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| **Case Title**  | Myocardial Infarction – VF Arrest |
| **Scenario Name** | ACLS 1 |

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| **Learning Objectives -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) |
| **Knowledge:**1. Apply basic ACLS protocols
2. Demonstrate management of V. Fib Arrest
3. Demonstrate initial management of chest pain
4. Demonstrate initial management of Acute MI
 |
| **Skills:**1. Perform high quality CPR
2. Perform defibrillation
3. Perform intubation
4. Demonstrate EKG interpretation
 |
| **Attitude/Behaviours**1. Demonstrate Team skills
2. Demonstrate Situational awareness
3. Demonstrate Graded Assertiveness
 |
| **Scenario Environment** |
| **Location** | ED |
| **Monitors** | Telemtry/Crash Cart/defibrillator |
| **Props/Equipment** | IV, MedsAirway equipmentEKGSTEMI Protocol from EDACLS Algorithms on hand |
| **Make-up/Moulage** | None |
| **Potential Distractors** | None |

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| **Case Introduction:** |
| 58 y.o. Caucasian male presenting with chest pain at work during argument with co-worker. 45 minutes of central chest pain and SOB. |

| **Patient Parameters** | **Effective Management** | **Notes** |
| --- | --- | --- |
| **Phase 1: Unstable Chest Pain/ Acute MI****Condition:** UnstablePale and diaphoretic. Looks unwell. **Initial Assessment*** **Heart Rhythm:** Sinus Tachycardia with ST changes
* **HR:** 132
* **BP:** 90/60
* **RR:** 24
* **SP02:** 92% on R/A
* **T:** 36.6 C
* **Glucose:** 6.5
* **Chest:** Crackles to bases of lungs bilat
* **CNS:** GCS 15
* **CVS:** Heart sounds normal
* **GI:** Abd non-tender
* **Weight:** 220 lbs
* **Height:** 5’9”
 | 1. **Take a focused history** (see Notes column)
2. **Medical Management**
* ECG, goal within 10 mins
* Cardiac monitor
* Oxygen
* IV access (x2 NOT right wrist)
* Cardiac labs
* Meds:
	+ ASA 320 mg chewed
	+ Nitro spray
	+ Morphine IV if discomfort not relieved by Nitro

*\*Be mindful of BP & area of infarct with Nitro/ Morphine*  | 1. **Focused history**

Was having argument with co-worker when sudden central chest pain developed. Ongoing x 45 mins. SOB. Denies cardiac history. No regular extertional activities or exercise.**PMHx*** Smoker
* HTN
* High Cholesterol
* Gout

**Meds*** HCTZ
* Ramipril
* Atorvastatin
* Allopurinol
* Indomethacin PRN

**Allergies*** None
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| **Phase 2: V. Fib Arrest****Condition:** CodingPatient unresponsive, eyes closed, apneic**Physical Examination*** **Heart Rhythm:** Ventricular Fibrillation
* **BP:** no reading
* **RR:** apneic
* **CNS:** GCS 3
 | 1. **Patient Reassessment** (see Notes column)-*Recognizes change in condition*
2. **Medical Management:**
* CPR
* Intubate patient
* Defibrillate and follow ACLS Protocol
 | 1. **Patient Reassessment**

**Airway*** Obstructed – tongue
* Accepts oral a/w & intubation

**Breathing** * Apneic – must be bagged

**Circulation*** Absent pulses – must do CPR
 |
| **Phase 3: PEA Arrest****Condition:** CodingPatient unresponsive, eyes closed, apneic**Physical Examination*** **Heart Rhythm:** PEA
* **HR:** 100
* **BP:** no reading
* **RR:** apneic
* **CNS:** GCS 3
 | 1. **Patient Reassessment** (see Notes column)-*Recognizes change in condition*
2. **Medical Management:**
* CPR
* Intubate patient if not already done so
* Follow PEA Algorithm:
	+ Epi 1 mg Q3-5 mins
	+ Review H’s & T’s

**Consequences of ineffective management*** If ACLS guidelines not followed correctly remain in PEA or progress to asystole.
* If ACLS guidelines followed correctly, progress to Phase 4 (ROSC)
 | 1. **Patient Reassessment**

**Airway*** Obstructed, must intubate if not already done so

**Breathing** * Apneic, must bag

**Circulation*** Absent pulses, must continue CPR
 |
| **Phase 4: ROSC****Condition:** UnstableROSC, rejects oral a/w, spontaneous resps**Physical Examination*** **Heart Rhythm:** Sinus Tachycardia
* **HR:** 110
* **BP:** 100/50
* **RR:** 12 on ventilator
* **SpO2:** 96% vented on high oxygen
* **T:** 36.6 C
 | 1. **Patient Reassessment** (see Notes column)-*Recognizes change in condition*
2. **Medical Management:**
* Cardiology Consult/ Cath Lab
* STEMI Check list
* Post Arrest Care
 | 1. **Patient Reassessment**

**Airway*** Starts fighting ETT

**Breathing** * Some spontaneous effort, allows assistance between and with own resps

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

**X-RAYS**



**EKGs**

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