ST VINCENT'S HEALTH AUSTRALIA
SYDNEY

UNDER THE STEWARDSHIP OF MARY AIKENHEAD MINISTRIES

ADULT ADVANCED LIFE SUPPORT

ASSESSMENT WORKBOOK

2018

Don Harrison Patient Safety Simulation Centre

ALS ACCREDITATION

Requirements for St Vincent's Hospital ALS accreditation:

1. Participation in the one day ALS course within the last 3 months.

2. Completion of the multiple choice questions and short answer questions in this workbook.

3. Demonstration of proficiency (to an ALS assessor) in ALS skills including:
    a. Provision of basic life support
    b. Demonstration of simple airway manoeuvres
    c. Recognition of shockable and non shockable rhythms
    d. Manual defibrillation
    e. Application of ALS algorithm to a case scenario
    f. Discussion of reversible causes

A certificate of ALS accreditation will be issued on completion of the above.

Yearly participation in SVH simulation based ALS team training session is then required to maintain ALS accreditation for 4 years.

MULTIPLE CHOICE QUESTIONS

These questions take you through a scenario. Each question follows on from the previous. Choose one BEST answer to each question.

You find a patient collapsed in the ward corridor. The patient is not responding. Your first action is to:

a) Feel for a pulse
b) Give 2 breaths using mask and one-way valve
c) Lift them up onto a bed
d) Call for help

The patient is not responding and not breathing normally after you open and clear the airway. Your next action is to:

a) Give 2 breaths by mouth to mask
b) Feel for a pulse
c) Start chest compressions
d) Check the blood glucose

A colleague arrives and asks you how to put out an arrest call.
You tell them to:

a) Page the bed manager
b) Press the patient's call button
c) Call 59 for the switchboard
d) Call 555 and state CODE BLUE and the location

Another colleague arrives. You ask them to:

a) Get the ward arrest trolley
b) Help you lift the patient up onto a bed
c) Perform a blood pressure measurement
d) Get the ECG machine

You would then like to:

a) Attach an oxygen saturation probe
b) Get a 12 lead ECG
c) Check the patient's BSL
d) Attach the defibrillator pads

There is an Automatic External Defibrillator. Defibrillator pads have been attached the patient. You turn the defibrillator on. Chest compressions pause while it analyses the rhythm. Shock is advised. While the defibrillator is charging you:

a) Stand back from the patient
b) Wait
c) Continue chest compressions
d) Administer adrenaline 1mg IV

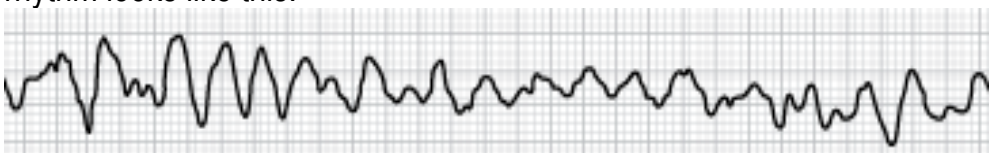
A shock is delivered to the patient. The next step is to:

a) Insert an IV line
b) Lift the patient up onto a bed
c) Get an oxygen saturation reading
d) Recommence chest compressions

There are now two people to deliver bag-mask ventilation. They should:

a) Ventilate at a regular rate of 6-10/minute
b) Deliver 2 breaths during the pause after every 30 chest compressions
c) Insert a nasogastric tube to deflate the stomach
d) Remove the patient's dentures

The arrest team arrives and a manual defibrillator is attached to the patient. The rhythm looks like this.



You describe the rhythm as:

a) Pulseless electrical activity
b) Ventricular tachycardia
c) Ventricular fibrillation
d) Motion artefact

The initial treatment of this rhythm is:

a) Defibrillation with maximum joules
b) External pacing
c) Synchronized cardioversion
d) No shock advised

Your action is immediately followed by:

a) Checking the pulse
b) Chest compressions
c) Amiodarone 300mg IV
d) A 12 lead ECG

The patient has now had two shocks. After recommencing CPR, you administer:

a) Atropine 0.5mg IV
b) Amiodarone 300mg IV
c) Adrenaline 1mg IV
d) Lignocaine 100mg IV

If peripheral IV access is difficult, the next best option for drug administration is:

a) Intraosseous
b) IM injection
c) Transtracheal
d) Intranasal

A member of the team offers to insert a central line. You think this is NOT a good idea during an arrest because:

a) It takes too much time
b) There is an increased risk of incorrect placement during an arrest
c) There is an increased risk of needle stick injuries to staff
d) All of the above

A member of the team is inserting an intraosseous needle in the proximal tibia. You see them measure 2cm distal and 2cm medial to the tibial tuberosity. You think:

a) The correct location is the mid-point of the tibial shaft
b) The correct location is lateral to the tibial tuberosity
c) The correct location is above the tibial tuberosity
d) This is the correct location

