

10 EMS Simulation Scenarios Every Program Should Master

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PURPOSE

For EMS programs, simulation is more than a teaching tool, it's a readiness accelerator. Realistic, scenario-based simulation helps first responders build muscle memory, strengthen critical thinking, and increase scene coordination in unpredictable situations. The most effective EMS simulation programs blend high-frequency, low-frequency, and high-acuity events to mirror real-world response conditions. These 10 scenarios represent core training modules every EMS and first responder education program should include.



Sudden Cardiac Arrest (Adult)

Focus: High-frequency, high-acuity scenario

Why it Matters: Cardiac arrest remains one of the most common and time-critical EMS responses.

- Rapid scene entry, primary assessment, early CPR
- AED/monitor deployment and defibrillation
- Team role assignment and airway management
- Emphasis on high-performance resuscitation



Pediatric Respiratory Failure

Focus: Low-frequency, high-acuity scenario

Why it Matters: Pediatric calls are rare but among the most anxiety-inducing for providers.

- Early recognition of distress in pediatric patients
- BVM ventilation, airway adjuncts, oxygenation
- Pediatric dosing and equipment selection
- Crew communication under stress



Multi-Vehicle Collision Trauma

Focus: Complex scene management

Why it Matters: Trauma scenarios test decision-making under pressure.

- Multi-patient triage and resource allocation
- Hemorrhage control, rapid extrication, immobilization
- Coordination with fire, law enforcement, and hospital systems
- Prioritizing life threats under chaos



Opioid Overdose/Respiratory Arrest

Focus: Time-sensitive airway and reversal

Why it Matters: Opioid overdose remains a leading cause of prehospital emergencies.

- Rapid identification of respiratory depression
- Airway management, BVM, oxygenation
- Naloxone administration and reassessment
- Post-resuscitation monitoring



STEMI/Chest Pain Management

Focus: Rapid assessment and early intervention

Why it Matters: Early intervention significantly impacts morbidity and mortality.

- 12-lead ECG acquisition and interpretation
- Early activation of cath lab / transport decision-making
- Medication administration and monitoring
- Patient communication and anxiety management



Anaphylaxis with Airway Compromise

Focus: Medical emergency and critical intervention

Why it Matters: Seconds count when airway obstruction is progressing.

- Early recognition of symptoms
- Epinephrine administration and adjunct treatments
- Airway support and rapid transport decisions
- Coordination of care in dynamic presentation



Behavioral Emergency/Patient in Crisis

Focus: Crisis communication and safety

Why it Matters: Behavioral emergencies require a balance of clinical skill and communication.

- Scene safety and de-escalation techniques
- Coordination with law enforcement
- Medical clearance and mental health protocols
- Emphasis on non-physical resolution when possible



OB Emergency/Precipitous Delivery

Focus: Low-frequency, high-acuity scenario

Why it Matters: OB calls are uncommon but require practiced precision.

- Rapid assessment of imminent delivery
- Field delivery protocols, newborn resuscitation
- Postpartum hemorrhage management
- Neonatal care and transport preparation



Hypoglycemia

Focus: Common medical emergency

Why it Matters: Common scenario with high potential for error if missed or mismanaged.

- Scene size-up, history gathering, glucose check
- Oral vs. IV glucose or glucagon administration
- Reassessment and transport considerations
- Patient refusal documentation and risk management



Mass Casualty Incident (MCI)

Focus: Team communication and systems coordination

Why it Matters: MCI simulations prepare teams for the rare, catastrophic events that define readiness.

- START triage and scene organization
- Incident command integration
- Radio communication and hospital notifications
- Leadership and resource allocation under pressure

BEST PRACTICES FOR SCENARIO-BASED EMS SIMULATION

- **Train in the field:** Bring simulation to the environment where responders work.
- **Use portable, modular equipment:** Allows for fast setup and repeatable drills.
- **Debrief every scenario:** Immediate, structured feedback drives learning.
- **Integrate competencies:** Technical skills + communication + decision-making.
- **Scale difficulty:** Start with structured scenarios, then introduce chaos and complexity.

BUILDING YOUR SCENARIO LIBRARY

These 10 core scenarios provide the foundation for a comprehensive EMS simulation curriculum. Advanced programs often supplement them with specialized modules (e.g., hazmat exposure, active shooter response, interfacility transfers) based on local protocols and community risk assessments.

REFERENCES

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