

**PROVIDER MANUAL FOR THE EMERGENCY CARE OF CRITICALLY ILL
AND INJURED INFANTS, CHILDREN AND PREGANT MOTHERS**

EES & EMNCH

**Essential Emergency Surgical Skills with
special emphasis on Emergency Maternal,
Neonatal and Child Healthcare**



MCAI Maternal & Childhealth
Advocacy International

Maternal and Child Advocacy
International (MCAI)
Conway Chambers
83 Derby Rd, Nottingham
NG1 5BB
e-mail:
dauids@doctors.org.uk
www.mcai.org.uk

Advanced Life Support Group
29-31 Ellesmere Street
Swinton
Manchester
M27 0LA
Tel: 0161 794 1999
Fax: 0161 794 9111
e-mail:enquiries@alsg.org
www.alsg.org



Integrated with the work of

The Ministry of Health, Liberia and WHO Liberia



© MCAI UK and ALSG: all rights reserved

Authors and Contributors

The material in this manual was derived from a number of different sources. Throughout it has been made as compatible as possible with published advice from the World Health Organisation. The following were major sources of the material:

Initiative for maternal mortality programme assessment. IMMPACT www.who.int/reproductive-health/impac/

The International Federation of Infection Control <http://www.theific.org/>

Primary Mothercare http://www.leeds.ac.uk/demographic_entrapment/Front.PDF

The Resuscitation Council (UK) Resuscitation at birth 2011 The Newborn Life Support (NLS) Provider Course Manual <http://www.resus.org.uk/pages/nlsgen.htm>

CD Rom of Advanced Paediatric Life Support (APLS) Emergency care for babies and children, including major trauma. The CD Rom includes 120 videos and more than 400 X-rays and other clinical pictures. Published ALSG 2011 www.alsg.org

CD Rom of obstetric and neonatal emergency care. Published MCAI 2010. www.mcai.org.uk

International Child Health Care: a practical manual for the hospital care of children worldwide. Published BMJ Books November 2001 (currently new edition in press Radcliffe Publishers, Oxford).

Pocket Emergency Paediatric Care - A Practical Guide to the Diagnosis and Management of Paediatric Emergencies in hospitals and other healthcare facilities worldwide. British Medical Journal Books. 2003

A manual for the control of pain in children. Royal College of Paediatrics and Child Health UK 1990

Advanced Paediatric Life Support: The Practical Approach, ALSG www.alsg.org

Managing Obstetric Emergencies & Trauma: The Practical Approach, ALSG, RCOG Publications

A Pocket Guide to Teaching, ALSG BMJ Books

Editors:

Dr Barbara Phillips, Consultant in Paediatric Accident and Emergency Medicine

Dr Assad Hafeez, Consultant Paediatrician and epidemiologist, Pakistan

Dr Edmund Hey, Consultant Paediatrician

Ms Sara Paterson-Brown, Consultant Obstetrician and Gynaecologist

Mrs Angela Railton, Consultant Obstetrician and Gynaecologist with a Special interest in Perinatal Medicine

Professor David Southall, Consultant Paediatrician and Honorary Medical Director, MCAI

Dr Diane Watson, Consultant Anaesthetist

Major Contributors -the editors plus the following:

Dr James Bunn, Consultant Paediatrician and Senior Lecturer in International Child Health

Dr Christine Edwards, Consultant Obstetrician and Gynaecologist

Dr Jennifer Gonde, Consultant Paediatrician

Dr Mumtaz Hassan, Professor of Paediatrics

Mr Kim Hinshaw, Consultant Obstetrician and Gynaecologist

Dr Ghazala Mahmud, Consultant Obstetrician and Gynaecologist

Dr Irfan Mirza, Consultant Paediatric Surgeon

Professor Elizabeth Molyneux, Consultant Paediatrician

Ms Sara Paterson-Brown, Consultant Obstetrician and Gynaecologist

Dr Fidelma O'Mahoney, Consultant Obstetrician and Gynaecologist

Dr Mark Pietroni, Consultant Physician

Dr Sam Richmond, Consultant Neonatologist

Dr Shamsa Zafar, Consultant Obstetrician and Gynaecologist

Dr Abiola Sulaimon, Paediatrician

Contents

SECTION	TITLE
1	Infection Prevention
2	Principles of Managing Emergencies In The Mother And Child: assessment and triage
3	Drug And Fluid Administration Blood transfusion
4	Pain Management and Sedation Anaesthetic issues (including spinal and ketamine)
5	Transport of Ill Patients
6	Basic Life Support Introduction Basic Life Support Child Basic Life Support mother Safe approach Are you alright Airway opening actions Breathing actions Circulation actions Basic Life Support at different ages Calling emergency services Cardiopulmonary resuscitation in pregnancy Choking
7	Advanced Life Support Introduction Airway equipment and skills Breathing equipment and skills Circulation equipment and skills Cardiac arrest
8	The structured approach to the seriously ill or injured mothers, babies and children Primary Assessment and resuscitation during emergencies Airway and Breathing Effort of breathing: Respiratory rate/rhythm: Stridor/wheeze: Auscultation: Skin colour Circulation Heart rate: Pulse volume: Capillary refill: Skin temperature Cardiac failure Disability Mental status/conscious level: Posture: Pupils: Blood glucose Secondary assessment and emergency treatment Airway and breathing Circulation Disability Exposure Summary
9	Management of Emergencies in the Pregnant Mother Hyperemesis Shock Haemorrhage in first trimester Ruptured ectopic

