid Overdose and Post-Naloxone Refusal

Medical

Teaching Focus

Ventilate before you reverse. Then the Isolated Opioid Overdose pathway in 1.8, which is one of the few places the PCGs spell out an alternate-destination checklist item by item.

Discussion Questions

#	Question and Model Answer
1	**What must be prioritized before naloxone is administered, and why?** Resuscitate with a BVM to an SpO2 above 93% before naloxone. Naloxone given to a hypoxic, hypercapnic patient can precipitate agitation and vomiting in someone who is not yet oxygenated, and ventilation is the intervention that fixes the immediate problem. *PCG: 5.13.1 (EMT); 8.7*
2	**State the naloxone doses and routes for the EMT and EMT-A levels in an adult, and the repeat interval.** EMT: 2 to 4 mg intranasal. EMT-A: 0.4 mg IV/IO/IM/IN. Pediatric EMT-A: 0.02 mg/kg, max 0.4 mg. Repeat every 4 minutes as needed to restore effective ventilations. The endpoint is breathing, not full wakefulness. *PCG: 5.13.1; 9.33*
3	**List every inclusion criterion for an Isolated Opioid Overdose to be considered medically clear for alternate destination referral. Does this patient meet all of them?** Age over 18; isolated IV opiate overdose; treated under 5.13.1; never in cardiac arrest; regained normal mental and respiratory status after naloxone of up to 4 mg IN or 2 mg IM or IV; once awake, admits to isolated IV opioid/heroin use with no oral narcotics; consents to another 2 mg naloxone IM or IN. If all are met and there is no other acute condition, the patient is medically clear for alternate destination referral. This patient meets all criteria on the history given. *PCG: 1.8 (Refusal after Medical Treatment)*
4	**The patient refuses both alternate destination and transport. What must the crew still offer him?** The additional 2 mg naloxone dose by the IM or IN route, even when the patient refuses alternate destination and transport. *PCG: 1.8 (item h)*
5	**Which findings in the Determination of Decision-Making Capacity section would have prompted an OLMC contact had they been present?** Drug or alcohol ingestion with appreciable impairment (slurred speech, unsteady gait) and medical conditions such as hypoxia. Both were present on arrival and both resolved. Orientation differing from baseline would also apply if he had not returned to baseline. If any question remains, contact OLMC. *PCG: 1.8 (Determination of Decision-Making Capacity)*

#	Question and Model Answer
6	**If this patient had lost pulses after naloxone, which section requires Medical Director notification?** The 0.11 list is stated as including but not limited to the items shown. The closest listed items are cardiac arrest subsequent to controlled substance administration and any unexpected death during transport. Naloxone is not a controlled substance, so a strict reading does not trigger the list, but an arrest during EMS care after a medication is the type of event the section expects to be communicated. Note the crime scene guidance in 0.8 for the syringe and paraphernalia. *PCG: 0.11; 0.8*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask the group what changes if the patient admits to also taking pills.
- Ask what makes a refusal high risk versus standard, and who is consulted.
- Ask what documentation should capture the offered dose and the refusal.

SCENARIO 8 | ANSWER KEY

Status Epilepticus

Medical

Teaching Focus

Route selection for the benzodiazepine, the antiepileptic math, and the ketamine decision point. The PEARLs list in 5.11 is the sequence; the group should be able to walk it in order.

