



ADVANCED LIFE SUPPORT INSTRUCTOR MANUAL

FOR MINISTRY OF HEALTH HOSPITALS

ALS COURSE | 3. VARIOUS LEVELS OF INSTRUCTOR | 4. ROLES AND RESPONSIBILITIES OF INSTRUCTORS | 5. PREPARING FOR THE ADVANCED LIFE SUPPORT COURSE | 6. ASSESSMENT AND CERTIFICATION



This guideline was developed by:
ALS Subcommittee,
National Committee on Resuscitation Training
Ministry Of Health



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***FOREWORD BY DIRECTOR
GENERAL OF HEALTH***

Datuk Dr. Noor Hisham Bin Abdullah

Director General
Ministry of Health Malaysia



The first Advanced Cardiac Life Support Course was held in Kuala Lumpur General Hospital in 1986. It was jointly organised by the Ministry of Health, Malaysian Society of Anaesthesiologists and National Heart Association in collaboration with American Heart Association.

Since then, changes have been made to this course to cater for local needs. The Advanced Cardiac Life Support Course was renamed Advanced Life Support Course. The Advanced Life Support Subcommittee under the umbrella of National Committee on Resuscitation Training developed the Advanced Life Support Manual in 2012. Apart from that, the Advanced Life Support Subcommittee organizes Advanced Life Support Instructor Course every year to ensure the quality of teaching and to standardize the training according to the standards acceptable to CPR committees throughout the world.

This year, the ALS Subcommittee has come out with the Advanced Life Support Instructor Manual to be used as a guidance and reference to all Advanced Life Support Instructors in Malaysia on how to organize the Advanced Life Support Provider Course.

I would like to congratulate the Advanced Life Support Subcommittee and National Committee on Resuscitation Training, Ministry of Health Malaysia for their efforts and commitments for producing this Instructor Manual.

Thank you.

LIST OF ABBREVIATION

ABC	Airway Breathing Circulation
ABG	Arterial Blood Gas
AHA	American Heart Association
ALS	Advanced Life Support
APLS	Advanced Paediatric Life Support
ATLS	Advanced Trauma Life Support
BLS	Basic Life Support
BP	Blood Pressure
bpm	Beats per minute
CCU	Cardiac Care Unit
CPR	Cardiopulmonary Resuscitation
CVS	Cardiovascular System
CXR	Chest X-Ray
ECG	Electrocardiogram
ETD	Emergency and Trauma Department
ETT	Endotracheal Tube
ILCOR	International Liaison Committee on Resuscitation
IV	Intravenous
LCD	Liquid Crystal Display
LMA	Laryngeal Mask Airway
MOH	Ministry of Health

MCQ	Multiple Choice Question
MI	Myocardial Infarction
NCORT	National Committee on Resuscitation Training
NIBP	Non-invasive Blood Pressure
KPI	Key Performance Index
PEA	Pulseless Electrical Activity
PR	Pulse Rate
RR	Respiratory Rate
SpO₂	Peripheral Capillary Oxygen Saturation
Tv	Tidal Volume
VF	Ventricular Fibrillation

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

Advanced Life Support Course is a demanding, expensive and labor-intensive course. It requires dedication, perseverance and passion from its instructors and facilitators. From a humble beginning when the first AHA certified Basic Cardiac Life Support Provider Course and Advanced Cardiac Life Support Provider course were conducted in 1986 in Kuala Lumpur Hospital with the anaesthetists taking the lead, training of cardiopulmonary resuscitation (CPR) today involves multidisciplinary teams. Realizing the importance of teaching these courses to frontline health care providers, emergency physicians have begun to actively participate in conducting life support courses together with other specialties which include the paediatricians (Advanced Paediatric Life Support Course, APLS), general surgeons and orthopaedic surgeons (Advanced Trauma Life Support Course, ATLS). The Ministry of Health, in its policy on resuscitation training, has placed Basic Life Support (BLS) training as one of the core courses which must be taught to all health care providers. For Advanced Life Support (ALS) training, it is to be taught to all doctors and health care providers working in the critical care areas.

The ALS Subcommittee of the **National Committee on Resuscitation Training (NCORT)**, Ministry of Health, has embarked on a mission to make ALS training more streamlined. In 2011, the ALS Subcommittee produced the ALS Training Manual for providers. Subsequently the Subcommittee conducts regular ALS instructor course to build up the pool of instructors. As of today, a total of 5 ALS instructor course has been conducted. This year the Subcommittee produced this **Advanced Life Support Instructor Manual** to assist ALS Provider Course instructors to train health care providers in a systematic manner.

