



ASSOCIATION OF
AMBULANCE
CHIEF EXECUTIVES

SECOND EDITION

FIRST RESPONDER **CARE** Essentials



Richard Pilbery
and Kris Lethbridge

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CLASS
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PUBLISHING

Foreword

The Association of Ambulance Chief Executives welcomes the second edition of *First Responder Care Essentials* to its portfolio of endorsed publications. This comprehensive textbook will continue to assist many in learning essential skills for their role as a volunteer community first responder. The progressive manner of introducing the basics of how an ambulance service functions, the ambulance service context, clinical skills and also how to provide optimum and inclusive patient care gives the reader a complete understanding of what is required. The second edition has been brought up-to-date with current guidance and introduces a new section on poisoning. We thank you for your interest in ambulance volunteering and trust this publication will support you to build confidence and skill.

Helen Vine, Assistant Director, the Association of Ambulance Chief Executives

The National Education Network for Ambulance Services welcomes the second edition of *First Responder Care Essentials* to its portfolio of endorsed publications written by Richard Pilbery and Kris Lethbridge. This innovative textbook will continue to assist ambulance first responders in learning essential skills. The second edition has been brought up-to-date with current guidance. We look forward to future editions. This textbook provides essential underpinning learning for first responder programmes in place across the UK ambulance services. The emergency and urgent care systems are undergoing significant and continual change and the development of a suite of resources for UK ambulance services will ensure that the ambulance workforce is able to continue working at the heart of these changing systems. The textbook will assist learners to develop their knowledge and skills as a part of taught programmes and will provide a strong understanding of what is required of today's ambulance workforce and a solid foundation for continued learning.

Pauline Cranmer, Chair, National Education Network for Ambulance Services (NENAS) and Chief Paramedic Officer, London Ambulance Service

1 Introduction

1 Textbook guide

1.1 Introduction

This textbook is designed to help prepare you to work as a volunteer responder (sometimes referred to as community first responder, or first/emergency responder) or similar, but will also be of interest to readers who already have completed a first-aid or first-response emergency care course and wish to expand their knowledge.

1.2 Textbook

This textbook is designed to be read from start to finish on the first reading because concepts introduced later on in the book assume that you already have knowledge of the content that has been covered in earlier chapters. However, this textbook will also be a useful reference to which you can return again and again, reflecting on the learning points that are highlighted.

Each chapter comprises a number of different topics centred on a theme, such as health and safety, or the airway. The learning objectives for each chapter have been mapped to objectives from a range of courses that are used to prepare volunteers to become responders.

1.3 Getting started

To help get you orientated to the topics covered in this textbook and their relevance to clinical practice, the next section, 'Anatomy of an emergency call', will take you step by step through an emergency call, highlighting the variety of knowledge and skills that you will require in order to be an effective responder.

Each chapter is split into sections, which are typically laid out in the following way:

- learning objectives: to clearly highlight what you are expected to learn in the chapter

- introduction: setting the scene for the theme of the chapter
- content: the content!

2 Anatomy of an emergency call

2.1 Introduction

The topics covered in the chapters of this textbook are an essential part of your role as a responder. It can be helpful to find out WHY you need to learn something. In order to see this in context, let's review a typical clinical scenario that you may be faced with when responding on the behalf of the ambulance service (Figure 1.1).

2.2 The emergency operations centre (EOC)

When Mrs Brown makes a 999 call, she speaks to a telephone operator, who asks her which service she requires. She asks for the ambulance service and is put through to her local ambulance service's EOC (Figure 1.2).

Since the call has been triaged as an emergency, an ambulance and responder are allocated to it.



Figure 1.1 Mr James Brown, a 59-year-old man who has chest pain, with his wife, Patricia



Figure 1.2 A dispatcher in the EOC

As a responder, you are tasked to incidents that can benefit from your knowledge and skills, and which are close to where you are located, meaning that you may well arrive before the ambulance crew.

You will learn more about the ambulance service, including the roles and responsibilities of its staff, and ambulance and clinical quality indicators in Chapter 2, 'The Ambulance Service'.

2.3 Arriving on scene

You will have been conducting a scene assessment, even before arriving at the address. This will include considering the location, time of day and type of incident, and is a dynamic process, i.e. should be constantly reviewed, as the scene can change rapidly. You will learn more about this in Chapter 8, 'Scene Assessment'.



Figure 1.3 The responder arrives at the address

In addition to scene safety, you will consider the need for personal protective equipment (PPE). At a residential address, this may be limited to a pair of disposable gloves, but other PPE may be required if there is severe bleeding, for example (covered in Chapter 5, 'Health and Safety').

