Sanity Template for Asystole with Suspected Covid-19

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| **Field** |  |
| Title | Asystole with Suspected Covid-19 |
| Subtitle | EMS Resuscitation Training |
| Publishing Organization | Laerdal Medical |
| Overview tab |  |
| Simulation Type | Simulation-based training |
| Simulation time | 15-25 minutes |
| Debriefing time | 20-40 minutes |
| Level | Intermediate |
| Patient Type | Adult |
| Target groups | Emergency response personnel (EMS) |
| Summary | In this scenario, the participants will encounter a patient who is home-quarantined with suspected Covid-19. During simulation the patient will experience a cardiac arrest with a non-shockable rhythm.  The participant should don Personal Protective Equipment (PPE) according to guidelines prior to patient interaction and the team should consider how to limit the use of aerosol generating procedures during resuscitation. After ROSC, the participants should consider transport to the hospital and driving personnel should doff PPE according to guidelines.  This scenario does not contain timed events but allows the operator to move the simulation forward when the participants have performed adequate interventions. |
| Learning objectives | After simulation the participants should be able to:   * Use donning/doffing procedure * Consider a limited use of Aerosol Generating Procedures (AGP’s) * Perform airway management for a casualty with suspected Covid-19 * Maintain a secure BVM seal * Recognize and treat a cardiac arrest with a non-shockable rhythm * Identify transport consideration of suspected Covid-19 patient |
| Educational information |  |
| Further readings  (collapsed item) | *ACLS Cardiac Arrest Algorithm for suspected of Confirmed COVID-19 Patients,* American Heart Association, May 2020, retrieved from  <https://cpr.heart.org/-/media/cpr-files/resources/covid-19-resources-for-cpr-training/english/algorithmacls_cacovid_200406.pdf?la=en>  *Covid-19 Content: An AHA Compendium*, American Heart Association, May 2020, retrieved from <https://professional.heart.org/professional/General/UCM_505868_COVID-19-Professional-Resources.jsp>  *ERC Covid-19 Guidelines*, European Resuscitation Council, May 2020, retrieved from <https://www.erc.edu/covid>  *The ARC Guidelines*, Australian Resuscitation Council, May 2020, retrieved from <https://resus.org.au/guidelines/> |
| Why use this scenario? | This scenario is developed to train EMS personnel to prepare and provide care for a suspected Covid-19 patient using Personal Protective Equipment (PPE) to prevent cross-contamination during resuscitation and post-cardiac care of cardiac arrest based on latest AHA, ANZCOR and ERC guidelines. |
| Prepare tab |  |
| Location | Private home |
| Participants | Emergency response personnel (2-4) |
| Equipment list  (semi-collapsed item) | BP cuff  Defibrillator/AED  Personal Protective Equipment (PPE) including long-sleeved gown, goggles or faceshield, surgical or medical mask, non-sterile gloves  Bag-valve-mask (BVM)  Stethoscope  Pulse oximeter  Ventolin inhaler  Thermometer  HEPA filter  Standard emergency equipment (O2, medications and supplies) |
| Preparation and setup | * Dress the simulator in a jogging suit * Place the simulator lying on a bed or couch |
| Role Information  (collapsed item) | **Scenario assistant acting as the patients friend, Jack**  You and your friend Paul has decided to go into self-quarentine together in Paul’s department after you discovered that a fellow, you met at a bar a week ago, has been tested positive with Covid-19  Provide information about the incident upon request from the EMS team:   * Paul Slater is a 47-years-old male * He is self-quarantined at home following exposure to Covid-19 at a local bar * He has been coughing with fever and chest tightness, and said he felt weak. He thought he might have had the flu the past 3 days * His chest is hurting in a different way now and he feels as if he is dying * You have not been feeling any symptoms |
| **Patient chart** |  |
| Training Devices | Resusci Anne Simulator, Resusci Anne Advanced Skills trainer, ALS Simulator, SimMan ALS |
| Simulation devices | SimPad, LLeap |
| Simulation mode | Automatic mode |
| Additional Simulation Equipment | Patient monitor, SpO2 probe |
| Simulate tab |  |