With all these efforts, the ALS Subcommittee hopes that training of ALS in Malaysia will be better structured and in accordance to the standards acceptable to CPR committees throughout the world.

CHAPTER 2

PRINCIPLES OF ADULT LEARNING IN ALS COURSE

2.0 PRINCIPLES OF ADULT LEARNING IN ALS COURSE

Training of ALS should be based on the Principles of Adult Learning. The principles are described as below:

Life-Experience Based

Adults require instruction and information given to them to be closely related to their own real-life experiences.

Goal-Oriented

Adult learners usually come to class with certain expectations. They have goals and expectations and the instructor needs to relate to them to reach those goals.

Mature

Adult learners develop more defined expectations and interests that are often associated with their careers

Demand Relevance

Adult learners usually want the subject matter to be highly relevant to their personal or professional lives. They are generally intolerant of information they cannot apply. They also want to be able to apply the subject matter immediately.

Selective

An adult learner wants to be given choices, and to be able to pick from a variety of learning methods.

Enjoy Recognition

Adult learners want to be treated as independent mature individuals who are capable of making decisions about their learning.

Require Constant Encouragement

Adults enjoy external recognition of their accomplishments, but still want encouragement to continue and progress.

Focused on Career Issues

Many of the reasons why adults continue learning centre around their career. Therefore they expect the teaching and support structures to be geared toward that career. The knowledge

and skills relate directly to their careers.

Seek Return on Investment

Adult learners want a return on their investment. They want to feel that they have been appropriately rewarded for their sacrifice of time and resources.

Seek an Interactive Environment

Adult learners value group interaction. They feel they can learn as much from interacting with other students as they can from the teacher.

Self-Directed

Most adult learners are self-motivated. Therefore, we are seeing a trend toward self-paced multimedia instruction.

Seek Enjoyment

Adults need to be satisfied that the learning process brings enjoyment. They expect to interact with peers, instructors and others in a non-threatening atmosphere.

Seek Social Interaction

Adults are social beings and want learning to foster this attribute. They enjoy sharing experiences with their peers and instructors.

Protect Self-Image

The strength of an adult's self-image influences his or her ability to learn. Adults with low self-confidence have low expectations. They are easily threatened, and this often leads to poor learning. Conversely, those with high self-confidence have high expectations and are confident about their chances of success.

CHAPTER 3

VARIOUS LEVELS OF INSTRUCTOR

3.0 VARIOUS LEVELS OF INSTRUCTOR

3.1 Course director

- 3.1.1 Responsible for directing, coordinating, teaching and running of life support courses.
- 3.1.2 Must himself/herself partake actively and demonstrate constructive commitment to the course.
- 3.1.3 Also an instructor trainer.

3.2 Instructor- trainer

- 3.2.1 Conducts and teaches at the NCORT-accredited instructor training course.
- 3.2.2 Must have conducted ALS Provider Course for at least 2 years and is required to instruct at an NCORT-accredited instructor training course at least once annually.
- 3.2.3 Requires recommendation letter from the Course Director of the training center.

3.3 Instructor

- 3.3.1 Must be certified in the appropriate provider course.
- 3.3.2 Must have attended any NCORT-accredited instructor training course **OR** has been conducting ALS Provider Course for at least once a year and certified by NCORT ALS Subcommittee after being advised by the Course Director of the training centre.
- 3.3.3 The validity of the instructor certificate is 5 years.

3.4 Facilitator (tagging Instructor)

- 3.4.1 A person who has successfully undergone provider course, achieved instructor potential during the provider course and is actively involved in the area of resuscitation. Facilitator will partake as assistant in the ALS Provider Course.
- 3.4.2 A facilitator has not undergone instructor course.

CHAPTER 4

ROLES AND RESPONSIBILITIES OF ALS COURSE DIRECTOR AND INSTRUCTORS

4.0 ROLES AND RESPONSIBILITIES OF ALS COURSE DIRECTOR AND INSTRUCTORS

A competent and ready-to teach instructor is critical to the successful conduct of ALS Provider Course including successful student outcomes.