You retrieve the response bag and automated external defibrillator (AED) from your vehicle and head towards the front door, where Mrs Brown is anxiously waiting (Figure 1.3).

2.4 Principles of communication

You are shown into the living room where Mr Brown is sitting on the sofa, clutching his chest and looking rather grey and sweaty. You introduce yourself to Mr and Mrs Brown and clarify what Mr Brown prefers to be called. He tells you to call him Jim (Figure 1.4).

Communication is a fundamental aspect of all ambulance work and your role as a responder. It is not always easy as you will have to communicate with patients, friends and family members, as well as other healthcare professionals, and adapt your approach and style appropriately. In addition, you cannot communicate the same way with an elderly person as you would a teenager. Some patients will not, or cannot, communicate with you, because they are depressed or don't speak English, for example. Chapter 3, 'Communication', will cover this in more detail.



Figure 1.4 The responder talking to Jim

2.5 Patient assessment

You complete an initial catastrophic haemorrhage (bleeding), airway, breathing, circulation, disability, exposure (<C>ABCDE) assessment of Jim (reviewed in Chapter 9, 'Patient Assessment') and obtain a set of baseline observations to support this. Jim's airway is patent; he is breathing at a rate of 16 breaths per minute, which is in the normal range. After obtaining permission (correctly termed 'consent', an important legal concept, covered in Chapter 4, 'Legal and Ethical Issues') from Jim, you apply a pulse oximeter to one of his fingers. His oxygen saturations are 93% on air so you administer oxygen (covered in Chapter 11, 'Breathing'). Continuing with the assessment of Jim's circulation, you check his pulse and measure his blood pressure.

2.6 Patient history

Jim explains that he experienced a sudden onset of central chest pain radiating to his jaw, back and both arms an hour prior to his wife's 999 call. It feels like a heavy pressure, which he scores as 7 out of 10, and is associated with shortness of breath, nausea and sweating. His wife states that he has been very pale since the onset of the pain.

You ask about Jim's past medical history and he tells you that he has high cholesterol and high blood pressure; he takes medication to treat both. You ask for his medication so you can pass it on

to the crew (Figure 1.5). He has never had a heart attack (myocardial infarction, MI), but does admit to experiencing occasional chest pain on exertion over the past month or so.

2.7 Cardiac arrest

You continue to talk to Jim and reassure him and his wife while you wait for the ambulance to arrive. Suddenly, Jim becomes unresponsive. After calling his name and then gently shaking his shoulders, you realise that he may be in cardiac arrest (Figure 1.6). After conducting a rapid Task, Individual, Load, Environment, Equipment (TILEE) assessment (covered in Chapter 7, 'Manual Handling'), you move Jim on to the floor.

2.8 Basic life support and defibrillation

After confirming that Jim is not breathing and is showing no signs of life, you instruct Jim's wife to start chest compressions while you update the EOC and get the AED ready (covered in Chapter 20, 'Cardiac Arrest'). You expose Jim's chest and ensure that the defibrillator pad sites are free from jewellery, piercings, medication patches, wounds and tumours. Luckily, there is no need to shave his chest.

The AED instructs everyone to stand clear while it analyses Jim's heart rhythm before instructing



Figure 1.5 Gathering the patient's medication for the ambulance crew



Figure 1.6 Jim collapses and is unresponsive



Figure 1.7 Using an AED safely is an important responder skill

you to resume chest compressions. Jim's wife is looking tired, so you take over. A shock is advised, so once the AED has charged you ensure that Jim's wife and you are clear of Jim before pressing the shock button (Figure 1.7). As soon as the shock is delivered, you immediately resume chest compressions.

After 2 minutes of cardiopulmonary resuscitation (CPR), the AED instructs you to stand clear, so you briefly pause chest compressions to allow it to assess the rhythm. Another shock is advised, which you deliver before immediately resuming chest compressions.

2.9 Crew arrival

The ambulance crew arrive and you provide a structured handover, explaining what has happened (Figure 1.8). The crew take over Jim's care but ask you to assist them while they reassess and then transfer Jim to the ambulance.




Figure 1.8 Providing a structured handover to the ambulance crew is important to ensure good continuity of care

2.10 Clean up and prepare for the next call

After another 2 minutes of CPR, Jim shows signs of life and begins to breathe spontaneously. You assist the ambulance crew in loading Jim on to the ambulance before returning to the house to gather your equipment. You find out later that Jim had suffered a heart attack, but the blockage in his arteries was successfully removed and he is doing well.

3 Extended skills

3.1 Scope of practice

Look out for the  extended-skill icons throughout the book. These highlight where a skill may be outside of your scope of practice. If you are unsure, talk with your local co-ordinator about them.