| Learner Brief | *This section should be read out for the participants before start of simulation:*  You arrive at the private home of Paul Slater, who is a 47-year-old male self-quarantined at home with his friend, Jack following exposure to Covid-19 at a local bar. His friend called the emergency response system, stating, that he thinks the patient has had the flu the past 3 days accompanied by fever, coughing, chest tightness, and weakness. |
| Patient Picture | NA |
| Patient Data   * Name * Gender * Age * Weight * Height * Race * Religion * Major Support * Allergies * Immunizations | Paul Slater  M  47  Weight: 98 kg  Height: 192 cm  Race/Culture: na  Religion: Unknown  Major Support: His friend, Jack  Allergies: Unknown  Immunizations: Unknown status |
| Start vital signs   * Heart Rhythm * Heart rate (bpm) * Blood pressure (mmHg) * Respiration rate (rpm) * SpO2 (%) * PetCO2 (mmHg) * Temperature * Capillary refil time (sec) | Sinus Tach  142  94/48  34  90%  38.7 C  2 sec |
| Medical history |  |
| Clinical Findings | * Chest tightness * Chest pain, * Feverish and sweating * Coughing with audible wheezing * Generally feeling very ill |
| Diagnostics | None |
| Provider’s orders | NA |
| Expected interventions  (accordion for each Phase) | **Phase 1**   * Perform hand hygiene * Apply long sleeved disposable gown * Apply surgical mask * Apply protective eyewear * Apply gloves * Apply patient PPE   **Phase 2**   * Ensure scene safety * Call backup * Open airway * Obtain SpO2 * Assess breathing * Check pulse * Obtain blood pressure * Assess level of consciousness * Obtain 12-lead ECG * Ensure correct posture * Choose oxygen device * Set oxygen rate * Administer albuterol 5 mg * Consider use of Aerosol Generating Procedures (AGP’s) * Use closed-loop communication * Delegate roles * Coordinate team efforts * Insert IV/IO * Administer normal saline   **Phase 3**   * Start CPR * Apply pads * Turn on defibrillator * Charge defibrillator * Select defibrillation dose * Announce “Stand Clear” * Stop CPR * Recognize non-shockable rhythm (Asystole) * Checks safety * Dump charge * Open airway * Clear airway * Insert basicairway * Start ventilations * Use HEPA filter * Maintain secure BVM seal * Use closed-loop communication * Delegate roles * Coordinate team efforts * Administer epinephrine * Rights of medication administration * Consider use of Aerosol Generation Procedure (AGP’s) * Insert advancedairway * Consider H’s and T’s   **Phase 4**  Check pulse  Monitor SpO2  Administer oxygen  Obtain respiratory rate  Obtain NIBP  Obtain 12-lead ECG  Assess IV site, fluid and rate  Use closed-loop communication  Delegate roles  Coordinate team efforts  Consider H’s and T’s  Prepare for transport  Move to doffing  Apply patient PPE  Consider use of Aerosol Generating Procedures (AGP’s)  **Phase 5**  Remove gloves  Perform hand hygiene  Remove goggles/facemask  Remove gown  Remove mask  Perform hand hygiene |
| Assessment Instruments  (collapsed item) | This scenario contains scoring that enables a summative assessment of the participants. The scoring is based on key events for donning and doffing PPE and for interventions involving considerations for aerosol generating procedures. These events should be carefully logged during simulation. The scoring is as a total score which is presented in the Session Viewer under the Event Log tab. |
| Operator Information  (collapsed item) | Vital signs can be shown on patient monitor with LLEAP or SimPad. Otherwise, vital signs and patient symptoms should be offered verbally  These 4 Events can be activated at operator’s or facilitator’s discretion:   * The ‘*Move to treatment’* event allows assessment of a casualty in acute respiratory distress * The ‘*Arrest Now’* event progress the patient state to asystole * The ‘*Move to ROSC’* event leads to return of spontaneous circulation * The “*Doffing sequence*” event leads to the checklist for the doffing procedure |
| Scenario Progression Image |  |
| Scenario Progression Image Title | n/a |
| Scenario Progression Image Description | n/a |
| Scenario Progression Attachment |  |
| Debrief tab |  |