4.1 Responsibilities of a ALS Course Director

- 4.1.1 Oversees communication among instructors before and during the course.
- 4.1.2 Oversees the overall flow of the course.
- 4.1.3 Oversees adherence to ALS Provider Course schedule.
- 4.1.4 Oversees the quality of the ALS Provider Course.
- 4.1.5 Issues Course completion certificate from his/her training centre.

4.2 Responsibilities of an ALS Instructor

- 4.2.1 Shows positive commitment in the success of the Provider Course.
- 4.2.2 Actively partakes in the Provider Course.
- 4.2.3 Updates his/her knowledge and practice in line with the latest guidelines and recommendations in resuscitation.
- 4.2.4 Gives lectures and runs the skill stations as required.
- 4.2.5 Ensures effective adult learning during the teaching of ALS Provider Course by:
 - 4.2.5.1 'Listening to students' responses and providing positive or corrective feedback.
 - 4.2.5.2 Observing students' action and coaching them as necessary.
 - 4.2.5.3 Keeping discussions and simulations on track for optimal learning and use of time in the classroom.
 - 4.2.5.4 Conducting structured debriefing sessions after each simulation.

4.3 Useful tips

- 4.3.1 Conducting an Advanced Life Support Provider Course requires a multi-disciplinary team approach. It is useful if the ALS Course Director ensures that ALS training is NOT identified as solely a disciplinary activity but a hospital programme that involves many departments. Call letters for the release of instructors and participants are best issued by the Hospital Director and directed to the respective Heads of Department.
- 4.3.2 An efficient secretariat is important to ensure a sustainable training programme. A nursing tutor/sister/paramedic makes a good secretary if given the guidance and support.
- 4.3.3 It is important to develop and maintain a core group of instructors who are committed. The success of the training programme essentially depends on the availability of the instructors and the support given by them. Attention must be given to train new instructors to ensure a constant but adequate pool of instructors.
- 4.3.4 If you are embarking the Advanced Life Support Provider Course for the first time, it is recommended that you invite some experienced instructors from other centres to come in. These experienced instructors will ensure that the course is organised according to the standards and their presence will add credence to the course.
- 4.3.5 Maintaining a good registry of participants and courses conducted is important. This will come in handy when auditing the Advanced Life Support Provider Course and planning the training programme in future.

CHAPTER 5

PREPARING FOR THE ADVANCED LIFE SUPPORT COURSE

5.0 PREPARING FOR THE ADVANCED LIFE SUPPORT COURSE

Advanced Life Support Provider Course is designed for healthcare providers who participate directly in the management of cardiopulmonary arrest or other cardiovascular emergencies (either due to primary cardiac causes or secondary causes).

The goal of the Advanced Life Support Provider Course is to improve outcomes of adult patients with cardiac arrest or other cardiopulmonary emergencies. Therefore, the main aim of conducting ALS Provider Course is to train the first line rescuers to be able to perform the initial resuscitation of a collapsed victim until the definite help arrives.

5.1 Provider Course objectives

Upon successful completion of ALS Provider Course, the students will be able to:

- 5.1.1 Recognise and initiate early management of pre-arrest conditions that may result in cardiac arrest or complicate resuscitation outcome.
- 5.1.2 Demonstrate proficiency in providing bls care, including prioritizing chest compressions and integrating use of electrical therapy.
- 5.1.3 Recognise respiratory arrest and perform proper airway management.
- 5.1.4 Recognise the shockable rhythms and handle proper electrical therapy.
- 5.1.5 Initiate correct cardiac resuscitation drug therapy in the management of cardiopulmonary arrest/other cardiovascular emergencies.
- 5.1.6 Recognise and manage cardiac arrest until termination of resuscitation or transfer of care, including immediate post-cardiac arrest care.
- 5.1.7 Demonstrate effective communication as a member or leader of a resuscitation team and recognise the impact of team dynamics on overall team performance.

5.2 Guidelines for setting up the ALS Course

5.2.1 Budget

It would be useful at the outset if the hospital apportions a fixed allocation for the resuscitation courses early in the year. Budget includes money for equipment and money for food & stationary.

