POLICY ON RESUSCITATION TRAINING FOR MINISTRY OF HEALTH HOSPITALS

MINISTRY OF HEALTH MALAYSIA
POLICY ON RESUSCITATION TRAINING
FOR MINISTRY OF HEALTH HOSPITALS

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Having the knowledge and skills of Cardiopulmonary Resuscitation (CPR) can make a difference between life and death in a patient who stops breathing. His or her only chance of survival will depend on how fast and how effective CPR is being instituted. In view of this, the Ministry of Health of Malaysia (MOH) is taking the necessary steps to ensure that all its healthcare providers be properly trained in CPR.

All house officers are now required to be formally trained in CPR and if successful, be further trained in ACLS or ATLS. They will be expected to undergo this training while doing their posting in Emergency Medicine or at anytime the course is being made available to them. Likewise, all our healthcare providers are encouraged to learn CPR during their formative years. Such courses can also be extended to the lay public and this can be done with the assistance of other stakeholders who have special expertise in teaching this group of volunteers.

We are of course mindful that the steps and procedures in CPR may change with time as new evidence emerges. Both trainers and trainees must therefore make a special effort to keep themselves updated on the latest developments pertaining to this life-saving technique.
I am confident that all staff working in MOH will make an effort to learn CPR so that they can apply this life-saving technique whenever the need arises and no one can predict when this is going to happen. Therefore, it is best that we arm ourselves with the knowledge and skills and be ready to render assistance when required.

We must always reminds ourselves that to save a life is part of what we do and the public is counting on us to do our job well.

Thank you.

Tan Sri Datuk Dr Hj Mohd Ismail Merican
It gives me great pleasure to pen a few words for the launch of this much awaited policy on resuscitation training for Ministry of Health hospitals. It has been a few years in the making and will hopefully set the stage for the eventual formation of a Malaysian Resuscitation Council.

To the public and our patients, saving lives is the number one expectation from a health care provider. Saving lives is exactly what cardiovascular resuscitation (CPR) is about.

Formal CPR training was introduced in the Ministry of Health in 1986 using the American Heart Association CPR guidelines. Medical and nursing schools began introducing CPR training in the 1990s. Our senior colleagues may not have been trained in this skill during their medical school days.

Our anaesthetic colleagues take credit for championing CPR training in the 1980s and 1990s. Emergency physicians, a new breed of doctors in the MOH, have joined in to promote CPR training. Our pediatric colleagues are active in resuscitation training for neonates and children. There is however a need for a change in paradigm; CPR training should be one of the core business of healthcare providers.
The need for this training cuts across the board for all categories of health care personnel and from all disciplines. This policy hopes to address this with the formation of multi-disciplinary committees and involvement of top managers and directors.

The training and retention of valuable CPR Instructors has been another area of concern that this policy will address. Quality assurance standards are proposed that will be in line with the Key Performance Indicators (KPI). Putting these indicators on the shoulders of hospital directors will garner support from hospital and top management.

I sincerely hope that the introduction of this policy will set the path to a more credible, systematic and well organised CPR training in MOH hospitals. Lastly my deepest appreciation to the technical committee for working tirelessly in drafting this policy.

Thank you.

Datuk Dr Noor Hisham Abdullah
TECHNICAL COMMITTEE ON POLICY ON RESUSCITATION TRAINING FOR MINISTRY OF HEALTH HOSPITALS

Advisor

Y.Bhg. Datuk Dr. Noor Hisham Abdullah
Deputy Director General of Health (Medical)

Y.Bhg. Dato’ Dr. Noorimi bt Hj. Morad
Former Deputy Director General of Health, Ministry of Health

Y.Bhg. Dato’ Dr. Azmi bin Shapie
Director, Medical Development Division

Dr. Teng Seng Chong
Senior Deputy Director, Medical Development Division

Chairman

Dr. Kauthaman Mahendran
Physician, Hospital Melaka

Drafting Members

Dr. Thohirah bt Ab. Razak
Anaesthesiology, Hospital Kuala Lumpur

Dr. Tan Cheng Cheng
Anaesthesiology, Hospital Sultanah Aminah Johor Bahru

Dr. Sabariah Faizah bt Jamaluddin
Anaesthesiology and Trauma Specialist, Hospital Sungai Buloh

