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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/defibrillatorAirway 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** |
| --- | --- | --- |
| **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**
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**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

|  |  |
| --- | --- |
| 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 |  |  |  |  |  |
|  |  |  |  |  |  |
| 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 GASpH - , PC02 – , p02 – , HC03 – , O2 Sat - % |