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| **Case Title** | Cardiac Arrest |
| **Scenario Name** | Multi-Rhythm Code |

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| **Learning Objectives (3 or more) -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) | |
| **Knowledge**   1. Apply ACLS Algorithms | |
| **Skills:**   1. Lead ACLS mega code 2. Demonstrate Breaking Bad news | |
| **Attitude/Behaviours**   1. Demonstrate Team skills 2. Demonstrate Situational awareness 3. Demonstrate Graded Assertiveness | |
| **Scenario Environment** | |
| **Location** | Emergency |
| **Monitors** | NIBP, Cardiac, Saturation |
| **Props/Equipment** | Code cart/defibrillator  Airway intervention |
| **Make-up/Moulage** | None |
| **Potential Distractors** | None |

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| **Case Introduction:** |
| Called to bed 12 by RN – Chest Pain patient waiting to be seen –became pulseless.  Initial V-fib, then PEA, multiple shocks. Eventual Asystole. |

| **Patient Parameters** | **Effective Management** | **Notes** |
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| **Phase 1: V. Fib Arrest**  **Condition:** Coding  **Initial Assessment**   * **Heart Rhythm:** Ventricular Fibrillation * **BP:** -/- * **RR:** apneic | 1. **Take a focused history** (see Notes column) 2. **Medical Management** 3. Start CPR 4. Place patient on monitor 5. Defibrillate 6. Establish IV/IO access 7. Ventilate patient with BMV 8. Vfib arrest - “Run Code”    1. Epi 1mg Q3-5minutes    2. Defibrillate for V-fib    3. Amiodarone | 1. **Focused history**  * 65-year-old female patient presents with chest pain waiting for assessment by emergency physician. * Husband provided history. Patient has had recurrent chest pain X 6 weeks. * Noticed pain during daily 90 minute walks when going up hill. * Usually resolves with rest. * Today – pain persisted and patient self presented to ED. * Patient moved into bed 12 from triage. ECG tech into room to do 1st ECG. * Patient has more pain and loses pulse, not yet on monitor.   **SHx**   * Non-smoker   **PMHx**   * HTN * High Cholesterol * Family Hx of CAD * Exercise treadmill test normal 8 years ago   **Meds**   * Ramipril * Atrovastatin * Thyroxine |
| **Phase 2: PEA**  **Condition:** Coding  **Physical Examination**   * **Heart Rhythm:** Sinus Tachycardia * **HR:** 118 * **BP:** -/- * **RR:** apneic * **CVS:** no palpable pulses | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management** 3. PEA Management:    1. Epi q 3-5 minutes    2. Run PEA algorithm – H’s and T’s 4. Consider Cardiology back up (not available) | 1. **Patient Reassessment**   **Airway**   * Not patent- needs to intubate if not already done so   **Breathing**   * Apneic- needs to use BVM   **Circulation**   * No palpable pulse- needs to do CPR |
| **Phase 3: V. Fib Arrest**  **Condition:** Coding  **Physical Examination**   * **Heart Rhythm:** Ventricular Fibrillation * **BP:** -/- * **RR:** apneic | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management** 3. Vfib arrest Management    1. Epi 1mg Q3-5minutes    2. Defibrillation    3. Amiodarone | 1. **Patient Reassessment**   **Airway**   * Not patent- needs to intubate if not already done so   **Breathing**   * Apneic- needs to use BVM   **Circulation**   * No palpable pulse- needs to do CPR. * Shockable Rhythm- should defibrillate |
| **Phase 4: PEA Bradycardia**  **Condition:** Coding  **Physical Examination**   * **Heart Rhythm:** Sinus Bradycardia * **HR:** 48 * **BP:** -/- * **RR:** apneic | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management** 3. PEA Management:    1. Epi q 3-5 minutes    2. Run PEA algorithm – H’s and T’s | 1. **Patient Reassessment**   **Airway**   * Not patent- needs to intubate if not already done so   **Breathing**   * Apneic- needs to use BVM   **Circulation**   * No palpable pulse- needs to do CPR |
| **Phase 5: Asystole**  **Condition:** Coding  **Physical Examination**   * **Heart Rhythm:** Asystole * **HR:** 0 * **BP:** -/- * **RR:** apneic | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management** 3. Asystole Management:    1. Epi q 3-5 minutes    2. When to call code \*\*Notify team that it is now more than 30 minutes of Cardiac arrest and patient remains in Asystole    3. How to Call code    4. What do you say to family – breaking bad news | 1. **Patient Reassessment**   **Airway**   * Not patent- should be intubated at this point   **Breathing**   * Apneic- must use BVM   **Circulation**   * Asystole- needs to continue CPR until code called |

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| **Expected Patient Management** | **Debriefing Points** |
| 1. **Student** 2. **R1** 3. **Senior IM resident** |  |

**References:**

**LABS – click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FLabs&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d) **OR fill out below**

RUN DATE: Today LABORATORY \*LIVE\* Lab Summary Report

LOCATION

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| Name: | | | | | | Age/Sex: | | | | | | | |
| Acct#: | | | Unit#: | | | | | | Status: Admitted | | | | Location: SIM |
| Reg: | | | | | Disch: | | | | | | | Code status - | |
| COMPLETE BLOOD COUNT | | | | | | | | | | | | | |
| Date |  | | |  | | | |  | | |  | |  |
| Time |  | | |  | | | |  | | | Reference | | Units |
| WBC |  |  | |  | | | H |  | |  | (3.5-10.8) | | 10^9/L |
| Toxic changes seen |  |  | |  | | |  |  | |  | (4.3-5.7) | | 10^12/l |
| Hgb |  |  | |  | | | L |  | |  | (130-170) | | g/L |
| MCV |  |  | |  | | | L |  | |  | (0.37-0.47) | | L/L |
| Platelets |  |  | |  | | | H |  | |  | (150-400) | | 10^9/L |
| INR |  |  | |  | | | H |  | |  | 0.9-1.2 | |  |
| D-Dimer |  |  | |  | | |  |  | |  |  | |  |
| PTT |  |  | |  | | |  |  | |  |  | |  |
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| CHEMISTRY | | | | | | | | | | | | | |
| ADMISSION |  | | |  | | | |  | | |  | |  |
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| Glucose-Random |  |  | |  | | | H |  | |  | (3.0-11.0) | | mmol/L |
| Na |  |  | |  | | | L |  | |  | (137-145) | | mmol/L |
| K |  |  | |  | | | H |  | |  | (3.5-5.0) | | mmol/L |
| Cl |  |  | |  | | |  |  | |  | (98-107) | | mmol/L |
| HCO3 |  |  | |  | | | L |  | |  | (22-26) | | mmol/L |
| Urea |  | H | |  | | | H |  | |  | (2.5-6.1) | | mmol/L |
| Creat |  |  | |  | | | H |  | |  | (62-106) | | mmol/L |
| GFR Est |  |  | |  | | | L |  | |  | (> 60) | | ml/min |
| C Reactive Protein |  |  | |  | | | H |  | |  | <10 | |  |
| Lactic Acid |  |  | |  | | | H |  | |  | <2.0 | | mmol/L |
| ARTERIAL BLOOD GAS  pH - , PC02 – , p02 – , HC03 – , O2 Sat - % | | | | | | | | | | | | | |