Dr. Mahathar b. Abdul Wahab
Emergency Care Specialist, Hospital Kuala Lumpur

Encik Mohd Nordin b. Bakar
Medical Assistant, Hospital Sultanah Aminah Johor Bahru

Puan Balasaraswthy Kumaran
Tutor
Kolej Sains Kesihatan Bersekutu, Jln Hospital, Sg. Buloh
Coordinator/Secretariat

Dr. Che Engku Nor Bahiyah bt Che Engku Muda  
Assistant Director  
Emergency Unit  
Medical Development Division

Review Panel

Y.Bhg. Dato’ Dr. Noorimi bt Hj. Morad  
Former Deputy Director General of Health, Ministry of Health

Dr. Teng Seng Chong  
Senior Deputy Director, Medical Development Division

Dr. Teo Aik Howe  
Emergency Care Specialist, Hospital Pulau Pinang

Dr. Ahmad Tajuddin bin Mohd Noor  
Emergency Care Specialist, Hospital Tengku Ampuan Rahimah Klang

Dr. Teh Keng Hwang  
Paediatrician, Hospital Alor Star

Dr. Patimah Amin  
Senior Principle Assistant Director  
Surgical and Emergency Service  
Medical Development Division

Dr. Kasuadi bin Hussin  
Senior Principle Assistant Director  
Emergency Unit  
Medical Development Division
INTRODUCTION
Resuscitation in hospitals and health care facilities refers to prompt actions aimed at preventing death and providing the best possible chances for human survival. The immediate actions by the health care worker (HCW) can make the difference between life and death. Regular, updated and effective resuscitation training courses for HCWs are therefore crucial.

1.1 Cardio-pulmonary resuscitation (CPR) refers to efforts aimed at restoring the functions of the heart and lungs to maintain oxygenation and for survival of the brain. These core skills can be broadly divided into:

1.1.1. Basic life support (BLS): resuscitation efforts incorporating mask ventilation and Automated External Defibrillator (AED).

1.1.2. Advanced life support (ALS): resuscitation efforts incorporating advanced life support equipment and drugs.

These courses were introduced into Ministry of Health (MOH) Hospitals in 1986 by the American Heart Association (AHA). The Anaesthetists initially took the lead role in running these programs. Specialists and paramedics from other disciplines provided support and more recently Emergency Care Specialists have begun to play an important role. The advanced component was initially modelled after the AHA and called Advanced Cardiac Life Support (ACLS). In 2001, this was simplified and modified and called the Malaysian Advanced Life Support (MALS) course.
1.2 Resuscitation for specific patient groups requires additional knowledge and skills. HCWs are also required to continually update knowledge and attend regular courses. The following is a non-exhaustive list of programs addressing these groups.

1.2.1 Newborn resuscitation program (NRP). This is an on-going program managed by the paediatric fraternity based on guidelines from the United States (US). It was introduced in Malaysia in 1996.

1.2.2 Paediatric Advanced Life Support (PALS) for the emergency management of infants and children approaching or already in respiratory or cardiac arrest. It is also based on the US guidelines and was introduced in 1993.

1.2.3 Advanced Paediatric Life Support (APLS) which focuses on emergency care during the period of stabilisation. This is also a US based course that the paediatric fraternity hopes to introduce into the country.

1.2.4 Trauma Life Support (TLS) for the victims of trauma. This is currently conducted by a professional society, Malaysian Society of Traumatology and Emergency Medicine (MASTEM), with the name Malaysian Trauma Life Support (MTLS) course. HCWs in MOH are currently trained by MASTEM. It is targeted at doctors and paramedics involved in emergency medical and trauma services to ensure a coordinated and skillful approach to management of trauma victims. There may be other versions of this program being carried out in MOH hospitals.
1.2.5 Advanced Trauma Life Support (ATLS) is a trauma course initiated by the American College of Surgeon. It offers advanced training for personnel involved in the direct management and resuscitation of trauma victims in emergency departments or other similar setting. Many institutions worldwide adopted their training module and curriculum as a requirement for personnel working in these setting.

1.2.6 First Responder Life Support Course (FRLS) for first responders who do not have a medical background. It is applicable to non-clinical hospital HCW e.g Pembantu Perawatan Kesihatan (PPK) and ambulance drivers. This course has also been run by MASTEM since 1994.