5.2.2 Physical facilities/venue

- 5.2.2.1 Course venue should be carefully selected. Ideally it should be air-conditioned and there should be a big room for lectures and smaller rooms for the various skill stations. Each room should have at least one electrical point to conduct skill station. If rooms are not available, a hall can be partitioned to appropriate areas. Toilet and dining area should be available.
- 5.2.2.2 Basic audio visual aids such as overhead projector, video player and laptop are all that is required. LCD projector with big screen display if available will enhance teaching capability.

5.2.3 Equipment (refer to Appendix 1)

- 5.2.3.1 Draw up equipment lists.
- 5.2.3.2 Demonstrate equipment set up for skill stations (Airway, Defibrillation and Megacode stations).

5.2.4 Manpower (instructors/facilitators)

5.2.5 Target group

- 5.2.5.1 All doctors shall be trained and certified in Advanced Life Support.
- 5.2.5.2 Additional resuscitation training shall be provided for healthcare providers working in critical care areas.

5.2.6 Course schedule and course materials

- 5.2.6.1 The ALS Provider Course should emphasize on enhancing one's skill in the treatment of collapsed victims through active participation in a series of simulated cardiopulmonary cases. The simulation should be designed to reinforce important concepts including:
 - i. The ALS Primary Survey
 - ii. The ALS Secondary Survey
 - iii. The ALS Algorithm
 - iv. Effective resuscitation dynamics
- 5.2.6.2 The Course should consist of lectures, practical and examination which includes MCQ and practical.

- 5.2.6.3 5.2.6.3 Duration of Course - 2 days (at least 16 hours)
- 5.2.6.4 5.2.6.4 The participant must have passed the BLS course before enrolling into the ALS Provider Course. The ALS Provider Course Training Manual must be given to the participants at least 2 weeks before the course. The recommended Course Books/Materials include:
 - i. Latest Advanced Life Support Training Manual by NCORT
 - ii. Latest AHA Provider Manual
 - iii. Latest manual/guidelines recommended by International Liaison Committee On Resuscitation (ILCOR)
- 5.2.6.5 The recommended lectures are:
 - i. Airway management
 - ii. Algorithm
 - iii. Drugs in resuscitation
 - iv. Put it all together
 - v. Ethics in resuscitation
 - vi. Post cardiac arrest care
 - vii. Optional :
 - Acute Coronary Syndrome & Resuscitation in Specific Situation
- 5.2.6.6 Skill stations should consist of:
 - i. Electrical therapy
 - ii. ECG recognition
 - iii. Airway Management
 - iv. Megacode
- 5.2.6.7 5.2.6.7 Ratio instructor to students (1:6)

CHAPTER 6

ASSESSMENT AND CERTIFICATION

6.0 ASSESSMENT AND CERTIFICATION

Completion of the ALS Provider Course requires the participant to successfully pass both the test components ie written (theory) and practical (skills). Upon successful completion of the Course, the participant will receive an ALS Provider Course Completion Certificate. This certificate shall be endorsed by the Course Director of the training centre.

It is important for each ALS Provider Course participant to be able to promptly and accurately deliver ALS skills and knowledge. These skills and knowledge have to be tested in an objective and uniform manner. Therefore, all ALS instructors are expected to maintain high standards of performance for all skills tests to ensure a consistent delivery of the ALS Provider Course content.

6.1 WRITTEN TEST

The written test measures the cognitive skills of the participant. The test is to be conducted without using the Provider Training Manual, algorithms charts or any other resources. The participant must score at least 75% on the written test.

6.2 SKILLS TEST

Participants must be able to demonstrate competency in both Megacode and Airway management skills. Please refer to the Appendix 2 and 3 for full description of requirements.

SKILLS TESTING REQUIREMENT	WRITTEN TEST REQUIREMENT
Participants need to pass both these components: <ol style="list-style-type: none"> 1. Airway adjunct 2. Megacode test 	Participants need to score at least 75% on the written test

6.3 RETESTING

Retesting is allowed under these circumstances:

- 6.3.1 A participant passes the written test and one of the skill components. The skill component is to be tested on the same day.
- 6.3.2 A participant fails the written test but passes both skill components. The written test is to be repeated within three months.

6.4 VALIDATION

The certificate of competency as ALS provider is valid for three years.

