Emergency Response in a Mass-Casualty Incident

Reading Passage

It was close to midnight when the emergency department at City General Hospital received a trauma alert from dispatch. A multi-vehicle accident had occurred on Interstate 95 during heavy rain. Several cars and a cargo truck were involved in a chain-reaction collision, causing serious injuries to multiple victims. The accident was immediately classified as a mass-casualty incident because emergency responders expected a large number of critically injured patients.

Inside the emergency room (ER), Dr. Arlo, the attending physician on duty, had already completed a twelve-hour shift. Despite his exhaustion, he quickly prepared himself for the incoming emergency. Overhead speakers suddenly announced, “Code Orange. Mass casualty. Three minutes out.” In many hospitals, a Code Orange is used to activate emergency protocols during disasters or incidents involving multiple casualties.

Dr. Arlo immediately instructed Nurse Chloe to prepare the trauma bays. Additional stretchers were brought into the ER, and the blood bank began preparing O-negative blood for emergency transfusions. O-negative blood is commonly used in trauma situations because it can be safely given to most patients before their blood type is confirmed.

The ER team reviewed the Advanced Trauma Life Support (ATLS) protocol, which emphasizes rapid assessment and stabilization of trauma patients. During trauma care, medical professionals prioritize the patient’s airway, breathing, and circulation, commonly known as the “ABC approach.” These steps are essential because uncontrolled bleeding or airway obstruction can quickly lead to death.

A few minutes later, the ambulance doors opened and paramedics rushed inside with the first patient. The patient was a twenty-two-year-old man named Mark. He had been ejected through the windshield during the collision and suffered severe injuries.

Paramedic Jenkins quickly gave a report to the trauma team.

“Male patient involved in an MVA,” he said. “High-speed collision. Blood pressure is 90 over 60, heart rate 130 beats per minute, and oxygen saturation 88 percent. He has an open femur fracture and possible internal bleeding.”

The abbreviation MVA stands for Motor Vehicle Accident, a term commonly used in emergency medicine and trauma reports. Mark’s low blood pressure and elevated heart rate suggested that he was developing hemorrhagic shock, a life-threatening condition caused by severe blood loss.

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Dr. Arlo approached the patient and immediately assessed his airway and breathing. Mark was conscious but struggling to speak. His skin appeared pale and cold, which are common signs of poor circulation.

“Mark, can you hear me?” Dr. Arlo asked.

The patient weakly nodded while holding his abdomen. A sharp metal object remained impaled in his lower abdomen. Medical staff understood that the object should not be removed immediately because it might be compressing damaged blood vessels and limiting blood loss. Removing the object outside the operating room could worsen internal bleeding and cause rapid deterioration.

Nurse Chloe inserted two large-bore IV lines into Mark’s arms. The abbreviation IV stands for intravenous, meaning that fluids or medications are delivered directly into a vein. Rapid IV access is critical in trauma care because it allows healthcare providers to administer fluids, blood products, and emergency medications quickly.

“Start two units of O-negative blood,” Dr. Arlo ordered.

While the blood transfusion began, the trauma team continued the primary assessment. Mark’s respiratory rate increased, and his oxygen saturation remained low despite oxygen therapy. Dr. Arlo suspected that the patient might also have chest trauma.

Meanwhile, another nurse attached Mark to a cardiac monitor. His blood pressure continued to decrease, and the monitor showed signs of tachycardia. Tachycardia refers to an abnormally fast heart rate, usually above 100 beats per minute in adults.

Paramedic Jenkins informed the team that several additional victims were still on the way.

“At least six more patients are coming,” he said. “Some are trapped in their vehicles, and emergency crews are still trying to remove them.”

The emergency department rapidly became overcrowded. Nurses prepared extra ventilators, physicians contacted the operating room staff, and surgeons were placed on standby. During mass-casualty incidents, hospitals must use triage systems to prioritize treatment based on injury severity and the likelihood of survival.

