



Emergency Nursing at a Glance

**Edited by
Natalie Holbery
Paul Newcombe**



WILEY Blackwell

Emergency Nursing at a Glance

This title is also available as an e-book.
For more details, please see
www.wiley.com/buy/9781118867679
or scan this QR code:





Emergency Nursing at a Glance

Edited by

Natalie Holbery

Lecturer/Practitioner Emergency Care
St George's University Hospitals NHS
Foundation Trust
Kingston University and St George's,
University of London
London

Paul Newcombe

Associate Professor
Kingston University and St George's,
University of London
London

Series editor: Ian Peate

WILEY Blackwell

This edition first published 2016 © 2016 by John Wiley & Sons Ltd.

Registered office: John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial offices: 9600 Garsington Road, Oxford, OX4 2DQ, UK
The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK
350 Main Street, Malden, MA 02148-5020, USA

For details of our global editorial offices, for customer services and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell

The right of the authors to be identified as the authors of this work has been asserted in accordance with the UK Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book. It is sold on the understanding that the publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

The contents of this work are intended to further general scientific research, understanding, and discussion only and are not intended and should not be relied upon as recommending or promoting a specific method, diagnosis, or treatment by health science practitioners for any particular patient. The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation any implied warranties of fitness for a particular purpose. In view of ongoing research, equipment modifications, changes in governmental regulations, and the constant flow of information relating to the use of medicines, equipment, and devices, the reader is urged to review and evaluate the information provided in the package insert or instructions for each medicine, equipment, or device for, among other things, any changes in the instructions or indication of usage and for added warnings and precautions. Readers should consult with a specialist where appropriate. The fact that an organization or Website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Website may provide or recommendations it may make. Further, readers should be aware that Internet Websites listed in this work may have changed or disappeared between when this work was written and when it is read. No warranty may be created or extended by any promotional statements for this work. Neither the publisher nor the author shall be liable for any damages arising herefrom.

Library of Congress Cataloging-in-Publication Data are available.

ISBN 978-1-118-86767-9 (pbk)

A catalogue record for this book is available from the British Library.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Cover image: © Corbis

Set in 9.5/11.5pt Minion Pro by Aptara

Contents



Contributors vii
Preface viii
Acknowledgements viii
About the companion website ix

Part 1

Initial patient assessment 1

- 1 The context of emergency nursing 2
- 2 Pre-hospital care 4
- 3 Triage 6
- 4 The 'ABCDE' approach 8
- 5 Track and trigger systems 10
- 6 Pain 12

Part 2

Airway and breathing 15

- 7 Airway assessment and management 16
- 8 Assessment of breathing 18
- 9 Oxygen therapy 20
- 10 Respiratory conditions 22

Part 3

Circulation 25

- 11 Assessment of circulation 26
- 12 Circulation interventions 28
- 13 Shock 30
- 14 12-lead electrocardiogram (ECG) 32
- 15 Cardiac arrhythmias 34
- 16 Acute coronary syndromes (ACS) 36
- 17 Heart failure 38
- 18 Advanced life support (ALS) 40

Part 4

Disability 43

- 19 Assessment of neurological function 44
- 20 The unconscious patient 46
- 21 Stroke 48
- 22 Seizures 50
- 23 Headache 52

Part 5

Emergency presentations and conditions 55

- 24 Abdominal pain 56
- 25 Gastrointestinal bleed 58
- 26 Genitourinary conditions 60
- 27 Acute kidney injury (AKI) 62
- 28 Diabetic emergencies 64
- 29 Obstetrics and gynaecology 66

Part 6

Poisoning and overdose 71

- 30 Poisoning: Assessment and management 72
- 31 Poisoning: Prescription and non-prescription drugs 74
- 32 Poisoning: Other substances 76
- 33 Alcohol misuse 78

Part 7

Infectious diseases 81

- 34 Infectious diseases 82
- 35 Notifiable diseases 84
- 36 Sexually transmitted infections (STI) 86

Part 8

Vulnerable patient groups 89

- 37 Domestic abuse 90
- 38 Sexual assault 92
- 39 The mental health patient in the emergency department (ED) 94
- 40 Risk assessment, self-harm and suicide 96
- 41 Common mental health problems 98
- 42 The patient with dementia 100
- 43 The patient with an intellectual disability 102