Discussion Questions

#	Question and Model Answer
1	**State the midazolam doses for an actively convulsing adult without IV access and with IV access. Why does the route matter?** No IV/IO: 10 mg IM/IN (pediatric 5 mg). IM/IN is the preferred route in the actively convulsing patient because it does not depend on obtaining a line during convulsions. IV/IO established before the seizure: 5 mg IV/IO (pediatric 0.2 mg/kg, max 5 mg). *PCG: 5.11 (Benzodiazepines, P-1); 9.32*
2	**Calculate the levetiracetam dose for this patient and state the infusion time and the rounding rule.** 60 mg/kg x 80 kg = 4,800 mg, capped at the 4,000 mg maximum. Infuse over 10 minutes. May round to the nearest 250 mg. P-2 medication. *PCG: 5.11 (Antiepileptics, P-2); 9.28*
3	**At what point in the PEARLs sequence does ketamine enter, and what documentation is required with it?** Ketamine at 1 to 2 mg/kg IV/IO is indicated if the seizure is refractory to midazolam, and the PEARLs place it at 10 to 15 minutes after the benzodiazepine, alongside the DAI decision. RASS documentation is required for every patient who receives ketamine, before and after. *PCG: 5.11 (PEARLs e; If refractory to Midazolam); 0.6; 9.24*
4	**Seizures stop after ketamine. What does the guideline say about proceeding to intubation in that situation?** The guideline states that if ketamine causes the seizures to stop, consider proceeding without intubation and consider an antiepileptic infusion. Airway compromise after ketamine is the trigger for DAI. Convulsions stopping after intubation does not mean CNS seizure activity has stopped, so benzodiazepine and antiepileptic administration continues. *PCG: 5.11 (PEARLs; postictal section); 2.3*
5	**What assessments are expected during the postictal period, and why?** Expect a 10 to 20 minute recovery after generalized convulsions. Close monitoring, especially after benzodiazepines or antiepileptics. Assess and treat for hypoglycemia and hyperglycemia. Perform and repeat complete neurologic examinations including cranial nerves; asymmetric or focal findings point to the underlying cause. *PCG: 5.11 (postictal section); 5.2*

#	Question and Model Answer
6	**The patient wants to refuse after midazolam and levetiracetam. What does 1.8 say about this refusal?** Seizure resolution after EMS administration of midazolam and/or levetiracetam is a listed high-risk refusal. The crew must consult a P-3 on scene or on a recorded line, or OLMC on a recorded line, before obtaining the refusal, and capacity must be re-assessed after medical treatment. *PCG: 1.8 (High-Risk Refusals; Refusal after Medical Treatment)*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what the pediatric intubation adjunct is for status epilepticus (lidocaine 1 mg/kg, P-2) and why it is pediatric only.
- Ask what alcohol withdrawal changes in the assessment, and where CIWA-Ar lives (7.5, 5.13.3).
- Ask the group to describe the DAI checklist roles for Crew 1 and Crew 2 if the airway decision is made.

SCENARIO 9 | ANSWER KEY

High-Speed MVC with Hemorrhagic Shock and Tension Pneumothorax

Trauma

Teaching Focus

This is the heaviest scenario in the packet. The group should be able to list the trauma alert criteria the patient meets, sequence the tourniquet, decompression, TXA, and blood product steps, and explain the LR incompatibility and the calcium follow-up.

Discussion Questions

#	Question and Model Answer
1	**List the Trauma Red criteria this patient meets. What does Trauma Red direct for destination?** Active bleeding requiring a tourniquet; GCS 13 or less (12); RR above 29 (34); respiratory distress; SBP below 90 for age 10 to 64 (72); HR greater than SBP (138 vs 72). Trauma Red directs transport to the closest Level I or Level II trauma center. Yellow mechanism criteria also apply (intrusion over 12 inches at the occupant site, need for extrication). *PCG: 7.18*
2	**What findings prompt needle decompression, and what is the P-2 alternative if needle decompression fails? What contraindication does 8.15 list for finger thoracostomy, and does this patient raise that concern?** Findings: absent breath sounds on the right, tracheal deviation, hypotension, and hypoxia with chest wall crepitus point to tension pneumothorax. Needle decompression is P-1; finger thoracostomy is the P-2 alternative and is indicated for clinical tension pneumothorax. 8.15 lists local trauma with the possibility of a sharp bone fragment or foreign body as a contraindication, which is a real concern with chest wall crepitus and should be discussed before the P-2 proceeds. *PCG: 4.4; 8.30; 8.15*
3	**State the TXA dose, the time window for administration, and the age restriction.** 2 g IV/IO for hemorrhagic shock. For onset of injury, bleeding, or birth with postpartum hemorrhage within the last 3 hours. Not indicated in patients under 16. *PCG: 3.10.2 (P-1); 9.47*
4	**What fluid is incompatible with LTOWB? What medication follows the first unit, and at what dose and rate?** LTOWB is not compatible with Lactated Ringer's; do not run it through a line carrying LR and do not give medications through the blood line. After the first unit, calcium gluconate 100 mg/kg (70 kg = 7 g, capped at 3 g) over 10 minutes in a pulsatile patient, may dilute in 100 mL using the 1 g/110 mL concentration. Adult dose is 1 unit, repeat PRN to sustain improvement. *PCG: 3.10.6; 9.30; 9.8*