APPENDICES

EQUIPMENT LISTS

Airway Skill Station	
<ul style="list-style-type: none"> • Oxygen delivery devices : <ul style="list-style-type: none"> » Nasal prong » Simple face mask » Venturi mask » High flow mask • Oro-pharyngeal airway • Nasopharyngeal airway • Bag-valve mask • Laryngoscope with normal adult blade • Laryngoscope with long blade • Endotracheal tube 	<ul style="list-style-type: none"> • Stylet • Yaunkers • Suction catheter (various sizes) • Syringe (10 and 20 mls) • Lubricant/manikin spray • Adhesive tape • Cricothyrotomy set • Laryngeal Mask Airway (LMA) - Size 3 and 4 • Trolley/table • Airway manikin
Defibrillation Station	
<ul style="list-style-type: none"> • Defibrillator with adhesive gel pad • Simulation Manikin • Heart-sim 2000/Any rhythm generator • Trolley • Airway devices • Intravenous devices 	
Megacode Station	
<ul style="list-style-type: none"> • ALS skill trainer (manikin) with heart-sim 2000 • Defibrillator • Airway adjuncts - bag valve mask, oropharyngeal airway, endotracheal intubation set and LMA • Trolley • Syringe with drug label • Drip stand • Clip board with paper for documentation 	

MEGACODE SCENARIOS

SCENARIO 1

REFRACTORY VF / ASYSTOLE

56 year old man with history of Acute Coronary Syndrome presents to your Emergency Department (ED) with complaint of severe chest pain. Upon arrival at your ED Triage Area, patient suddenly throws a fit and becomes unconscious. Patient is brought to your Resuscitation Zone.

Instructor’s note:

This scenario tests the management of VF and Asystole and advanced airway management skills.

Scenario development

Primary DRSABC ⇨ CPR ⇨ (Rhythm Check) VF ⇨ Defibrillation ⇨ CPR ⇨ (Rhythm Check) Asystole ⇨ Advanced Airway ⇨ CPR ⇨ IV adrenaline ⇨ (Rhythm Check) VF ⇨ Defibrillation ⇨ CPR ⇨ (Rhythm Check) VF ⇨ Defibrillation ⇨ IV Adrenaline ⇨ CPR ⇨ (Rhythm Check) VF ⇨ Defibrillation ⇨ IV Amiodarone ⇨ CPR ⇨ (Rhythm Check) Sinus rhythm.

Trainee’s action	Instructor’s reply / action	Assessment of trainee’s action √ or X	Comments
1. Perform initial steps of primary DRSABC survey <ul style="list-style-type: none"> • Check for danger • Hello, hello, are you OK? • Call for help • Call for defibrillator • Move patient onto bed 	No response		
2. Perform initial steps of primary DRSABC survey <ul style="list-style-type: none"> • Airway : head tilt chin lift • Breathing : Look for breathing and signs of life 	No breathing		
3. Start chest compression and ventilation (30:2)	Drugs trolley and defibrillator arrive		
4. Attach ECG leads / paddles for quick look			

Trainee's action	Instructor's reply / action	Assessment of trainee's action √ or X	Comments
5. Rhythm Check	Select VF on rhythm generator		
6. Defibrillation <ul style="list-style-type: none"> • Apply conduction gel/pads • Select appropriate energy • Charge the defibrillator • Shout 'stand clear' • Confirm VF • Deliver shock 	Still VF on Rhythm generator		
7. Continue chest compression			
8. Advanced Airway Management			
9. Establish IV access			
10. Rhythm Check <ul style="list-style-type: none"> • IV adrenaline 1 mg 	Select Asystole May ask trainee how to exclude fine VF		
11. Rhythm Check <ul style="list-style-type: none"> • Defibrillation 	Select VF on Rhythm generator		
12. Resume chest compression			
13. Rhythm Check <ul style="list-style-type: none"> • Defibrillation • IV adrenaline 	Still VF		
14. Resume chest compression			
15. Rhythm Check <ul style="list-style-type: none"> • Defibrillation • IV Amiodarone 300mg bolus 	Still VF		
16. Resume chest compression			
17. Check Rhythm	Sinus Rhythm		

Trainee's action	Instructor's reply / action	Assessment of trainee's action ✓ or X	Comments
18. Stop chest compression <ul style="list-style-type: none"> • Check pulse • Check BP 	Weak pulse present BP 60/40 mmHg		
19. Calculate fluid requirement <ul style="list-style-type: none"> • Consider inotropes if the BP does not start rising within next 4 – 5 mins. • Perform 12 leads ECG, CXR, blood sugar, blood investigations etc • Consider therapeutic hypothermia 	May ask trainee management of low BP immediately after return of spontaneous circulation		
20. Transfer to CCU	End of scenario		

SCENARIO 2

PULSELESS ELECTRICAL ACTIVITY (PEA)

VERSION 1: Non traumatic causes

You are reviewing a young asthmatic who has become very dyspnoeic over the last 30 minutes. As you approach the bed, you notice that the patient is confused, shouting irrationally, trying to take off the ventolin nebulizer mask and get out of bed. As you auscultate, the patient stops shouting and slumps to one side. What will you do?