Part 9

Children in the emergency department 105

- 44 Children in the emergency department (ED) 106
- 45 Safeguarding children 108
- 46 Recognising the sick child 110
- 47 Common illnesses in children 112
- 48 Paediatric advanced life support 114

Part 10

Minor injuries and conditions 117

- 49 Minor injuries in children 118
- 50 Lower limb injuries 120
- 51 Upper limb injuries 122
- 52 Wounds 124
- 53 Eye conditions 126
- 54 Ear, nose and throat conditions 128

Part 11

Major Trauma 131

- 55 Trauma in context 132
- 56 Primary survey 134
- 57 Head and spinal injury 136
- 58 Chest trauma 138
- 59 Limb injuries 140
- 60 Abdominal and pelvic trauma 142
- 61 Massive haemorrhage 144
- 62 Burns 146
- 63 Trauma: Special circumstances 148
- 64 Trauma in children 150
- 65 Major incident 152

Part 12

Patient transfer and end of life care 155

- 66 Patient transfer 156
- 67 End of life care 158

Further reading/references 161

Index 165

Contributors



Jim Blair (Chapter 43)
Associate Professor (Hon)
Consultant Nurse Learning Disabilities
Great Ormond Street Hospital
London

Chris Brunker (Chapters 19, 20, 21 and 22)
Clinical Nurse Specialist
Neuro-Intensive Care
St George's University Hospitals NHS Foundation Trust
London

Claire Chincock (Chapters 30, 31, 32 and 33)
Senior Lecturer Emergency Care
Kingston University and St George's,
University of London
London

Chris Hart (Chapters 39, 40 and 41)
Senior Lecturer Mental Health Nursing
Kingston University and St George's,
University of London
London

Caron Ireland (Chapters 44, 45, 46, 47, 48 and 49)
Paediatric Sister
Urgent and Emergency care
Sussex Community NHS Trust
Sussex

Heather Jarman (Chapters 65 and 66)
Clinical Director for Major Trauma
Consultant Nurse in Emergency Care
St George's University Hospitals NHS Foundation Trust
London

Emma Menzies-Gow (Chapters 15, 16 and 17)
Senior Lecturer Cardiac Nursing
Kingston University and St George's,
University of London
London

Matthew Parkes (Chapters 51, 52 and 54)
Matron
Urgent Care Centre
St George's University Hospitals NHS Foundation Trust
London

Nicola Shopland (Chapters 50, 53 and 54)
Divisional Chief Nurse of Medicine
Surrey and Sussex Healthcare NHS Trust
Surrey



Preface

Demand for emergency care has risen in the UK in recent years, calling for a reshaping of the system. Innovative models of service provision and the development of new roles in urgent and emergency care are two initiatives to ensure that care is delivered to the right people in the right place at the right time. While it is an exciting time to be working in this specialty, it is not a job for the fainthearted! Emergency nursing is a rewarding yet sometimes challenging career that demands a broad knowledge base and commitment to lifelong learning.

This textbook offers up-to-date, peer-reviewed content that provides the reader with written and visual information relating to all

aspects of emergency nursing. Chapters are organised into themes that reflect aspects of care or particular patient groups. Each chapter covers a clinical topic and includes background information, guidelines for assessment and care, and management of common clinical presentations. The text is accompanied by clear illustrations, photographs, diagrams and flow charts to further support learning. The 'At a Glance' format is perfect for student nurses or nurses new to emergency nursing because it allows quick reference to the diversity that is emergency nursing.

Acknowledgements

We would like to thank the contributors for dedicating their time and expertise to assist the development of this textbook. We would also like to thank Rosie Maundrill and Darrel Manuel for allowing us to use their work for the acute kidney injury chapter.

Thanks also to Oscar Cavero and Nichola Brown for posing as models in the neuro chapters, and to Sarah Yeomans, Chloe Yeomans, Drew Yeomans and Isla Qureshi for posing as models in the paediatric chapters.

We are very grateful to the team at Wiley for their direction in keeping us on track. Finally, we would like to thank our families for their support and encouragement, not merely during the writing of this book, but throughout our careers.

