

CPR HFS scenario 1

Simulation scenario: Non Shockable Adult In-Hospital Cardiac Arrest			
Simulation Center			
Learning Objectives			
<p>General objective</p> <p>Demonstrate the treatment of an adult non shockable cardiac arrest : Asystole / Pulseless Electrical Activity (PEA)</p> <p>Specific objectives</p> <ul style="list-style-type: none"> - Recognize non shockable cardiac arrest rhythm : Asystole or PEA - Perform high-quality chest compressions (frequency and depth). - Minimize chest compressions interruption (no-flow time) - Demonstrates knowledge of the ALS algorithm face a non shockable rhythm 			
DURATION OF THE SESSION: 30mn	Briefing : 05 mn	Role-Play : 06-08mn	Debriefing : 15mn
Scenario Summary			
<p>On call at the emergency department. You receive an elderly patient aged 75 years. He has acute chest pain and respiratory discomfort. He has a history of diabetes and high blood pressure. While administering his treatment, you notice that her clinical condition is deteriorating. You are asked as a team to take charge of the deterioration of his clinical situation.</p>			
SIMULATION SESSION			
Participants	3 Experimental group students		
references	ERC, 2015 guidelines		
Mannequin	High fidelity simulator : Gaumard® code blue III		
Emergency medicines needed	Adrenaline (Amp 1ml / 1 mg)		
Briefing	<p>Explanation of the pedagogical scenario, the skills involved and Mutual Respect Rules (lack of judgment and personal assessment, confidentiality)-Familiarizing the student with the simulator and the environment -Clinical details at the beginning of the scenario</p>		
Baseline State	<p>Patient complains of chest pain.</p> <p>BP : 9/5 ; HR : 56 ; SpO2 : 84% (3l/mn)</p>		

State/ timing / Events	Desired actions of learners	Simulator response
State 1, T0: recognize the Cardiac Arrest (CA) early	Check consciousness, breathing Recognize early the CA	unconscious patient, in apnea
State 2, T1 : 1 mn ECG : Asystole	Shout for help Begin BLS (30 :2)/ 2 mn Request a defibrillator	persistent asystole
State 3 : T2 : 3 mn	- Insert an IV catheter - Prepare the Epinephrine dose. - Inject Epinephrine IV - continue the BLS and change the operator every 2 minutes, without chest compression interruption (avoid No-Flow)	persistent asystole
State 4 : T3 : 5 mn, end of scenario	Continue CPR for 2 minutes, then check pulse. Identify change to sinus rhythm. Stop CPR	-Return of spontaneous circulation (ROSC). Hand-Over : arrival of the resuscitation team
DEBRIEFING	Structured teaching debriefing was conducted using the Plus/Deltacheck-list.	

CPR HFS scenario 2

Simulation scenario: Shockable Adult In-Hospital Cardiac Arrest			
Learning Objectives			
<p>General objective Demonstrate the treatment of an adult Cardiac arrest with shockable rhythm : Ventricular Fibrillation (VF) or pulseless Ventricular Tachycardia (pVT)</p> <p>Specific objectives</p> <ul style="list-style-type: none"> - Recognize a shockable rhythm : VF / pVT - Demonstrate high-quality chest compressions (frequency and depth) and minimize No-flow time. - Recognize the importance of early defibrillation. - Demonstrates appropriate and safety use of the defibrillator. - Demonstrates knowledge of the ALS shockable rhythm algorithm. 			
Duration of session : 35	Briefing : 05 mn	Role-play : 8 mn	Debriefing : 20mn
Scenario summary			
On call at the ICU. Your 70-year-old patient has acute chest pain and respiratory discomfort. Suddenly he is unconscious. He has a history of diabetes and high blood pressure. You are called upon as a team to manage the clinical deterioration of this patient.			
SESSION SIMULATION			
Participants	3 Experimental Groups students		
References	ERC 2015 Guidelines		
Simulation mannequin	High fidelity Simulator Gaumard® code Blue III		
Equipment required	<ul style="list-style-type: none"> ○ Ventilation equipment : BVM ○ Cardioscope ○ Defibrillator 		
Emergency drugs required	Epinephrine (Amp 1 mg) Amiodarone (Amp 300mg)		
Briefing	Explanation of the pedagogical scenario, the skills involved and Mutual Respect Rules (lack of judgement and personal assessment, confidentiality)-Familiarizing the student with the simulator and the environment -Clinical details at the beginning of the scenario		
Baseline State	Patient complains of chest pain. BP : 8/5 ; HR : 92 ; SpO2 : 90% (6l/mn)		
State / Timing / Events	Desired actions of learners (The team)	Simulator response	

Etat 1, T0 : Unconsciousness, Apnea	Recognize early the CA Shout for Help	Any one
State 2, T1 : 1 mn : Initial ECG rhythm: FV	-Begin CPR (30 :2), minimize chest compressions interruptions -Defibrillator Connection and Rhythm Analysis: Identification of a shocking rhythm Take precaution 1st Choc : 120-150 J Immediately resume CPR for 2 mn(30 :2) Insert IV catheter	ECG :VF
State, T2 : 3mn : rhythm analysis : VF	-Check pulse -Rhythm Analysis : Consistent FV -Inject 1mg of Epinephrine (IV) -Continue CPR during Defibrillator load -Precaution - 2 nd Choc : 150- 300 J - Immediately resume CPR for 2 mn(30 :2)	VF
State 3, T3 : 5mn : rhythm analysis : pulseless VF	-Check pulse + rhythm analysis : VT -Continue during defibrillator load - Precaution - 3 rd Choc : 150- 300 J - Immediately resume CPR for 2 mn(30 :2) - Inject 1mg of Epinephrine (IV) - Inject 300 mg of Amiodarone (IV)	pulseless VT
State 5 : ROSC : End of scenario	Check for signs of survival Respiration, Pouls Identify change to sinusal rhythm Stop CPR	Sinusal rhythm ; BP: 9 /6 HR : 134 Hand over: Resuscitation team arrival
DEBRIEFING	Structured debriefing was conducted and guided using the Plus/ Deltacheck-list.	