#	Question and Model Answer
5	**When does the guideline direct norepinephrine versus continued blood product administration, and what is the push-dose agent while an infusion is prepared?** The P-2 is directed to consider LTOWB early; blood is the resuscitation fluid for hemorrhage. Norepinephrine is the preferred vasopressor at 0.05 to 0.15 mcg/kg/min to start, titrated every 5 minutes, with epinephrine infusion added after norepinephrine exceeds 0.2 mcg/kg/min. Push-dose epinephrine 5 to 20 mcg every 2 to 3 minutes bridges while the infusion is prepared. The guideline does not set a rule for one over the other; both are used with blood addressing volume and the pressor addressing tone. *PCG: 3.10.2 (P-2); 7.21; 9.18*
6	**The patient is approximately 12 weeks pregnant. Does the pregnancy risk factor in 7.18 apply, and what notification is expected?** The 7.18 EMS Judgment risk factor is pregnancy over 20 weeks, so it does not apply at 12 weeks. Trauma in the Pregnant Patient (6.3.5) still applies, and early notification of pregnancy and gestational age to the receiving center is expected. The Rh-positive blood note in 3.10.6 for females of childbearing potential is worth reading aloud. *PCG: 7.18; 6.3.5; 3.10.6*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask why the Canadian C-Spine Rule cannot be used to clear this patient (GCS below 15, unstable vitals, pregnancy are all listed contraindications in 8.35).
- Ask the group to walk the 8.6 bleeding control progression from direct pressure to wound packing to tourniquet.
- Ask what pain control looks like in a hypotensive trauma patient and why ketamine at the pain bolus dose was selected.
- Ask which items on this call would trigger 0.11 notification if they occurred.

SCENARIO 10 | ANSWER KEY

Geriatric Ground-Level Fall on Anticoagulants

Trauma

Teaching Focus

Age changes the thresholds. The group should find the age-based hypotension numbers in 4.2, recognize why the spinal clearance tool cannot be used, and catch the herniation signs when she deteriorates.