Dr. Arlo continued examining Mark. His abdomen appeared rigid and swollen, increasing suspicion of internal hemorrhage. FAST ultrasound imaging was ordered immediately. FAST stands for Focused Assessment with Sonography in Trauma, a rapid bedside ultrasound examination used to detect internal bleeding.

The ultrasound revealed free fluid in the abdominal cavity, strongly suggesting internal hemorrhage.

“We need emergency exploratory surgery,” Dr. Arlo said. “Page general surgery immediately.”

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As preparations were made to transfer Mark to the operating room, his condition suddenly worsened. The cardiac monitor alarm sounded repeatedly.

“BP is dropping to 80 over 50,” Nurse Chloe warned.

Mark became unresponsive, and the monitor showed pulseless electrical activity. Dr. Arlo immediately began cardiopulmonary resuscitation (CPR). Chest compressions were initiated while another nurse prepared emergency medications.

“Charge the defib to 200 joules,” Dr. Arlo instructed.

The term “defib” is short for defibrillator, a device used to deliver electrical shocks to restore normal heart rhythm during cardiac arrest.

The trauma team cleared the patient before Dr. Arlo delivered the shock.

“Clear!”

The electrical shock caused Mark’s body to jerk slightly. After several tense seconds, the monitor displayed a weak but organized rhythm.

“We have a pulse,” Nurse Chloe announced.

Although Mark’s condition remained critical, the temporary return of circulation allowed the surgical team to transport him safely to the operating room.

Outside the trauma bay, additional ambulances continued arriving. Some patients had minor injuries such as lacerations and fractures, while others required immediate life-saving intervention. Nurses documented patient information rapidly, respiratory therapists managed oxygen equipment, and surgeons prepared for multiple emergency operations.

The mass-casualty incident demonstrated the importance of communication, teamwork, and rapid decision-making in emergency medicine. Every member of the healthcare team had a critical role in patient survival.

For medical professionals, situations like these require not only technical knowledge but also emotional resilience. Emergency healthcare workers frequently operate under intense pressure while making life-or-death decisions within seconds.

Despite the chaos, Dr. Arlo and the trauma team remained focused on their responsibilities. Their ability to apply trauma protocols, interpret vital signs, and coordinate emergency treatment gave patients the best possible chance of survival.

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Multiple-Choice Questions

Abbreviation Questions

1. In the passage, what does the abbreviation “MVA” stand for?

A. Major Vascular Arrest
B. Motor Vehicle Accident
C. Medical Ventilation Assessment
D. Multiple Victim Alert

Answer: B. Motor Vehicle Accident

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2. What does the abbreviation “IV” mean in the passage?

A. Internal Ventilation
B. Intensive Valve
C. Intravenous
D. Immediate Verification

Answer: C. Intravenous

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3. In emergency medicine, what does “FAST” stand for?

A. Focused Assessment with Sonography in Trauma
B. Functional Airway Support Technique
C. Full Advanced Surgical Treatment
D. First Aid Stabilization Test

Answer: A. Focused Assessment with Sonography in Trauma

Comprehension Questions

4. Why did the medical team avoid removing the metal object from Mark’s abdomen immediately?

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A. The object was difficult to remove
B. Removing it could worsen internal bleeding
C. The patient refused treatment
D. Surgery equipment was unavailable

Answer: B. Removing it could worsen internal bleeding

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5. Which clinical signs suggested that Mark was developing hemorrhagic shock?

A. High blood pressure and slow heart rate
B. Low blood pressure and rapid heart rate
C. Stable breathing and warm skin
D. Normal oxygen saturation and alertness

Answer: B. Low blood pressure and rapid heart rate

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6. What was the main purpose of activating a "Code Orange" in the hospital?

A. To announce a fire emergency
B. To prepare for a contagious disease outbreak
C. To activate emergency response protocols for a mass-casualty incident
D. To schedule emergency surgery for one patient

Answer: C. To activate emergency response protocols for a mass-casualty incident

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