The rhythm remains unchanged. The antiarrhythmic of choice is:

a) Amiodarone 300mg
b) Atropine 1mg
c) Lignocaine 100mg
d) Adrenaline 1mg

The team leader wants to look for reversible causes. This involves:

a) Performing blood gas analysis
b) Obtaining the patient's relevant medical history
c) Examining the patient
d) All of the above

The airway doctor wants to intubate the patient. You think this is a good idea because:

a) Chest compressions can then be continuous
b) It helps to protect the lungs from aspiration
c) You can decompress the stomach
d) All of the above

Waveform capnography is attached to the endotracheal tube. You have heard this is useful because:

a) It can confirm and monitor endotracheal tube position
b) It can monitor the quality of CPR
c) It can be an early indicator return of spontaneous circulation
d) All of the above

The blood gas shows a blood glucose measurement of 18.3mmol/L. You suggest:

a) Blood glucose management in post resuscitation care
b) Actrapid 10 units subcutaneously
c) Protophane 10 units subcutaneously
d) Metformin 1g via nasogastric tube

The blood gas also shows a potassium 7.8mmol/L. You would like to treat this in the first instance with:

a) Salbutamol 5mg nebulised
b) Magnesium 20mmol IV
c) Calcium Chloride 10% 10mL IV
d) Resonium 50g PR

The patient's temperature is 35.8°C. The appropriate response to this is:

a) Give IV fluids through a blood warmer
b) Aim for 36°C in post resuscitation care of the unconscious patient
c) Apply a bair hugger
d) Place a cooling blanket under the patient

On examining the patient, the trachea is markedly deviated to the left and there is no air entry to auscultation on the right. The most important action is to:

a) Suction down the endotracheal tube for mucous plugging
b) Withdraw the endotracheal tube 2cm and re-examine the patient
c) Turn the patient on the left to improve the ventilation on the right
d) Decompress the right sided tension pneumothorax

Cardiac tamponade can be detected during arrest by:

a) Muffled heart sounds
b) Ultrasound
c) Hypotension
d) Raised JVP

Pulmonary embolus as a cause of arrest is most suspected if:

a) There is severe right ventricular dilation on ultrasound
b) No other cause of the arrest is found
c) There are thromboembolic clinical risk factors
d) All of the above are present

Immediately following the next shock and BEFORE recommencing chest compressions, you notice a change in rhythm to this.

Your next step is:

a) Recommence chest compressions for another 2 minutes
b) Administer atropine 0.5mg IV
c) Feel for a pulse
d) Start external pacing

The rhythm remains unchanged following your action.

Your next step is to:

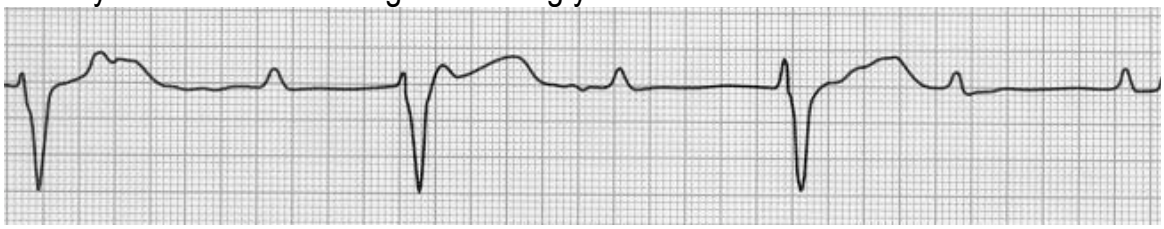
a) Administer atropine 0.5mg up to maximum 3mg IV
b) Recommence chest compressions
c) Defibrillate the patient
d) Feel for a pulse

The rhythm remains unchanged following your action above.

There is no pulse. Your next step is to:

a) Check the blood pressure
b) Recommence chest compressions for 2 minutes and give adrenaline 1mg IV
c) Start external pacing
d) Administer atropine 0.5mg up to maximum 3mg IV

The rhythm remains unchanged following your action above.