Discussion Questions

#	Question and Model Answer
1	**The crew attempts to apply the Canadian C-Spine Rule. Which contraindication to clearance in 8.35 does this patient have, and what high-risk factor in the rule would apply even if she could be cleared?** 8.35 lists GCS below 15 as a contraindication to Spinal Motion Restriction Clearance; her GCS is 14, so she cannot be cleared and a collar is indicated. Had she been clearable, age 65 or older is a high-risk factor in the Canadian C-Spine Rule that mandates imaging and therefore motion restriction. Long spine board use is limited to extrication and movement and removed before transport over 5 minutes. *PCG: 8.35; 4.3*
2	**What is the hypotension threshold for a head injury patient over 65, and why does the guideline treat a single hypotensive reading as significant?** For head trauma, hypotension inclusion for age over 65 is SBP below 110 mmHg (16 to 65 is below 90; under 16 is 70 + 2 x age). Her SBP of 104 qualifies for a 10 to 20 mL/kg bolus at the EMT-A level. The guideline treats a single hypotensive reading as significant because one instance of SBP below 90 doubles the chance of death. *PCG: 4.2 (EMT-A; opening statement)*
3	**Name the three findings that each double the chance of death in head injury. Does this patient show any of them on arrival, and how does her SBP of 104 fit against the age-based threshold in the guideline?** One instance of SBP below 90, SpO2 falling below 90%, or GCS below 9. On arrival she shows none of the three as written. Her SBP of 104 is above 90 but below the age-based treatment threshold of 110, which is why the EMT-A still treats. This is a good place to discuss why the guideline sets a higher bar for older adults. *PCG: 4.2*
4	**List the seizure prophylaxis criteria in 4.2. Which ones does this patient meet after her deterioration, and what is the levetiracetam dose and rate?** GCS below 13; unconsciousness over 30 minutes; seizure after injury; any sign of herniation (pupillary asymmetry, pupillary fixation without known history, cardiac or respiratory arrest, Cushing's triad of hypertension, bradycardia, and irregular breathing). After deterioration she has GCS 11, pupillary asymmetry, and Cushing's triad. Levetiracetam 60 mg/kg, max 4,000 mg, over 10 minutes, rounded to the nearest 250 mg. Weight is not given, so the group should estimate and show the math; at 60 kg the dose is 3,600 mg rounded to 3,500 or 3,750 mg. *PCG: 4.2 (P-1/P-2); 9.28*

#	Question and Model Answer
5	**Is she a Trauma Red, Trauma Yellow, or EMS Judgment patient? Cite the specific criteria.** On arrival she is an EMS Judgment patient: low-level fall in an older adult with significant head impact, and anticoagulant use (apixaban). After deterioration her GCS of 11 meets the Red criterion of GCS 13 or less. The closing line of 7.18 applies either way: if there are trauma concerns, take the patient to a trauma center. *PCG: 7.18*
6	**Which destinations in 1.10 carry a trauma designation, and what level should this patient go to?** Level I: Dell Seton (adult), Dell Children's (pediatric). Level II: Ascension Seton Hays, St. David's South Austin, Ascension Seton Williamson, St. David's Round Rock. Level IV: Ascension Seton Austin, Ascension Seton Northwest, St. David's Medical Center, St. David's North Austin, BSW Taylor. As a Red patient she goes to the closest Level I or II. *PCG: 1.10; 7.18*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what changes in airway planning when GCS falls below 9 and what the P-2 must have ready.
- Ask why head elevation above 30 degrees and SpO2 above 95% are the EMT-level interventions.
- Ask how the crew should communicate the anticoagulant to the receiving facility and why it matters for the patient's timeline.

SCENARIO 11 | ANSWER KEY

Structure Fire Burn with Inhalation Injury

Trauma

Teaching Focus

TBSA drives dressings and fluids, inhalation findings drive hydroxocobalamin and the airway decision, and the airway decision is the one that cannot wait. Have the group time the DAI discussion against the hoarseness and stridor progression.