Natalie Holbery
Paul Newcombe

About the companion website



Don't forget to visit the companion website for this book:

**[ataglanceseries.com/nursing/
emergencynursing](http://ataglanceseries.com/nursing/emergencynursing)**

There you will find valuable material designed to enhance your learning, including:

- Interactive multiple choice questions

Scan this QR code to visit the companion website





Initial patient assessment

Part 1

Chapters

- 1** The context of emergency nursing 2
- 2** Pre-hospital care 4
- 3** Triage 6
- 4** The 'ABCDE' approach 8
- 5** Track and trigger systems 10
- 6** Pain 12

1

The context of emergency nursing

Figure 1.1 Emergency department nursing roles

Nurse consultant

- Clinical expert
- Leadership role
- Policy development
- Research engagement

Educator

- Facilitate clinical knowledge and skills
- Design, deliver and evaluate educational programmes

Matron

- Leadership
- Quality assurance
- Staff support

Emergency nurse practitioner (ENP)

- Autonomous, advanced role
- See, treat and discharge patients
- Prescribe medication

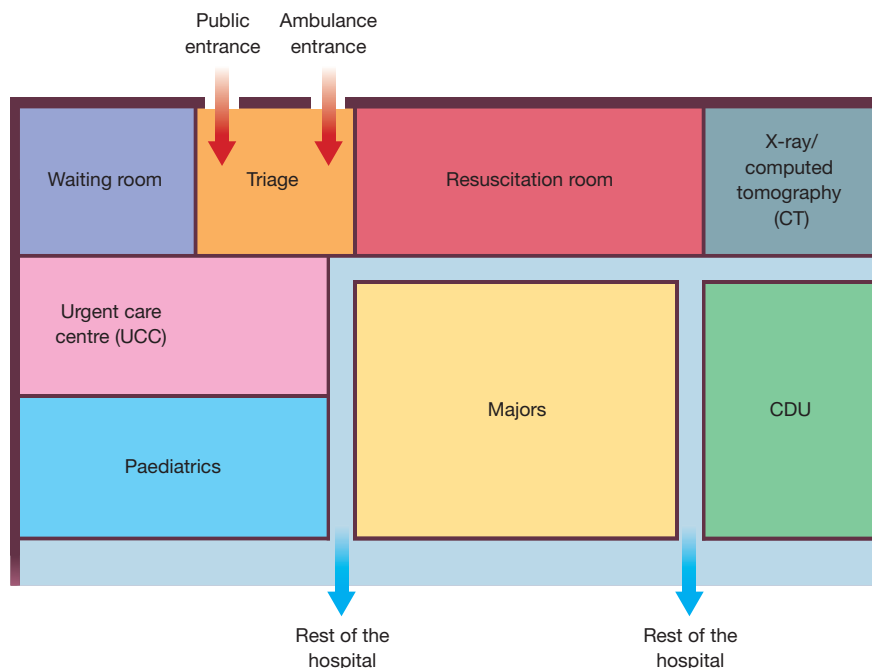
Registered nurse (RN)

Band 5 – Assess, plan, deliver and evaluate individual patient care

Band 6 – Assess, plan, deliver and evaluate individual patient care, manage areas of department and possibly shift lead

Band 7 – Assess, plan, deliver and evaluate individual patient care, manage areas of department, shift lead, manage a team of nurses, audit, clinical leadership

Figure 1.2 Areas within the emergency department



The emergency department (ED) is a busy, fast-paced, unpredictable and often highly emotive place to work. ED nurses thrive on the pace, excitement and unpredictable nature of the environment. They need to be proficient in the assessment, recognition and care of patients across the lifespan with undiagnosed illness or injury. They are required to process large amounts of information to facilitate decision making, often in time-pressured situations. Violence and aggression towards ED staff has increased in recent years. Nurses therefore need to be adept at conflict resolution and proficient at communicating with all members of the public. Knowledge of legal and professional issues relating to consent, mental capacity, restraint, information sharing, forensics and end of life care is key to delivering safe and competent care. A number of core and advanced ED nursing roles exist in the UK (Figure 1.1) to ensure that care is delivered safely, efficiently and effectively.

Patients present to the ED day and night, every day of the year. They arrive at the ED in a number of ways (Chapter 2). Current health policy organises services to redirect people away from the ED whenever possible. In the UK, public education encourages individuals to choose the right option to meet their needs. The campaign advises people to access services beyond the ED such as a Pharmacist, a General Practitioner (GP) or a Walk in Centre (WIC) for non-emergency conditions. The majority of patients self-refer to the ED, however others may be referred by a telemedicine service (e.g. NHS 111), a GP, pharmacist or community nurse.