Instructor's note:

This scenario tests the management of PEA and the recognition of hypoxia and tension pneumothorax as possible causes of PEA.

VERSION 2: Non traumatic causes

You are reviewing an 18 year old lady admitted for drugs overdose. The house officer informs you that the patient is confused and tachycardic. As you enter the ward, the staff nurse tells you that the patient has calmed down and fallen asleep.

You find a blonde Chinese lady lying on the bed with her limbs restrained and not responsive. What will you do?

Instructor’s note:

The scenario tests the management of PEA and the emergency management of overdose:

- Organophosphate
- Party or street drugs eg. ketamine, ecstasy, cocaine
- CVS drugs, antidepressant, antiepileptics

VERSION 3: Trauma cause

You are reviewing a male motorcyclist who has ribs, clavicle and scapula fractures after an accident. He has been complaining of breathlessness and chest pain for the last 30 minutes. As you approach the patient, you notice that the patient is confused, shouting irrationally and trying to get out of bed despite being restrained by the nurses. As you auscultate, the patient stops shouting and slumps to one side.

What will you do?

Instructor’s note:

The scenario tests the management of PEA and the recognition of tension pneumothorax (more common) and cardiac tamponade as possible causes of PEA.

SCENARIO DEVELOPMENT

PEA: sinus tachycardia without pulse ⇔ VF ⇔ sinus

Action for VERSION 1 (TENSION PNEUMOTHORAX)

Trainee’s action	Instructor’s reply / action	Assessment of trainee’s action √ or X	Comments
1. Perform initial steps of primary DRSABC survey <ul style="list-style-type: none"> • Check for danger • Hello, are you OK? • Call for help • Call for defibrillator 	No response		
2. Perform initial steps of primary DRSABC survey <ul style="list-style-type: none"> • Airway: head tilt, chin lift • Look for breathing and signs of life 	No breathing		

Trainee's action	Instructor's reply / action	Assessment of trainee's action √ or X	Comments
3. Start chest compression and ventilation (30:2)	Drugs trolley and defibrillator arrive		
4. Attach ECG leads / paddles for quick look	Cardiac monitor shows sinus tachycardia		
5. Check carotid pulse	No pulse Trainee should realize the patient has PEA		
6. ALS Secondary Survey <ul style="list-style-type: none"> • Advanced airway management • Intubate <ul style="list-style-type: none"> » Confirm placement of ETT 	Absent breath sound on the right lung Trainee to think what causes the absent breath sound on right lung – likely tension pneumothorax as this correlates with one of the causes of PEA and the clinical scenario		
7. Perform needle decompression			
8. Establish IV access <ul style="list-style-type: none"> • KIV IV Adrenaline 1 mg 			
9. Rhythm check	Select VF if tension pneumothorax is thought of and needle decompression is performed Otherwise select Asystole and let patient die		

Trainee's action	Instructor's reply / action	Assessment of trainee's action √ or X	Comments
10. Stop chest compression <ul style="list-style-type: none"> • Apply conduction gel/pads • Select appropriate energy • Charge the defibrillator • Shout 'stand clear' • Confirm VF • Deliver shock 	Select sinus rhythm		
11. Check pulse	Pulse present		
12. Check breathing <ul style="list-style-type: none"> • Continue ventilating 8-10 breath /min 	No breathing		
13. Check BP	BP 80/55 mmHg		
14. IV NS 500ml bolus			
15. Insert chest tube if needle decompression done earlier			
16. Consider inotropes if BP does not start rising after chest tube /within next 4-5 min	May ask trainee management of low BP immediately after return of spontaneous circulation		
17. Perform 12 leads ECG, CXR, blood sugar, blood investigations etc			
18. Transfer to ICU	End of scenario		

SCENARIO 3

NARROW COMPLEX TACHYCARDIA

You are working in Emergency and Trauma Department when a 22 year old lady comes to see you with complain of palpitation for the last 1 hour. She denies any medical illness and appears calm, comfortable and speaks in full sentences. Haemodynamic parameters are stable.