| Guided reflection questions | The Guided Debriefing Questions are organized by the theory-based debriefing methodology, the *GAS model* (Gather-Analyze-Summarize) and suggest topics that may inspire the learning conversation.  **Gather**   * What are your reactions to this simulation? * What are your other initial reactions? * Would one of you describe the events from your perspective? * From your perspective, what were the main issues you had to deal with?   **Analyze**   * What was the initial clinical condition of the patient? What were your initial steps? * Which PPE did you decide to apply? Please, describe the order in which you applied your PPE. How does this match local guidelines? * When did you decide to start chest compressions? * What were your actions to support ventilation? How did you ensure airway patency? * Which measures did you take to avoid Aerosol Generating Procedures? * What steps did you take after identifying a non-shockable rhythm? * What are the most likely causes of Asystole for this patient? How would you address these? * Describe the use of drugs in a cardiac arrest with asystole. Which drug did you administer? * How did you split roles and responsibilities among the team members? * Give examples of how you used or could be using closed-loop communication. * Recall the immediate steps of post-resuscitation care. How did you implement these steps? * What considerations did you make concerning transport? * Go through the doffing sequence of your PPE. How did you avoid contamination during this procedure?   **Summarize**   * What are the key points from this simulation? * What would you like to do differently next time in a similar situation? * What are your main take-home messages? |
| Guided reflection Attachment |  |
| Case considerations |  |
| Case considerations image |  |
| Case considerations image Descriptions |  |
| Case considerations Attachment |  |
| Files and attachments |  |
| Publication Details |  |
| Version number | V1 |
| Publication date | May 2020 |
| Release note |  |
| Co-developer One |  |
| Co-developer Two |  |
| Legal Notice |  |
| Credits |  |
| Scenario Settings |  |
| Training Disciplines | |  | | --- | | Community Health and Public Safety | | EMS /Prehospital | | Interdisciplinary | | Medical | | Military | | Nursing | | Nursing Aids | | Occupational Therapy | | Phlebotomy | | Pharmacy | | Physician Assistant | | Radiology Technician | | Respiratory Therapy | |
| Education Level | |  | | --- | | Undergraduate | | Postgraduate | |
| Medical Specialties | |  | | --- | | Allergy and immunology | | Anesthesiology | | Cardiology | | Critical Care Medicine | | Dermatology | | Emergency Medicine | | Endocrinology | | Family Medicine | | Gastroenterology | | Geriatrics | | Hospital Medicine | | Infectious diseases | | Internal medicine | | Nephrology | | Neurology | | Neurosurgery | | Obstetrics and Gynecology | | Oncology | | Ophthalmology | | Orthopedics | | Otolaryngology | | Palliative care | | Pediatrics | | Pharmacology | | Psychiatry | | Pulmonology | | Radiology | | Rehabilitation Medicine | | Rheumatology | | Surgery | | Vascular surgery | |
| Nursing Specialties | |  | | --- | | Ambulatory care nursing | | Advanced practice nursing | | Burn nursing | | Cardiac nursing | | Diabetes nursing | | Medical case management | | Community health nursing | | Critical care nursing | | Emergency nursing | | Gastroenterology nursing | | Geriatric nursing | | Home health nursing | | Hospice and palliative care nursing | | Hyperbaric nursing | | Immunology and allergy nursing | | Intravenous therapy nursing | | Infection control nursing | | Infectious disease nursing | | Maternal-child nursing | | Medical-surgical nursing | | Military and uniformed services nursing | | Neonatal nursing | | Neurosurgical nursing | | Nephrology nursing | | Nurse midwifery | | Obstetrical nursing | | Oncology nursing | | Orthopaedic nursing | | Ostomy nursing | | Pediatric nursing | | Perianesthesia nursing | | Perioperative nursing | | Psychiatric nursing | | Pulmonary nursing | | Radiology nursing | | Rehabilitation nursing | | Renal nursing | | Sub-acute nursing | | Substance abuse nursing | | Surgical nursing | | Urology nursing | | Vascular access | | Wound care | |
| Nursing courses | |  | | --- | | Child & adolescent health | | Community and family health nursing | | Fundamentals of nursing | | Gerontology | | Health assessment | | Leadership | | Maternal-neonatal health | | Medical-surgical nursing | | Pathophysiology | | Pharmacology | | Psychiatric and mental health | |
| Body systems | Circulatory  Digestive  Endocrine  Hematopoietic  Immune/lymphatic  Integumentary  Muscular  Nervous  Renal/Urinary  Reproductive  Respiratory  Skeletal |
| Assessment type | Summative  Formative |
| Free for public use | YES |
| SMS number | na |