1.2.7 Anaesthesia, Medical, Surgical, Obstetric and Psychiatric Emergency updates are also carried out by individual hospitals. There are also specific emergency update courses for Nurses and Assistant Medical Officers (AMOs).

1.3 All the above resuscitation training programs for HCWs require the following resources.

1.3.1 Instructors and Instructor trainers.

1.3.2 Skills lab and manikins.

1.3.3 Finances
POLICY STATEMENT
2.0 POLICY STATEMENT

2.1 All Ministry of Health health care workers, shall be trained and certified in Basic Life Support.

2.2 All doctors shall be trained and certified in Advanced Life Support.

2.3 Additional resuscitation training shall be provided for hospital HCWs working in specific areas.

2.4 This policy shall be reviewed at least every 5 years beginning from 2010.
ORGANISATION
3.0 ORGANISATION

3.1 COMMITTEE STRUCTURE AND FUNCTION

3.1.1 Committees on Resuscitation Training shall be formed at national, state and hospital levels, with membership and terms of reference as listed in appendix 1.

3.1.2 Resuscitation training for hospital HCWs shall be the shared responsibility of the following departments, where available and appropriate.

3.1.2.1 Emergency
3.1.2.2 Anaesthesia and Intensive Care
3.1.2.3 Paediatrics
3.1.2.4 General Medicine
3.1.2.5 Cardiology
3.1.2.6 General Surgery
3.1.2.7 Orthopaedics
3.1.2.8 Obstetrics and Gynaecology
3.1.2.9 Any other interested department
TRAINING
4.1 COURSES

4.1.1 The core CPR training program shall be made up of two courses:

4.1.1.1 Basic Life Support for all hospital HCWs
4.1.1.2 Advanced life support for all doctors.

4.1.2 All hospital HCWs (non doctors) working in the emergency department, operating theatre, intensive care unit and acute care wards shall be encouraged to undergo training and be certified in ALS.

4.1.3 All HCWs with BLS and ALS certification shall be privileged to perform the skills they learnt.

4.1.4 The other resuscitation training programs shall be considered as additional resuscitation training programs for selected HCWs working in related areas.

4.1.5 The sharing of training equipment, instructors and other resources between hospitals is encouraged.

4.1.6 Recertification shall be done every 5 years for both BLS and ALS courses.
4.0 TRAINING

4.2 TRAINING MANUALS

4.2.1. Guidelines and course materials for resuscitation training require approval of the National Committee on resuscitation training for MOH Hospitals.

4.2.2 Where possible, standard course materials produced by this committee shall be used. The material shall be produced by the various sub-committees, based on international guidelines where available or nationally accepted guidelines with modifications for local usage in our hospitals.

4.2.3. Materials shall be revised when major guideline changes occur.
4.3 HUMAN RESOURCES

4.3.1 Course Coordinators
Hospitals shall appoint coordinators for the BLS and ALS programs. The coordinators must be certified resuscitation instructors.

4.3.2 Hospital Secretariat
Hospital shall appoint a secretariat to provide clerical assistance. The Secretariat may come from the administrative department of the hospital.

4.3.3 Instructors

4.3.3.1 Resuscitation instructors shall be certified by the National Committee on Resuscitation training for MOH hospitals.

4.3.3.2 Privileging shall be done annually by the individual hospital resuscitation committees. The privileging criterion is involvement in at least 1 course per year. Instructors will be encouraged to maintain log book of their performance.

4.3.3.3 Recertification shall be obtained every 5 years. This shall be coordinated by the respective national level subcommittees.
4.3.3.4 Hospitals shall recognise instructors for their services and provide the following incentives where appropriate:

4.3.3.4.1 Time off or allowance for after-hours service.
4.3.3.4.2 Meals and refreshments during the course.
4.3.3.4.3 Sponsorships for resuscitation related refresher courses.
4.3.3.4.4 Appreciation of service (e.g. certificate, badge, uniform).

