

CHAPTER 1

Introduction

Throughout both the developed and the developing world, maternal mortality continues to present a serious challenge. Globally, there is estimated to be one maternal death every minute. This course will provide you with a system for managing the seriously ill and seriously injured. The system is designed to be simple and easy to remember when life-threatening emergencies arise and is known as ‘the structured approach’. The structured approach is based on the ABC of resuscitation and is practised throughout all areas of medicine and the emergency services. The concept is familiar to the lay person and known even to school children. The structured approach has led to the development of courses that attend to the resuscitation needs of all patients, from neonates to children, adults and now for those with the altered physiology and anatomy of pregnancy.

This manual, the Managing Obstetric Emergencies and Trauma (MOET) online material and practical course are divided into sections that provide a structured revision in recognition, resuscitation and treatment of emergencies in pregnancy. This includes trauma, medical and surgical emergencies and obstetric emergencies and is aimed at obstetricians, anaesthetists, emergency physicians and midwives. The structured approach is applied to resuscitation and is taught didactically as a drill. Subsequently, what has been learned is applied to the recognition and management of the seriously ill and injured pregnant patient. Although trauma management is not widely taught to obstetricians, trauma occurs to their patients and those in other specialties will consider them the experts on the management of the injured pregnant woman.

The physiological adjustments of pregnancy affect the response of the mother to illness and injury. These changes mean that resuscitation should be tailored to the pregnant patient and this manual, and the MOET course, teaches how this is achieved.

The MOET course began in 2001 and runs under the auspices of the Advanced Life Support Group (ALSG). Its aim is to provide the knowledge, practical skills and procedures necessary to save the mother and fetus in life-threatening circumstances. The course runs in six countries and, since its inception, over 3300 providers and 430 instructors have been trained. Course information and links for candidates and faculty are available from the ALSG website (www.alsg.org).

This text is essential pre-course reading for the MOET course and also provides a valuable reference for all obstetricians and anaesthetists.

In more recent years, and in acknowledgement of the challenging study leave climate in the UK, a precourse online learning component (Box 1.1) has been devised and piloted (www.alsg.org/vle). This reinforces the current text and provides an interactive method of

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delivering the knowledge components of the course. It prepares participants for the practical application of knowledge during the face-to-face course.

Box 1.1 Content of the MOET online learning package

- Structured approach to MOET
- Cardiopulmonary resuscitation
- Resuscitation and perimortem C-section
- Airway management and breathing
- Structured approach to trauma
- Abdominal and pelvic trauma
- Hypertensive diseases of pregnancy
- Massive obstetric haemorrhage
- Complications of delivery
- Domestic abuse and perinatal psychiatric illness
- Shock
- Patient with headache and confusion
- Jehovah’s witnesses
- Triage
- Drug calculations

The face-to-face course (Box 1.2) offers participants the opportunity to further reinforce their pre-course learning and also to have hands-on practice of essential skills. Interactive sessions and workshops explore a variety of acute medical emergencies that have been identified by the eighth Report of the Confidential Enquiries into Maternal Deaths in the UK, produced by the Centre for Maternal and Child Enquiries (CMACE), as leading causes of death in pregnancy. Simulations allow candidates to put knowledge and skills together and to practise and learn within a safe environment. In this, they are supported with structured debriefing by instructors and their fellow candidates. Continuous assessment on key skills and an end-of-course assessment on both a simulation and a multiple choice paper indicates those candidates that have achieved the required standard to be a ‘MOET provider’.

Those candidates who demonstrate the potential to be an instructor are invited to undertake a structured training programme. The Generic Instructor Course (GIC) prepares instructors to deliver lectures, skills teaching, small group discussions, simulations and also to carry out assessments. This is then reinforced with support and assessment by experienced instructors when new instructors teach on MOET courses on the first two occasions. Instructors then teach on three courses over each 2-year period to maintain their status.

As priorities for training change, the MOET course is continually improved following feedback from course directors, instructors and candidates and from important trend information from major reports, e.g. MBRRACE. This ensures that it remains fit-for-purpose and focuses on the current leading causes of maternal death.

Box 1.2 Content of the MOET face-to-face course

Lectures and demonstrations

- Structured approach to MOET
- Cardiopulmonary resuscitation demonstration
- Shock
- Trauma review
- Newborn resuscitation
- Nonstandard procedures in modern obstetrics
- Medical emergencies

Workshops, skill stations and simulations

- Airway management
- Basic life support (BLS) and automated external defibrillator (AED) use
- Surgical airway
- Newborn resuscitation and vascular access
- Trauma moulage
- Instrumental delivery
- Vaginal breech delivery
- Failed ventouse leading to forceps delivery
- Acute abdominal emergencies
- Obstetric triage
- Eclampsia and Haemolysis, elevated liver enzymes, and lowered platelets (HELLP)
- Anaesthetic complications
- Massive obstetric haemorrhage
- Advanced surgical techniques
- Version techniques for delivery of twin II
- Uterine inversion
- Shoulder dystocia
- Headache and confusion