	<p>Miscarriage</p> <p>Airway and Breathing problems:</p> <ul style="list-style-type: none"> ○ Asthma ○ Lower respiratory tract infection ○ Heart failure ○ Severe anaemia ○ Anaphylaxis ○ Pulmonary embolus <p>Abdominal pain early pregnancy</p> <p style="padding-left: 40px;">Acute appendicitis</p> <p>Major haemorrhage second and third trimesters</p> <p style="padding-left: 40px;">APH</p> <p style="padding-left: 40px;">Ruptured uterus</p> <p>PPH</p> <p>Sepsis</p> <p style="padding-left: 40px;">Severe gastroenteritis</p> <p>Disability-confusion, fits and coma</p> <p style="padding-left: 40px;">Status epilepticus not due to eclampsia</p> <p style="padding-left: 40px;">Hypertension, Pre-eclampsia and Eclampsia</p> <p style="padding-left: 40px;">Meningitis</p> <p style="padding-left: 40px;">Severe malaria</p> <p style="padding-left: 40px;">Diabetes mellitus</p> <p>Reduced fetal movements, intrauterine death and stillbirth</p>
10A and 10B	<p>Complications of labour and delivery</p> <p>Prolonged and Obstructed labour</p> <p style="padding-left: 40px;">Uterine rupture</p> <p style="padding-left: 40px;">Shoulder dystocia</p> <p>Inverted uterus</p> <p>Premature and prolonged ruptured membranes and premature labour</p> <p>Twins</p> <p>Malpresentations and malpositions, including OP and Breech</p> <p>Prolapsed cord</p> <p>Puerperal sepsis</p>
11	<p>Care of the Newborn at Birth and Emergencies in the First Month of Life</p> <p>Recognising at risk babies</p> <p>Preparation for birth</p> <p>Management at delivery</p> <p>Stabilising the term baby after birth</p> <p style="padding-left: 40px;">ABCDEF of resuscitation of the newborn</p> <p style="padding-left: 40px;">Airway management</p> <p style="padding-left: 80px;">Trachea blocked</p> <p style="padding-left: 40px;">Breathing</p> <p style="padding-left: 80px;">Mask inflation</p> <p style="padding-left: 80px;">Mouth to mouth/nose</p> <p style="padding-left: 80px;">Preterm</p> <p style="padding-left: 40px;">Circulation</p> <p style="padding-left: 80px;">Drugs</p> <p style="padding-left: 80px;">Acute blood loss</p> <p style="padding-left: 80px;">Umbilical venous catheter</p> <p>Environment</p> <p>Family</p> <p>Poor response to resuscitation</p> <p>Stopping resuscitation</p> <p>Documentation</p> <p>Common emergencies in the first month of life</p> <p style="padding-left: 40px;">Breathing problems</p>

	<ul style="list-style-type: none"> RDS Transient tachypnoea of the newborn Aspiration pneumonia Bacterial pneumonia Persistent fetal circulation Pneumothorax Congenital malformations Recurrent apnoea Suspected infection <ul style="list-style-type: none"> Antibiotics Severe jaundice <ul style="list-style-type: none"> Phototherapy Exchange transfusion Late jaundice Late anaemia Fits, spasms and coma <ul style="list-style-type: none"> Management of fits <ul style="list-style-type: none"> Hypoglycaemia Meningitis Tetanus Biochemical Kernicterus Inborn errors of metabolism Intrapartum asphyxia Drug related Developmental disorders Anticonvulsant treatment Vomiting and feeding problems
12	<ul style="list-style-type: none"> Management of Paediatric Emergencies Recognition seriously ill child: rapid assessment ABCD Infant or child with breathing difficulties <ul style="list-style-type: none"> Upper airway obstruction <ul style="list-style-type: none"> Croup Epiglottitis Anaphylaxis Wheeze <ul style="list-style-type: none"> Bronchiolitis Asthma Lower respiratory tract infection Infant or child with shock <ul style="list-style-type: none"> Dehydration Gastroenteritis Diabetic ketoacidosis Septicaemia Typhoid <ul style="list-style-type: none"> Dengue haemorrhagic fever Cardiogenic <ul style="list-style-type: none"> Cardiac arrhythmias Infant or child with acute renal failure Infant or child in coma <ul style="list-style-type: none"> Meningitis Malaria Infant or child with convulsions Infant or child with severe malnutrition
13	Serious Injury in the Infant, Child and Mother

	<ul style="list-style-type: none"> Structured approach Primary survey ABCDE Secondary survey Emergency radiology Analgesia Trauma in the pregnant mother Procedures in trauma <ul style="list-style-type: none"> Cervical spine immobilisation Log roll Pericardiocentesis Burns in the child Burns in the pregnant mother Electrical injuries in the mother and child Near drowning in the mother and child Envenomation in the mother and child Poisoning in the mother and child Domestic violence Life threatening child abuse
14	<ul style="list-style-type: none"> Post operative Management for mothers undergoing surgery for obstetric emergencies <ul style="list-style-type: none"> Basic nursing issues Post operative complications Care of those receiving spinal anaesthesia
Appendix	