4.3.4 Training Equipment Manager.

Manikins and training equipment shall be maintained by the Training Equipment Manager for use in all training activities. These shall be maintained in the skills lab/ training centre. The manager should be a certified instructor appointed by the respective hospital committees. Their term of service shall be reviewed and renewed yearly.
4.4 SKILL LAB/TRAINING CENTRE

Resuscitation training equipment shall be housed in a skill lab or training centre which may act as a venue for training. The components of skill lab will vary according to the category of hospitals. Refer Appendix 5

4.5 OUT-SOURCING OF RESUSCITATION TRAINING

Priority shall be for in-house resuscitation training using MOH personnel and equipment. Requests for out-sourcing of resuscitation training in specific circumstances may be approved by the Hospital Director abiding by the following principles.

Instructors from out-sourced organisations have valid instructor certification. The certification may be from organisations out of the MOH. In this circumstance the National Committee on resuscitation training for MOH Hospitals shall review and approve the certification as felt appropriate.

Instructors from MOH who represent the out-sourced organisation shall ensure their participation is outside their respective working hours.

The modules used by the out-sourced organisation shall first be approved by the National Committee on resuscitation training for MOH Hospitals.
QUALITY ASSURANCE
5.0 QUALITY ASSURANCE

5.1 The following output indicators are proposed for the core CPR courses, namely BLS and ALS.

5.1.1 100% of house officers (HOs) who have completed 2 years of house officer training shall have valid BLS and ALS certification as of 1st January the following year.

5.1.2 At least 70% of all hospital HCWs have valid BLS certification as of 1st January the following year.

5.2 Computerised data on resuscitation training activities shall be maintained by the respective hospital secretariat. This shall be transmitted to the secretariat of the state and eventually the National Committee on Resuscitation training for Ministry of Health Hospitals at 6 monthly intervals (Jan to June, July to December), as in Appendix 6.

5.3 The National Secretariat shall produce a yearly report on training activities and performance of all hospitals. This report shall be made available to all hospitals and state resuscitation training committees.
1.0 NATIONAL LEVEL
National Committee on Resuscitation Training for Ministry of Health (MOH) Hospitals

1.1 Committee Members

1.1.1 Chairman
A senior consultant appointed by the Deputy Director-General of Health (Medical) for a period of 2 years.

1.1.2 Secretariat
Principal Assistant Director and Assistant Director, Medical Development Division (Emergency Unit)

1.1.3 Subcommittee chairpersons representing the various training modules.

They will be appointed by the Deputy Director-General of Health (Medical) on advice of the National Chairman and the national advisor of each discipline.

1.1.3.1 BLS
1.1.3.2 ALS
1.1.3.3 Instructor training and certification
1.1.3.4 NRP
1.1.3.5 PALS/APLS
1.1.3.6 TLS
1.1.3.7 Anaesthesia and Intensive care based resuscitation (BASIC/ACRM)
1.1.3.8 FRLS
1.1.3.9 Medical Based Resuscitation
1.1.3.10 Obstetric Based Resuscitation
1.1.3.11 Representatives from other disciplines involved in resuscitation activities specific to their disciplines.
Appendix 1

1.1.4 Each subcommittee shall have representation from
   1.1.4.1 Specialists
   1.1.4.2 Medical Officers
   1.1.4.3 Nurses
   1.1.4.4 Medical Assistants

1.2 Frequency of meeting shall be at least twice a year.

1.3 Terms of reference for national committee and each subcommittee
   1.3.1 Review the policy on resuscitation training for MOH Hospitals at least every 5 years from 2010.
   1.3.2 Update and standardise evidence based training guidelines and material for use in MOH Hospitals.
   1.3.3 Plan the needs for trainers, posts, equipment and budget for MOH Hospitals.
   1.3.4 Coordinate the certification of Instructors and resuscitation providers in MOH Hospitals.
   1.3.5 Monitor resuscitation training activities in MOH Hospitals.
   1.3.6 Submit annual reports on training activities and performance of all hospitals/states to the Director of Medical Development Division, MOH and Deputy Director General of Health (Medical).
ORGANISATION CHART FOR NATIONAL LEVEL COMMITTEE

CHAIRMAN
A Senior Consultant from MOH hospital involved in resuscitation training
(appointed by Deputy Director General of Health -Medical for a period of 2 years)

SECRETARIAT
Medical Development
Division
(Emergency Unit)

SUBCOMMITTEE
Chairperson

INSTRUCTOR TRAINING AND CERTIFICATION

MEDICAL BASED RESUSCITATION

OBSTETRIC BASED RESUSCITATION

BLS
ALS
NRP
PALS/APLS
TLS
Anaesthesia and intensive care based resuscitation
FRLS
Appendix 1

STATE LEVEL

State Level Committee on Resuscitation Training

Committee members

2.1.1 Chairman
Deputy State Director of Health (Medical)

2.1.2 Vice-Chairman
Specialist actively involved in resuscitation training at state level appointed by Chairman every 2 years or as felt necessary.