Discussion Questions

#	Question and Model Answer
1	**What dressing does the guideline call for at this TBSA, and at what threshold does the dressing type change?** Burns under 10% TBSA are covered with wet sterile dressings. Burns 10% TBSA or greater are covered with dry sterile dressings. At 27% this patient gets dry dressings. Remove rings, bracelets, and constricting items from burned areas and distal to them. *PCG: 4.7*
2	**State the fluid rate for this patient and compare it with the rates for the 6 to 14 and 5 and under age groups.** Age 15 and older with 10% or greater TBSA: NS or LR at 500 mL/hr. Age 6 to 14: 250 mL/hr. Age 5 and under: 125 mL/hr. Under 10% TBSA uses the standard maintenance rate in 7.9. EMT-A level. *PCG: 4.7 (EMT-A); 7.9*
3	**Calculate the hydroxocobalamin dose for this patient. What is the infusion time and the repeat criteria?** 70 mg/kg x 90 kg = 6,300 mg, capped at the 5 g maximum. 5 g in 250 mL over 30 minutes. May repeat once, 10 minutes after the initial dose is complete, as needed. Indicated for facial burns, oropharyngeal burns, or inhalation injuries. P-1 level. *PCG: 4.7 (P-1); 9.21; 5.13.7*
4	**Which findings direct the P-2 to strongly consider Drug Assisted Intubation? Walk through the DAI checklist items that matter most in a burned airway.** Facial burns, oropharyngeal burns, inhalation injuries, or other indications of a compromised airway direct the P-2 to strongly consider DAI. Checklist items that matter most here: MOANS (mask seal on a burned face), HEAVEN with emphasis on Airway abnormalities and the 3-3-2 assessment, preoxygenation to best SpO2 for over 3 minutes, tubes one size up and one size down, a rescue airway and PACE plan equipment ready before medications, and leading with suction. Surgical cricothyrotomy (8.38) should be laid out as part of the PACE plan. *PCG: 4.7 (P-2); 2.3; 7.6; 8.38*
5	**Why is the pulse oximetry reading of 98% unreliable here?** Standard pulse oximetry cannot distinguish carboxyhemoglobin from oxyhemoglobin, so a smoke inhalation patient can read 98% while carrying a significant carbon monoxide load. The reading should not reassure the crew; treat on clinical findings and the fire environment. 5.13.9 directs 100% oxygen for carbon monoxide and lists CPAP as a consideration at the EMT level. *PCG: 5.13.9; 8.34; 4.7*

#	Question and Model Answer
6	**Under Trauma Alert Criteria, where do burn patients go, and how does the presence of trauma concerns change that?** Trauma Red includes burns and explosions with triage to an age-appropriate burn center. The closing line of 7.18 applies: if there are trauma concerns, take the patient to a trauma center. Burn center selection is confirmed through 1.10 and OLMC as needed. *PCG: 7.18; 1.10*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask the group to state the rocuronium and sedation steps in 2.3 and what post-intubation sedation looks like in 2.5.
- Ask why circumferential arm burns need repeated distal perfusion checks.
- Ask what the Z-Vent initial settings are in 7.22 for this patient.

SCENARIO 12 | ANSWER KEY

Septic Shock from a Urinary Source

Medical

Teaching Focus

The two sets of criteria are different and both are needed. Fluids have a maximum. The pressor decision has a defined trigger and a defined bridge. The extravasation reference is short and worth reading in full.

Discussion Questions

#	Question and Model Answer
1	**List the SIRS inclusion criteria and the Sepsis inclusion criteria. Which does this patient meet?** SIRS (two or more): sustained HR above 90, respirations above 20 or EtCO2 below 25, temperature below 96.8°F or above 100.4°F, and for IFTs WBC above 12 or below 4 or over 10% bands. He meets HR, RR, EtCO2, and temperature. Sepsis (two or more): altered mental status (GCS below 15), RR above 22, SBP below 100. He meets all three. *PCG: 5.5*
2	**What is the fluid bolus dose and the maximum total volume under 5.5? How much has the patient received when the crew moves to a vasopressor?** 20 mL/kg NS or LR, repeated as needed to support blood pressure, to a maximum total of 60 mL/kg. At 70 kg the crew has given 40 mL/kg (2,800 mL) when the pressor starts. Warm fluids when possible. *PCG: 5.5 (SIRS, EMT-A); 7.9*
3	**State the ceftriaxone dose and infusion time. What does the guideline say about pediatric dosing?** 1 to 2 g IV/IO over 30 minutes, P-2 level. Contact OLMC for pediatric dosing. The crew confirms the allergy is to sulfa, not to cephalosporins or penicillins. *PCG: 5.5 (Sepsis, P-2); 9.9*
4	**What are the norepinephrine starting range, titration interval, and the threshold for adding epinephrine as a secondary agent?** Indicated for severe sepsis with hypotension despite adequate fluid resuscitation. Range 0.05 to 0.3 mcg/kg/min, initiate at 0.05 to 0.15, titrate every 5 minutes. Add epinephrine infusion as a secondary agent after norepinephrine exceeds 0.2 mcg/kg/min. Push-dose epinephrine 5 to 20 mcg every 2 to 3 minutes while the infusion is prepared. Use an IV pump. *PCG: 3.10.5; 7.21; 9.35; 8.21*
5	**What does the Vasopressor Extravasation reference direct when the norepinephrine line infiltrates?** Tissue will be pale, cool, tender, painful, and firm. If the patient depends on the agent, switch the vasopressor to another IV or place an immediate IO. Do not pull the cannula immediately; aspirate as much fluid as possible with a syringe, then remove the catheter. Consider a warm compress. Notify the receiving physician and RN on arrival and document the event. *PCG: 7.20*

