1. **STORM study *SESSION protocol* - please follow step-by-step!**

**Session Simulations**

- **Setting:** Thank you for participating in this study. You are on duty as a mixed-level (BLS / ALS) team at a pre-hospital / EMS service; you will be asked to engage in three simulated patient care scenarios with live equipment during this study session. As these are simulated events, please do **not** activate or interface with resources outside this patient care space. *VERBALIZE in REAL TIME all clinical actions and decision-making as much as possible (e.g., “The heart rate is 125, I think the patient is hypovolemic. I will administer two liters of normal saline.”)* You will be videotaped for study purposes only; all materials will be destroyed after data collection and will **not** be used for evaluation of your job / clinical performance.

- **Manikin:** "You will be interacting with this SimMan 3G patient simulator, which can have chest rise + breath sounds if breathing, carotid and femoral pulses with circulation; EKG signals can also be obtained with a cardiac monitor or AED. The manikin can undergo chest compressions, basic and advanced airway management (endotracheal intubation, etc.), electrical therapy (cardioversion, defibrillation, pacing) and intra-venous/-osseous cannulation (no flash!). It is wireless / tetherless, so it can be moved and transported; it weighs ~195 pounds (~90 kilograms). Please review Study Sim. Session Information Sheets 1a + 1b for details."

- **Simulation space layout:** *Please review the Study Sim. Session Briefing + Orientation Sheet 1c."

- **Resuscitation equipment:** "Please check the resuscitation protocol cards + equipment provided."
A. Common Scenario Start Stem

You are working clinically in your 911 response pre-hospital setting and respond to a witnessed sudden cardiac arrest event at an eye clinic. The patient, Mr. Walter Young, was helped onto the floor by a bystander; there is no trauma. No further history is available.

B1. Performance assessment scenario 1

As the first two providers who respond to the patient, you will need to perform sudden cardiac arrest (SCA) resuscitation as defined by your pre-hospital service / state protocols, then transport the patient out. You will need to accomplish the following tasks prior to transport:

- 1. Assess patient for responsiveness.
- 2. Provide adequate and sustained chest compressions.
- 3. Establish and maintain a secure airway (e.g., endotracheal tube, ILMA/SGA).
- 4. Provide adequate and sustained ventilations.
- 5. Assess for arrhythmia, then provide electrical therapy as appropriate and necessary.
- 6. Establish and maintain secure vascular access.
- 7. Administer appropriate resuscitative medications.
- 8. Package the patient for safe transport.

If you feel unwell or are injured during the scenario, please stop immediately and inform the study team.

Please proceed to the scene + begin your resuscitation.

B2. Performance assessment scenario 2

As the first two providers who respond to the patient, you will need to perform sudden cardiac arrest (SCA) resuscitation as defined by your pre-hospital service / state protocols, then transport the patient out. You will need to accomplish the following tasks prior to transport:

As the first two providers who respond to the patient, you will need to perform sudden cardiac arrest (SCA) resuscitation as defined by the experimental protocols (see protocol card), then transport the patient out. You will need to accomplish the following tasks prior to transport:

- 1. Assess patient for responsiveness.
- 2. Provide adequate and sustained chest compressions.
- 3. Establish and maintain a secure airway (e.g., endotracheal tube, ILMA/SGA).
- 4. Provide adequate and sustained ventilations.
- 5. Assess for arrhythmia, then provide electrical therapy as appropriate and necessary.
- 6. Establish and maintain secure vascular access.
- 7. Administer appropriate resuscitative medications.
- 8. Package the patient for safe transport.

If you feel unwell or are injured during the scenario, please stop immediately and inform the study team.

Please proceed to the scene + begin your resuscitation.

B3. Performance assessment scenario 3

As the first two providers who respond to the patient, you will need to perform sudden cardiac arrest (SCA) resuscitation as defined by your pre-hospital service / state protocols, then transport the patient out. Please reverse your provider roles, i.e., the EMT-Basic will attempt to intubate, start the IV and administer medications without assistance; the EMT-I/C/P will perform only BLS interventions (incl. AED defibrillation). You will have seven minutes to accomplish as many of the following tasks as possible (prior to transport):

As the first two providers who respond to the patient, you will need to perform sudden cardiac arrest (SCA) resuscitation as defined by the experimental protocols (see protocol card), then transport the patient out. Please reverse your provider roles, i.e., the EMT-Basic will attempt to secure the airway, start an IO and administer medications without assistance; the EMT-I/C/P will perform only BLS interventions (incl. AED defibrillation). You will have seven minutes to accomplish as many of the following tasks as possible (prior to transport):

- 1. Assess patient for responsiveness.
- 2. Provide adequate and sustained chest compressions.
- 3. Establish and maintain a secure airway (e.g., endotracheal tube, ILMA/SGA).
- 4. Provide adequate and sustained ventilations.
- 5. Assess for arrhythmia, then provide electrical therapy as appropriate and necessary.
- 6. Establish and maintain secure vascular access.
- 7. Administer appropriate resuscitative medications.
- 8. Package the patient for safe transport.

If you feel unwell or are injured during the scenario, please stop immediately and inform the study team.

Please proceed to the scene + begin your resuscitation.

C. Common Scenario End Stem

1. Assess patient for responsiveness.
2. Provide adequate and sustained chest compressions.
3. Establish and maintain a secure airway (e.g., endotracheal tube, ILMA/SGA).
4. Provide adequate and sustained ventilations.
5. Assess for arrhythmia, then provide electrical therapy as appropriate and necessary.
6. Establish and maintain secure vascular access.
7. Administer appropriate resuscitative medications.
8. Package the patient for safe transport. ----->

If you feel unwell or are injured during the scenario, please stop immediately and inform the study team.

Please proceed to the scene + begin your resuscitation.