2.1.3 Secretariat
Officer from State Hospital Division

2.1.4 Committee members
Representatives from resuscitation training committees of all Hospitals in the state.

2.2 Frequency of meetings shall be at least twice a year.

2.3 Terms of reference

2.3.1 Plan the needs for trainers, posts, equipment and budget for resuscitation training in all hospitals in the state.

2.3.2 Coordinate the certification of instructors and resuscitation providers in the state.

2.3.3 Monitor resuscitation training activities at the state level.

2.3.4 Submit annual reports on training activities and performance of all hospital in the state to the National Committee on resuscitation training.
Appendix 1

ORGANISATION CHART FOR STATE LEVEL

CHAIRMAN
Deputy State Director of Health (Medical)

VICE CHAIRMAN
Specialist actively involved in resuscitation training at state level
(appointed by Chairman every 2 years or as felt necessary)

SECRETARIAT
Officer from State Hospital Division

COMMITTEE MEMBERS
Representative from resuscitation training committees of all Hospitals.
Hospital with specialists level
Hospital committee on Resuscitation training

3.1 Committee members

3.1.1 Chairman
Hospital Director or Deputy Hospital Director (Clinical).

3.1.2 Vice-Chairman
Specialist involved in resuscitation training.

3.1.3 Secretariat
Officer not necessarily involved in resuscitation training.

3.1.4 Coordinators for the following programs.
3.1.4.1 BLS
3.1.4.2 ALS
3.1.4.3 Instructor training and certification
3.1.4.4 Training Equipment Manager

3.1.5 Department representatives (where applicable):
3.1.5.1 Emergency
3.1.5.2 Anaesthesia and Intensive Care
3.1.5.3 Pediatrics
3.1.5.4 General Medicine/Cardiology
3.1.5.5 Surgical disciplines
3.1.5.6 Orthopedics
3.1.5.7 Obstetric and Gynaecology
3.1.5.8 Other departments as felt necessary
3.2 Terms of reference

3.2.1 To plan and submit appropriate budget request to meet Quality Assurance indicator set by the National Committee.

3.2.2 Coordinate all resuscitation training activities/courses in the hospital.

3.2.3 Maintain data on resuscitation training activities in the hospital.

3.2.4 Responsible for the maintenance of all training manikins/equipment.

3.2.5 Responsible for the certification of resuscitation providers.

3.2.6 Submit 6 monthly and annual reports on training activities and performance of the hospital to the state committee on resuscitation training.
4. Hospitals without specialists level

Hospital resuscitation training committee

4.1 Committee members

4.1.1 Chairman
Hospital Director or Medical Officer involved in resuscitation training

4.1.2 Secretary
Officer involved in resuscitation training in the hospital.

4.1.3 Coordinators:
4.1.3.1 BLS
4.1.3.2 Training Equipment Manager

4.2 Frequency of meeting shall be at least twice a year

4.3 Submit 6 monthly and annual reports on training activities and performance of the hospital to the state committee on resuscitation training.
BASIC LIFE SUPPORT COURSE

1. Module guidelines
   
   a) Adult CPR
   b) Conscious Adult choking
   c) Conscious Infant Choking
   d) Infant CPR
   e) Mask ventilation
   f) Automated External Defibrillator (AED)

2. Assessment

   2.1 MCQ
      20 questions, minimum 15 correct

   2.2 Skill assessment

   2.2.1 Adult CPR:
       Able to demonstrate adequate chest rise with ventilation
       Correct hand position and compression rate

   2.2.2 Mask ventilation:
       Able to demonstrate adequate chest rise
3. Suggested Programme

Note: Useful for hospitals with enough manikins and enough space for all participants to be trained simultaneously