You can feel a pulse. Your next step is to:

a) Stop chest compressions
b) Check the blood pressure
c) Consider external pacing
d) All of the above

SHORT ANSWER QUESTIONS

1. What is/are the most important action/s in VF arrest?

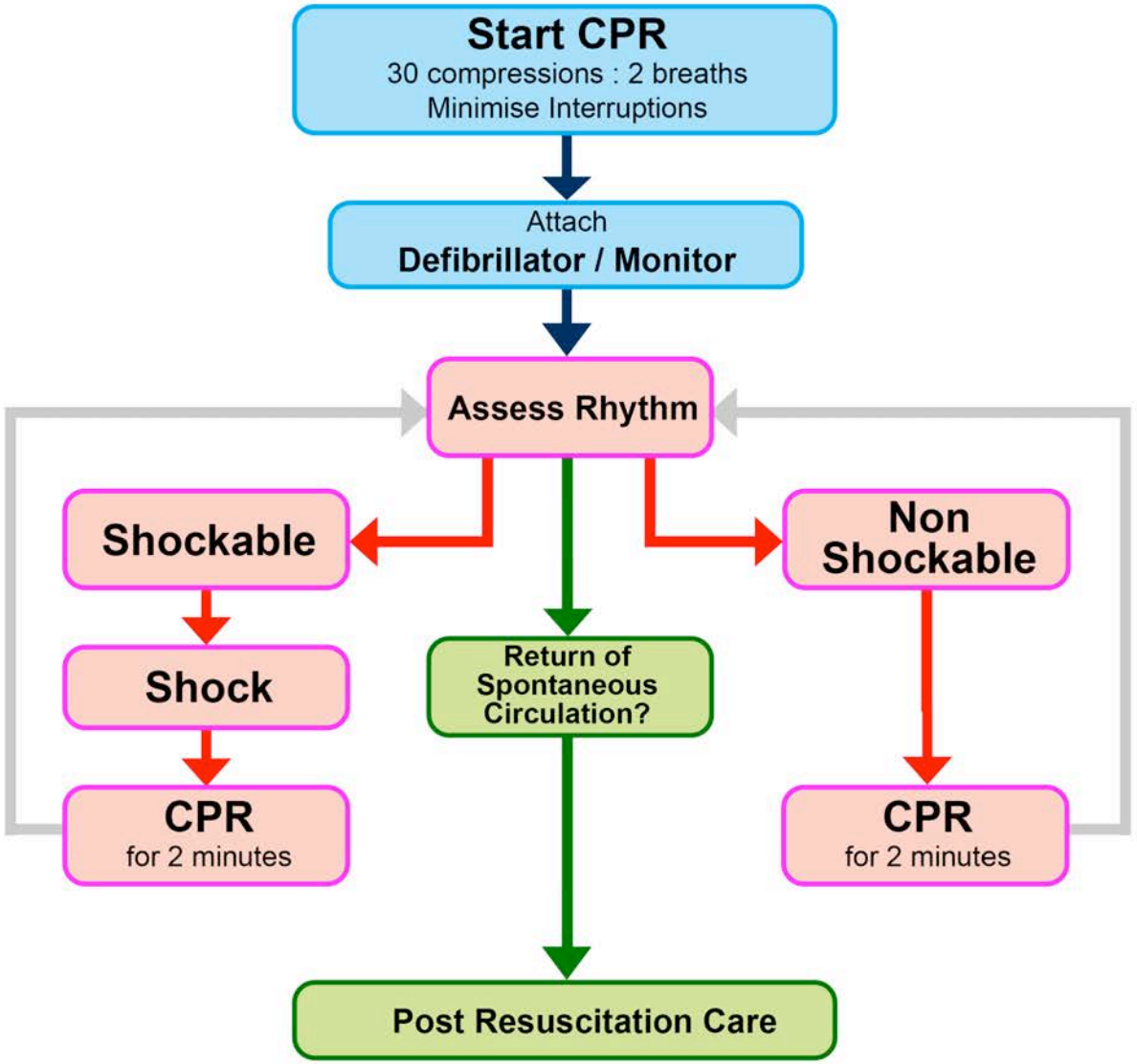
2. What are features of effective communication during an arrest?

3. What would you do if there were no effective team leader at an arrest?

4. What would you do if relatives were present at an arrest?

5. What is involved in post resuscitation care?

Advanced Life Support for Adults



During CPR

Airway adjuncts (LMA / ETT)
Oxygen
Waveform capnography
IV / IO access
Plan actions before interrupting compressions
(e.g. charge manual defibrillator)

Drugs

Shockable

* Adrenaline 1 mg after 2nd shock (then every 2nd loop)
* Amiodarone 300mg after 3 shocks

Non Shockable

* Adrenaline 1 mg immediately (then every 2nd loop)

Consider and Correct

Hypoxia
Hypovolaemia
Hyper / hypokalaemia / metabolic disorders
Hypothermia / hyperthermia
Tension pneumothorax
Tamponade
Toxins
Thrombosis (pulmonary / coronary)

Post Resuscitation Care

Re-evaluate ABCDE
12 lead ECG
Treat precipitating causes
Aim for: SpO2 94-98%, normocapnia and normoglycaemia
Targeted temperature management

January 2016

AUSTRALIAN RESUSCITATION COUNCIL
NEW ZEALAND Resuscitation Council WHAKAHAUORA AOTEAROA