#	Question and Model Answer
6	**Both acetaminophen formulations appear in 5.5. Why does the crew choose the parenteral formulation here?** He is drowsy with a GCS of 13 and an aspiration risk, so PO is a poor choice. The P-1 gives IV acetaminophen 500 to 1,000 mg (1,000 mg in 100 mL). Do not exceed 75 mg/kg/day or 4,000 mg/day. *PCG: 5.5 (Fever); 9.1*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what infection control steps in 0.7 apply to a patient with a suspected infection and an indwelling device.
- Ask the group how they would handle glucose management if the BGL had been above 450.
- Ask why EtCO2 is a SIRS criterion and what a value of 22 tells the crew.

SCENARIO 13 | ANSWER KEY

Violently Combative Patient with Stimulant Intoxication

Medical / Psychiatric

Teaching Focus

The restraint rules are stated twice in the PCGs and again in 7.17. The group should be able to say them from memory, do the ketamine math with the rounding rule, and describe the monitoring that starts the moment sedation takes effect.

Discussion Questions

#	Question and Model Answer
1	**State the two restraint rules at the top of 5.9 and 5.10, including the law enforcement custody exception. How do they apply once the deputies hand the patient to EMS?** Every physically restrained patient must be chemically restrained, except patients in custody of a law enforcement agency; 7.17 narrows the exception to custody patients who do not have an elevated RASS. Every chemically restrained patient must be physically restrained. Once EMS assumes care, this patient has an elevated RASS, so both apply regardless of custody status. Handcuffs are not for long-term restraint beyond 15 minutes unless unsafe to remove or the patient is in custody with a RASS of 0. Never transport prone. *PCG: 5.9; 5.10; 7.17*
2	**Calculate the IM ketamine dose for this 85 kg patient, apply the rounding rule, and state the maximum. How does the IV dose differ?** IM (RASS 4): 4 mg/kg x 85 kg = 340 mg, rounded to the nearest 50 mg = 350 mg (max 400 mg). IV/IO (RASS 4): 2 mg/kg = 170 mg, rounded to 150 mg (max 400 mg). P-2 medication. *PCG: 5.10 (P-2); 9.24*
3	**What RASS documentation is required, and where in 0.6 is that requirement stated?** 0.6 states that any time a sedative medication is administered, a RASS must be documented before and after. 5.10 and 9.24 repeat that RASS documentation is required for all patients receiving ketamine. 7.17 adds EtCO2 and vital signs every 5 minutes after sedation and restraint of a patient with a RASS of 2 or greater. *PCG: 0.6; 5.10; 7.13; 7.17*
4	**Describe the first-line treatment for an emergence reaction and the dose range.** Midazolam is first-line: adult 2.5 to 10 mg IV/IO/IM/IN (pediatric 0.05 to 0.1 mg/kg, max 4 mg). If the patient returns to a violently combative state, additional ketamine may be given at clinician discretion. As RASS decreases, titrate to a RASS of -2 to 0 using 5.8 and 5.9 agents. *PCG: 5.10 (Emergence Reaction); 9.32*
5	**Which hyperthermia band does this patient fall into under 5.3, and what changes in the guideline if his core temperature crosses 105°F?** Core temperature 100.4°F to 105°F: NS or LR 10 to 20 mL/kg, max 2 L, EMT-A level. Above 105°F: immediate transport is not required and scene time may be extended for Tarp-Assisted Cooling with Oscillation (First Responder skill), plus chilled NS or LR 10 to 20 mL/kg, stopping the chilled bolus if core temperature drops below 102°F. *PCG: 5.3; 8.40*