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 08:15</td>
<td>Registration</td>
</tr>
<tr>
<td>08:15 – 08:30</td>
<td>Introduction to CPR Course</td>
</tr>
<tr>
<td>08:30 – 09:00</td>
<td>Locally made video show – 2005 Guidelines</td>
</tr>
<tr>
<td>09:00 – 11:15</td>
<td>3 station run simultaneously – 1 man CPR</td>
</tr>
<tr>
<td></td>
<td>– Infant CPR/Adult choking/infant choking</td>
</tr>
<tr>
<td></td>
<td>– Mask ventilation and AED</td>
</tr>
<tr>
<td>11:15 – 11:30</td>
<td>Tea Break</td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td>MCQ</td>
</tr>
<tr>
<td>12:00 – 13:00</td>
<td>Testing adult CPR and mask ventilation</td>
</tr>
</tbody>
</table>

4. Certification

Only given to candidates who are successful in skills and theory assessment. Issued by National Resuscitation Committee in Ministry of Health. Validity period shall be for 5 years.
Appendix 3

ADVANCED LIFE SUPPORT COURSE

Module guidelines

(a) Defibrillation
(b) Advanced airway management
(c) Intravenous access
(d) Algorithms for ventricular fibrillation / pulseless ventricular tachycardia / pulseless electrical activity / asystole
(e) Drugs in resuscitation
(f) Arrhythmias and ECG recognition
(g) Ethical issues in resuscitation

The proposed advanced life support course is a continuation of the proposed Basic Life Support Course and is aimed at all patients who have a cardiac arrest irrespective of the underlying illness although many of these patients might have the cardiac arrest from Acute Coronary Syndrome. ECG recognition is hence made an optional module.

Assessment

2.1 The participant is assessed on the following essential skills:
   2.1.1 Bag valve mask technique
   2.1.2 Intubation
   2.1.3 Oxygen therapy
   2.1.4 Ability to lead and defibrillate if necessary.

2.2 The participant should have all the sequence correct and if an action is missed, the instructor needs to decide whether that action will cause serious harm and death to the victim.

2.3 A participant is allowed to miss 3 actions in a megacode scenario. The assessment will be based on a predetermined format.

4. Minimum training ratio instructor: participant is 1:6

5. Suggested Programme

### Day 1

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
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<tbody>
<tr>
<td>08:00 – 08:15</td>
<td>Registration</td>
</tr>
<tr>
<td>08:15 – 08:55</td>
<td>Respiratory Emergencies</td>
</tr>
<tr>
<td>08:55 – 09:30</td>
<td>Acute Coronary Syndrome</td>
</tr>
<tr>
<td>09:30 – 10:15</td>
<td>Algorithms in Resuscitation</td>
</tr>
<tr>
<td>10:15 – 10:30</td>
<td>Tea Break</td>
</tr>
<tr>
<td>10:30 – 11:15</td>
<td>Skill Station: ECG Recognition/Drug in resuscitation</td>
</tr>
<tr>
<td>11:15 – 12:00</td>
<td>Skill Station: Defibrillation</td>
</tr>
<tr>
<td>12:00 – 12:45</td>
<td>Skill Station: Intubation/Airway Adjuncts/Intravenous access</td>
</tr>
<tr>
<td>12:45 – 14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00 – 14:15</td>
<td>Mega Code Demonstration</td>
</tr>
<tr>
<td>14:15 – 17:00</td>
<td>Mega Code Practice</td>
</tr>
</tbody>
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### Day 2

<table>
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<tr>
<th>TIME</th>
<th>PROGRAMME</th>
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<tbody>
<tr>
<td>08:15 – 08:30</td>
<td>Putting It Together</td>
</tr>
<tr>
<td>08:30 – 10:00</td>
<td>Mega Code Practice</td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td>Tea Break</td>
</tr>
<tr>
<td>10:15 – 12:00</td>
<td>Mega Code / BLS / Intubation Practice</td>
</tr>
<tr>
<td>12:00 – 13:00</td>
<td>Theory Paper</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00 – 16:30</td>
<td>Mega Code Test</td>
</tr>
</tbody>
</table>

6. Certification

All candidates will be given a certificate of attendance and the successful candidates will be given a card. Validity is for 5 years.
Instructor Training For BLS and ALS in Ministry of Health

1. Definition

1.1. Instructor — Person who conducts courses to train BLS and ALS providers.

1.2. Instructor Trainer — Person who conducts courses to train instructors. He is also an instructor.

2. Strategies to identify and train an instructor

2.1 On-training identification’ of potential instructors shall be done. Potential instructors will be required to ‘tag’ with senior instructors and help facilitate resuscitation courses.

