# Sanity Template for VF with Suspected Covid-19

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| **Field** |  |
| Title | VF 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 with suspected Covid-19 who collapses during a visit to the local grocery. During simulation he experiences a cardiac arrest with a 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 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 | Grocery store |
| 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 clothes appropriate for a 32-years-old male * Place the simulator lying on the floor * Place a shopping bag at the floor beside the simulator |
| Role Information  (Collapsed item) | **Scenario assistant acting as a bystander in the grocery store**  Provide information about the incident upon request from the EMS team:   * The man seemed very weak, walked slowly, leaning on cart * He was really sweating and coughing a lot * Suddenly he collapsed on the floor, saying, he couldn’t breathe * You all got afraid to get near him and called the Emergency |
| **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 on scene in a local grocery store where a Demetri Henderson, age 32, an African American obese male has collapsed on the floor. The emergency caller told the responder that he appeared weak, had difficulty breathing, was sweating, and coughing frequently. At first he was able to state his name, but now he seems unresponsive. |
| Patient Picture |  |
| Patient Data   * Name * Gender * Age * Weight * Height * Race * Religion * Major Support * Allergies * Immunizations | Demetri Henderson  M  32  105 kg  178 cm  African American  Religion: Unknown  Major Support: None available  Allergies: Unknown status  Immunizations: Unknown status |
| Start vital signs   * Heart Rhythm * Heart rate (bpm) * Blood pressure (mmHg) * Respiration rate (rpm) * SpO2 (%) * PetCO2 (mmHg) * Temperature * Capillary refill time (sec) | Sinus Tach  104  143/75  30  88%  39.4 C  3 sec |
| Medical history |  |
| Clinical Findings | * Sweating and feverish * Wheezing on both lungs * Difficult to arouse and does not answer any questions |
| Diagnostics |  |
| Provider’s orders |  |
| Expected interventions (Accordions 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 * Confirms VF * Checks safety * Deliver shock * Open airway * Clear airway * Insert basicairway * Start ventilations * Use HEPA filter * Maintain secure BVM seal * Start CPR * 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 * Announce “Stand Clear” * Checks safety * Stop CPR * Deliver shock   **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 VF * 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 | NA |
| Scenario Progression Image Title | n/a |
| Scenario Progression Image Description | n/a |
| Scenario Progression Attachment | na |
| 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 shockable rhythm? * When did you decide to defibrillate this patient? * Which energy level did you decide to use for the shock? What was your reasoning behind this? * How did you work as a team to defibrillate this patient? Was there anything you would like to do differently? * What are the most likely causes of VF for this patient? How would you address these? * Describe the use of drugs in a cardiac arrest with VF. 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 | April 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 |  |