#	Question and Model Answer
6	**Which items in 0.11 would trigger a Medical Director notification on this call if they occurred?** Any cardiac or respiratory arrest or patient injury related to the use of physical restraints; cardiac or respiratory arrest subsequent to controlled substance administration (ketamine and midazolam are controlled substances); any complications related to advanced airway management if the airway is lost after sedation. *PCG: 0.11*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what the 5.9 agents are for a RASS 2 to 3 patient at the P-1 and P-2 levels, and which are syringe compatible.
- Ask why stimulant intoxication and alcohol withdrawal share a guideline, and where CIWA-Ar applies.
- Ask the group to describe positioning and airway monitoring in the first five minutes after IM ketamine.

SCENARIO 14 | ANSWER KEY

Precipitous Field Delivery with Postpartum Hemorrhage

Obstetrical / Neonatal

Teaching Focus

Two patients, two sets of documentation, two destinations. The group should walk delivery, newborn, and hemorrhage in order, and should be able to fill the emergency childbirth documentation list from memory.

Discussion Questions

#	Question and Model Answer
1	**Interpret G3P2002 using the GTPAL definitions in 6.1.** Gravida 3 (third pregnancy); Term 2; Preterm 0; Abortions/miscarriages 0; Living 2. Plain English is acceptable in the chart. *PCG: 6.1*
2	**Walk through the newborn management steps in order. When does the guideline direct ventilatory support for the infant?** Bulb suction the oropharynx first, then both nares, with caution because vagal stimulation causes bradycardia. Initiate neonatal resuscitation if indicated. Sniffing position with blow-by 100% oxygen until pink centrally. Support ventilations if the apical heart rate is below 100 or respirations are absent or depressed. Keep the infant warm and dry. Calculate APGAR at 1 and 5 minutes. This infant had a heart rate of 88 and was limp, so ventilatory support was indicated immediately. *PCG: 6.5 (EMT); 7.2*
3	**Score the 1-minute and 5-minute APGARs from the scenario. When are additional scores required beyond 5 minutes?** The 1-minute score of 5 and 5-minute score of 8 are given in the scenario; the group should assign the component points that produce them (appearance, pulse, grimace, activity, respirations). When the 5-minute APGAR is below 7, additional scores are assigned every 5 minutes up to 20 minutes. Here the 5-minute score was 8, so no further scores are required. *PCG: 6.5; 7.2*
4	**What are the EMT, P-1, and P-2 interventions for postpartum hemorrhage, in order of credential level?** EMT: palpate the fundus, fundal massage (8.33), encourage the mother to nurse for endogenous oxytocin release. P-1: consider Hemorrhagic Shock (3.10.2), TXA 2 g IV/IO, treat under Hypovolemic Shock (3.10.3), direct pressure to lacerations. P-2: oxytocin 10 units IM to the mother, and early consideration of LTOWB under 3.10.2 and 3.10.6. *PCG: 6.3.4; 6.4; 8.33; 9.41*
5	**State the TXA dose and the time window that applies to postpartum hemorrhage.** 2 g IV/IO, for onset of injury, bleeding, or birth with postpartum hemorrhage within the last 3 hours. Not indicated under age 16. *PCG: 6.3.4 (P-1); 9.47*