2.2 All to-be instructors shall attend a formal instructor course approved by the National Committee on resuscitation training for MOH Hospitals.

2.3 The new instructor will be required to involve themselves in at least 1 course per year.

2.4 Certification will then be provided by the National Committee on resuscitation training for MOH Hospitals on advice from the individual Hospital committee chairpersons.

2.5 All current Instructors will be approved by National Committee on resuscitation training for MOH Hospitals on advice of the individual Hospital committee chairpersons without the requirement of attending a formal instructor course.

2.6 Formal instructor training by organisations outside the MOH shall be accredited by the National Committee on resuscitation training for MOH Hospitals.
Appendix 4

Module guidelines for BLS/ALS Instructor Course

3.1 BLS/ALS update
3.2 Principles of teaching and learning
3.3 Effective teaching at skill stations
3.4 Manikin troubleshooting and maintenance

4. Assessment

4.1 Assessment will consist of theory and practical test
4.2 Theory will consist of 40 MCQ, passing mark is 30
4.3 Practical test will consist of:
   4.3.1 Motor skill
   4.3.2 Teaching at skill station
### Appendix 4

#### Suggested Programme

**Day 1**

<table>
<thead>
<tr>
<th>TIME</th>
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<tbody>
<tr>
<td>08:00 – 08:15</td>
<td>Registration</td>
</tr>
<tr>
<td>08:15 – 08:30</td>
<td>Introduction</td>
</tr>
<tr>
<td>08:30 – 10:00</td>
<td>Skill assessment</td>
</tr>
<tr>
<td>10:00 – 10:30</td>
<td>BLS / ALS update</td>
</tr>
<tr>
<td>10:30 – 11:00</td>
<td>Principles of teaching and learning</td>
</tr>
<tr>
<td>11:00 – 11:45</td>
<td>Common mistakes made by students</td>
</tr>
<tr>
<td>12:00 – 13:00</td>
<td>Small group practical teaching – 6 modules / graph interpretation</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00 – 16:00</td>
<td>Small group practical teaching – 6 modules / graph interpretation (cont’d)</td>
</tr>
<tr>
<td>16:00 – 16:30</td>
<td>Tea Break</td>
</tr>
<tr>
<td>16:30 – 17:00</td>
<td>Manikin – troubleshooting</td>
</tr>
<tr>
<td></td>
<td>Manikin – maintenance</td>
</tr>
</tbody>
</table>

**Day 2**

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 – 09:00</td>
<td>MCQ Test</td>
</tr>
<tr>
<td>09:00 – 10:30</td>
<td>Teaching at skill station</td>
</tr>
<tr>
<td>10:30 – 11:00</td>
<td>Tea Break</td>
</tr>
<tr>
<td>11:00 – 13:00</td>
<td>Teaching at skill station – cont’d</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
</tr>
</tbody>
</table>
### Equipment

#### Basic Life Support Instructor Course

<table>
<thead>
<tr>
<th>Skill Station</th>
<th>Mannequin/Equipment</th>
<th>Minimum Number Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 man / 2 man CPR</td>
<td>Half Torso of Resusci Anne</td>
<td>10</td>
</tr>
<tr>
<td>2 Paediatric CPR</td>
<td>Toddler</td>
<td>5</td>
</tr>
<tr>
<td>3 Adult Choking – Choking</td>
<td>Choking Charlie</td>
<td>1</td>
</tr>
<tr>
<td>3 Adult Choking – Unconscious</td>
<td>Resusci Anne</td>
<td>1</td>
</tr>
<tr>
<td>4 Infant CPR/Choking</td>
<td>Infant</td>
<td>10</td>
</tr>
<tr>
<td>5 Airway</td>
<td>BVM</td>
<td>10</td>
</tr>
<tr>
<td>6 Video show</td>
<td>TV 24 inch and DVD</td>
<td>1</td>
</tr>
<tr>
<td>7 Lecture</td>
<td>Computer and LCD</td>
<td>1 set each</td>
</tr>
<tr>
<td>8 Consumables and disposable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Advanced Cardiac Life Support Instructor Course