Blood Pressure: 115/78 mmHg and heart rate 160 bpm. What will you do?

Instructor’s note:

This scenario tests the recognition and management of SVT.

Scenario development

Narrow complex tachycardia, good haemodynamics status ⇒ carotid massage ⇒ SVT ⇒ IV adenosine ⇒ hemodynamic unstable ⇒ cardioversion

Trainee’s action	Instructor’s reply / action	Assessment of trainee’s action ✓ or X	Comments
1. Assess DRSABC <ul style="list-style-type: none"> • Ensure airway clear • Give Oxygen • Establish IV access • Monitor ECG, SpO2, BP • Perform 12 leads ECG 	Select SVT BP 115/78 mmHg PR 160/min RR 20 min Show ECG tracing once monitor attached		
2. Analyze ECG: Narrow Complex tachycardia (SVT) <ul style="list-style-type: none"> • Carotid massage 	Still SVT		
3. Check haemodynamics <ul style="list-style-type: none"> • IV Adenosine 6 mg rapid bolus over 1-3 sec 	BP 110/64 mmHg PR 160/min Still SVT		

Trainee's action	Instructor's reply / action	Assessment of trainee's action ✓ or X	Comments
4. Check haemodynamics <ul style="list-style-type: none"> • IV Adenosine 12 mg rapid bolus over 1-3 sec 5. Prepare for synchronized cardioversion <ul style="list-style-type: none"> • Consider Sedation • Select 50 Joules • Ensure safety before performing cardioversion 	BP 74/48 mmHg PR 160/min Still SVT Still SVT, BP 80/40 mmHg		
6. Second cardioversion with higher Joules <ul style="list-style-type: none"> • Check haemodynamics • Check rhythm on ECG monitoring • Repeat 12 leads ECG • Continuous monitoring 	Sinus, BP 120/70 mmHg		
7. Transfer to CCU	End of Scenario		

SCENARIO 4

BRADYCARDIA

You have been called to see a 60 year old man in the Cardiac Rehabilitation Ward who is at Day 2 of Anterior MI. The nurse informs you that the patient is complaining of dizziness and sweating. When you arrive, the patient is lying in discomfort on his bed with BP 85/50 mmHg, PR 40/min and RR 25/min. What will you do?

Instructor’s note:

This scenario tests the recognition and management of bradycardia.

Scenario development

Bradycardia ⇨ third degree heart block ⇨ sinus

Trainee’s action	Instructor’s reply / action	Assessment of trainee’s action ✓ or X	Comments
1. Assess DRSABC <ul style="list-style-type: none"> • Ensure airway clear • Give oxygen • Establish iv access • Monitor ECG, SpO₂, BP • Perform 12 leads ECG 	Select 3rd degree heart block BP 85/50 mmHg PR 40/min Show ECG tracing once monitor attached		
2. Analyze ECG <ul style="list-style-type: none"> • Give iv Atropine 0.5 mg • May repeat dose of iv Atropine up to maximum 3 mg 	Still same ECG tracing - not responding to Atropine		

Trainee's action	Instructor's reply / action	Assessment of trainee's action ✓ or X	Comments
<p>3. Check parameters</p> <ul style="list-style-type: none"> • Arrange transvenous pacing, contact cardiologist • Verify for the mechanical capture <p>Can consider chronotropic drug while waiting for pacing (adrenaline/ dopamine) titrate to action</p>	<p>BP now 72/45 mmHg, PR 35/min, patient becomes drowsy now</p> <p>While waiting can start chronotropic drugs</p>		
<p>4. Reassessment of parameters</p> <ul style="list-style-type: none"> • See the improvement of vital signs parameters 	<p>BP now 105/64 mmHg, PR 60 min and RR 15/ min</p> <p>The patient becomes more alert</p>		
<p>5. Perform further actions</p> <ul style="list-style-type: none"> • Repeat 12 leads ECG and analyze • Repeat investigations (electrolytes, ABG) 	<p>Ask reasons for these actions</p>		
<p>6. Consider transfer to CCU</p>	<p>End of scenario</p>		