#	Question and Model Answer
6	**List the emergency childbirth documentation elements required by 6.5. Which destination designations in 1.10 apply to the mother and to the newborn?** Document presentation, time, place, and date of birth, nuchal cord (yes/no/quantity), time of membrane rupture, membrane color, APGAR at 1, 5, and 10 minutes if applicable, placental delivery time, placental appearance, number of cord vessels, and infant resuscitation performed. Destinations: the mother goes to a facility with a Maternal designation and the newborn to one with a Neonatal designation in 1.10. 6.1 notes the crew can transport the mother and have communications arrange NICU transport for the baby. *PCG: 6.5 (Emergency Childbirth Documentation); 6.1; 1.10; 7.10*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what the EMT delivery steps are in 6.4 and what the EMT-A fluid rate is for the mother after delivery.
- Ask what the P-2 recovery care schedule is (vitals, fundal checks, massage every 15 minutes x 4).
- Ask when the Meconium Aspiration skill (8.23) would have applied.

SCENARIO 15 | ANSWER KEY

Hypoglycemia on Oral Agents with Refusal

Medical

Teaching Focus

A simple clinical problem with a refusal that is not simple. The group should catch the sulfonylurea, know that metformin is the noted exception, and know exactly who gets consulted before the refusal is signed.

Discussion Questions

#	Question and Model Answer
1	**State the PCG definition of hypoglycemia for adults and neonates. What action is required if the patient had been wearing an insulin pump?** Hypoglycemia is GCS below 15 AND BGL below 60 in adults (below 40 in neonates). If the patient has an insulin pump with an active infusion and confirmed hypoglycemia, disconnect the pump. *PCG: 5.2*
2	**Calculate the dextrose 10% dose for this patient in grams and milliliters. Why does the guideline allow less than the calculated dose?** 200 mg/kg x 90 kg = 18 g, capped at the 10 g maximum, which is 100 mL of D10 (10 g in 100 mL). The guideline directs titration to effect and allows less than the calculated dose because the goal is correction of the hypoglycemia, not delivery of a fixed volume. May repeat as needed. EMT-A level. *PCG: 5.2 (EMT-A); 9.11*
3	**Why does the PCG treat a refusal after hypoglycemia on oral agents as high risk? Which oral agent is noted as the exception?** Patients on oral diabetic medications are at risk of recurrent hypoglycemia that can be delayed for hours and require close monitoring even after a normal glucose is restored. They should be encouraged to accept transport. Not all oral agents have prolonged action; metformin is the noted exception. Glipizide (a sulfonylurea) is the concern for this patient. *PCG: 1.8 (Refusal after Medical Treatment)*
4	**Who must be consulted for a high-risk refusal, and through what mechanism?** For a high-risk refusal the clinician consults a P-3 Supervisor on scene or on a recorded line through communications, or OLMC on a recorded line through communications, before obtaining the refusal. Capacity is re-assessed after treatment. *PCG: 1.8 (High-Risk Refusals); 1.9*
5	**What instructions does the guideline direct for a patient who meets criteria to refuse after hypoglycemia on oral agents?** Patients who meet criteria to refuse should be instructed to contact their physician immediately and consume a meal. The First Responder guidance to feed complex carbohydrates and sugars (for example a peanut butter and jelly sandwich) applies once he can protect his airway. *PCG: 1.8; 5.2 (First Responder)*

#	Question and Model Answer
6	**Which findings in the Determination of Decision-Making Capacity section were present on arrival and are now resolved?** On arrival: orientation differing from baseline and a metabolic emergency (diabetic issue), both listed as reasons a patient may lack capacity. After treatment both have resolved, and the Decision-Making Capacity Tool is completed on the corrected patient. If any question remains, contact OLMC. *PCG: 1.8 (Determination of Decision-Making Capacity)*

Facilitator Prompts

Use these to push the group past the first correct answer. Each one should send someone back into the PCGs.

- Ask what changes if the patient were on insulin rather than oral agents.
- Ask what the oral glucose dose is (0.5 g/kg, max 15 g) and when it is appropriate.
- Ask how the refusal should be documented so that the consult, the instructions, and the wife's presence are all captured.