<table>
<thead>
<tr>
<th>Skill Station</th>
<th>Mannequin</th>
<th>Minimum number required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Megacode</td>
<td>VitalSim</td>
<td>3</td>
</tr>
<tr>
<td>2 Airway Station</td>
<td>Complete Airway and Intubation set</td>
<td>2 sets – Adult</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 sets – Infant</td>
</tr>
<tr>
<td>3 Lectures</td>
<td>As above</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 5

### SKILL LAB

<table>
<thead>
<tr>
<th>Course</th>
<th>Equipment</th>
<th>Requirement for hospital with specialists</th>
<th>Requirement for hospital without specialists and hospitals with minimal specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BLS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult manikin</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Adult choking</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Infant manikin</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Infant choking</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>AED trainer</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bag valve mask</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td><strong>PALS and NRP</strong></td>
<td>Infant manikin with skill guide for CPR</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Infant intubation head</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Neonatal manikin for umbilical</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Laryngoscope with different blades</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
## Appendix 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Equipment</th>
<th>Requirement for hospital with specialists</th>
<th>Requirement for hospital without specialists and hospitals with minimal specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALS</td>
<td>ALS trainer</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Airway Management Trainer</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Cardiac rhythm simulator</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Laryngoscopes</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>LMA</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Defibrillators</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Oxygen masks of different types</td>
<td>3 each</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SimMan with Chest Drain Insertion Module</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Central Venous Catheterization Insertion Trainer</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Venipuncture and Injection Training Arms</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Foldable Spinal Board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Long Spinal Board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Short Spinal Board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Scoop Stretcher</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Replacement Pneumothorax Kit</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Replacement Pericardiocentesis Kit</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Pleura Aspiration Kit</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Adult adjustable collar</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Upper limb immobilizer (3 sizes)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower limb immobilizer (3 sizes)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Lower limb (Aqil) traction splint</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
## Appendix 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Equipment</th>
<th>Requirement for hospital with specialists</th>
<th>Requirement for hospital without specialists and hospitals with minimal specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLS</td>
<td>Sim Man with Chest Drain Insertion Module</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Maintenance for Sim Man (Yearly)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Ultimate Hurt Manikin</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>AirSim Multi</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Venipuncture and Injection Training Arms</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Intraosseous Trainer</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Leg Replacement Pads</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Chest Drain Trainer (Complete Set)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Replaceent Chest Wall / Rib Cage</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Replacement Pneumothorax Kit</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Replacement Pericardiocentesis Kit</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Pleura Aspiration Kit</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Central Venous Catheterization Insertion Trainer</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### Immobilization

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Requirement for hospital with specialists</th>
<th>Requirement for hospital without specialists and hospitals with minimal specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult adjustable collar</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Pediatric adjustable collar</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Rigid cervical collar set (4 sizes: tall, regular, short, neck, no neck)</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Upper limb immobilizer (3 sizes)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Lower limb immobilizer (3 sizes)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Nina pelvic clamp</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Long spinal board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Short spinal board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Medical Extrication Device</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Scoop stretcher</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Foldable spinal board</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Trauma bag kit (for wound management)</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
LAPORAN LATIHAN RESUSITASI PERINGKAT NEGERI

TEMPOH: JANUARI – JUN / JULAI – DISEMBER

NEGERI:

<table>
<thead>
<tr>
<th>Nama Hospital</th>
<th>Jumlah Anggota di Hospital</th>
<th>Bil. Anggota yang mengikuti Latihan BLS tahun semasa</th>
<th>Jumlah Kumulatif yang mempunyai sijil yang sah (dan %)</th>
<th>Jumlah Doktor HO</th>
<th>Bil. Doktor yang mengikuti Latihan ALS tahun semasa</th>
<th>Jumlah Kumulatif yang memgikuti Latihan ALS sah tahun semasa (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HO</td>
<td>Lain-lain</td>
<td>HO</td>
</tr>
</tbody>
</table>

Isu / Masalah yang ingin dibangkitkan kepada National Committee

Tandatangan Pelapor:

Nama / Jawatan:

Tarikh:
Medical Development Division

Block E1, Parcel E,
Ministry of Health Malaysia,
Federal Government Administrative Capital,
62590 Putrajaya, Malaysia

603 88833888