**SKILL STATION ASSESSMENT FORM
AIRWAY MANAGEMENT**

Name :

IC No:

Date :

No.	Procedure	Remarks	Pass	Fail	Retest Pass	Retest Fail
1.	Head tilt chin lift					
2.	Jaw thrust					
3.	Choosing the correct oropharyngeal airway					
4.	Insertion of oropharyngeal airway					
5.	Identify at least two oxygen devices and their flow rates/ FiO2 a. Nasal prong b. Venturi mask c. Mask with reservoir bag d. Face mask					
6.	Assembly of bag valve mask and oxygen reservoir					
7.	Bag valve mask technique					
8.	Assembly of intubation equipment					
9.	Endotracheal intubation within 3 attempts (for doctors only)					
10.	Choosing the correct size LMA					
11.	Insertion of LMA and its fixation					
12.	Choosing the correct size ETT suction catheter					
13.	Selecting the correct suction pressure					
14.	Technique of endotracheal suction					
15.	Knowledge of intubation complications and post intubation care					

Overall Result: Pass / Fail

Name of Instructor:..... Signature



**NATIONAL COMMITTEE ON
RESUSCITATION TRAINING
MINISTRY OF HEALTH
MALAYSIA**

This is to certify that

.....

has successfully completed/attended

**ADVANCED LIFE SUPPORT PROVIDER
COURSE**

From..... till (date)

at

.....
(place / name organizing hospital)

.....
Hospital Director

.....
Hospital Course Director

ATTENDANCE SHEET

**ADVANCE LIFE SUPPORT COURSE
ATTENDANCE SHEET**

NAME	IC	DAY 1		DAY 2	
		AM	PM	AM	PM

EVALUATION FORM

Thank you for answering the following questions. Your frank opinion is most valued and we hope to learn from your suggestions.

1. Have you benefited from the course?
a. yes b. no c. not sure
2. Is the course duration satisfactory?
a. yes b. too long c. too short
3. Is the content well covered?
a. yes b. no c. not sure
4. How would you grade the teaching of the following modules?
 - Airway management -a. good -b. satisfactory - c. poor
 - Arrhythmias -a. good -b. satisfactory - c. poor
 - Defibrillation -a. good -b. satisfactory - c. poor
 - Megacode -a. good -b. satisfactory - c. poor
 - Lecture -a. good -b. satisfactory - c. poor
5. Do you think the instructors are knowledgeable?
a. yes b. no c. not sure : _____
Is the environment satisfactory?
a. yes b. no c. not sure : _____
Would you recommend this Course to your colleagues?
a. Strongly recommended b. recommended
c. not essential d. not recommended

If your answer is c or d, kindly state reason(s): _____

What should be done to improve the quality of the Course ? _____

DECLARATION

I understand that as a certified ALS Instructor, I will adhere to the following principles:

- I will use the knowledge and skills that I have learnt for the improvement of ALS teaching.
- I will strive to update my knowledge in ALS with each international update in the guidelines
- I will adhere to the resuscitation guidelines as described by National Committee on Resuscitation Training (NCORT)
- I will regularly perform my tasks as a ALS Instructor to maintain my Instructor certification
- I will not abuse my certification as an Instructor for any improper means.

TECHNICAL COMMITTEE

ALS Subcommittee, NCORT, MOH Malaysia

Chairperson:

Dr Luah Lean Wah

Consultant Anesthesiologist

Hospital Pulau Pinang

Members:

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Consultant Anesthesiologist
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Consultant Anesthesiologist
Hospital Kuala Lumpur
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Hospital Ampang
- 4. Dr Adi Bin Osman**
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- 7. Dr Khairuddin Bin Ismail**
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5. Mohd Faiz Bin Johari

Assistant Medical Officer

Emergency Services Unit

Medical Development Division

INTRODUCTION | 2. PRINCIPLES OF ADULT LEARNING IN A
D RESPONSIBILITIES OF ALS COURSE DIRECTOR AND INST
URSE | 6.ASSESSMENT AND CERTIFICATION | 1. INTRODU
VARIOUS LEVELS OF INSTRUCTOR | 4.ROLES AND RESPON
EERING FOR THE ADVANCEDLIFE SUPPORT C

KEMENTERIAN KESIHATAN MALAYSIA

BAHAGIAN PERKEMBANGAN PERUBATAN
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