ED team

ED care is delivered by an inter-professional team of nurses, doctors and healthcare assistants. Current redesign of UK emergency and urgent care services has seen an increase in paramedics and physician associates working in EDs. Allied health professionals, such as speech and language therapists, physiotherapists, occupational therapists and dieticians, also work alongside ED nurses to address patients' physical and social needs as required.

4-hour target

A drive to reduce waiting times and expedite care saw the introduction of the 4-hour target in the UK. That is, most patients are to be seen, treated and discharged within 4 hours of arrival. Approximately 25% of patients in the UK are admitted to hospital from the ED, with the remainder discharged to their usual place of residence. To support the delivery of care within 4 hours, medical and (in some places) surgical units have been established across the UK. These are separate to EDs and have developed as specialties in their own right.

Areas within the ED

EDs vary in size but all are structured to accommodate a variety of urgent and emergency presentations (Figure 1.2).

Triage

Triage is a nurse-led area and usually the first point of contact for patients. It is also known as the 'front door' of the hospital. Triage nurses determine the severity of the illness or injury and

allocate priority accordingly. Triage is covered in more detail in Chapter 3.

Resuscitation area

The resuscitation area, or 'resus', is designed for critically ill and injured patients with high acuity on a triage scale. Examples include trauma, cardiac arrest, stroke, respiratory distress, sepsis and altered conscious levels. This area should be staffed by experienced, specially trained ED nurses with appropriate knowledge, skills and competence.

Majors

'Majors' tends to be the core of the ED and is usually the largest part of the department. It accommodates acutely unwell patients with a wide variety of conditions or complaints. Examples include surgical (appendicitis, bowel obstruction, pancreatitis), gynaecological and obstetric (ectopic pregnancy, miscarriage, per vaginal [PV] bleed), oncology (neutropenic sepsis, generally unwell), medical (pneumonia, headache), urology (urinary retention) and mental health presentations. It is usually staffed by core ED nurses. In some departments, emergency advanced nurse practitioners see, treat and discharge patients from majors.

Minors/Urgent care centre (UCC)

'Minors' is a term that has been traditionally used to describe patients with lower acuity who are seen in the ED. Recent restructuring of emergency care led to the development of UCCs, some of which are attached to an ED. Regardless of the term used, patients seen in this area of an ED are lower acuity with minor injuries or minor health problems. Examples include limb injuries, epistaxis, cellulitis, eye conditions, back pain, ear, nose and throat conditions, and simple wounds. Minors is usually staffed by core ED nurses, emergency nurse practitioners and doctors.

Children

Children account for approximately 25% of emergency attendances. They and their families should have audio-visual separation from adult patients. This usually includes a separate triage area, waiting room and treatment area. Attention should also be paid to security and child-friendly facilities such as toilets, toys, and food and drink areas. A play specialist is recommended in departments that see more than 16,000 children a year. Registered children's nurses should be available to care for unwell or injured children. Registered adult nurses will also come into contact with children and their families in areas such as triage, resus and, occasionally, urgent care.

Observation area/Clinical decision unit (CDU)

The introduction of the 4-hour target led to the establishment of areas within EDs aimed at providing holistic care beyond 4 hours. These areas usually consist of hospital beds with single-sex amenities, food and drink facilities, and dedicated treatment areas. Patients who require allied health assessment or social care input benefit from these areas. Care is often pathway led and may also include patients with low-risk conditions who are waiting for serial blood tests or other investigations.

2

Pre-hospital care

Figure 2.1 Methods of pre-hospital transport



Figure 2.2 Pre-hospital environment: Scene assessment

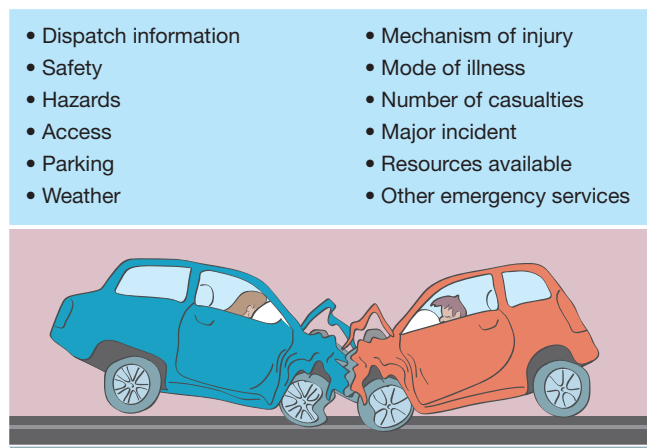
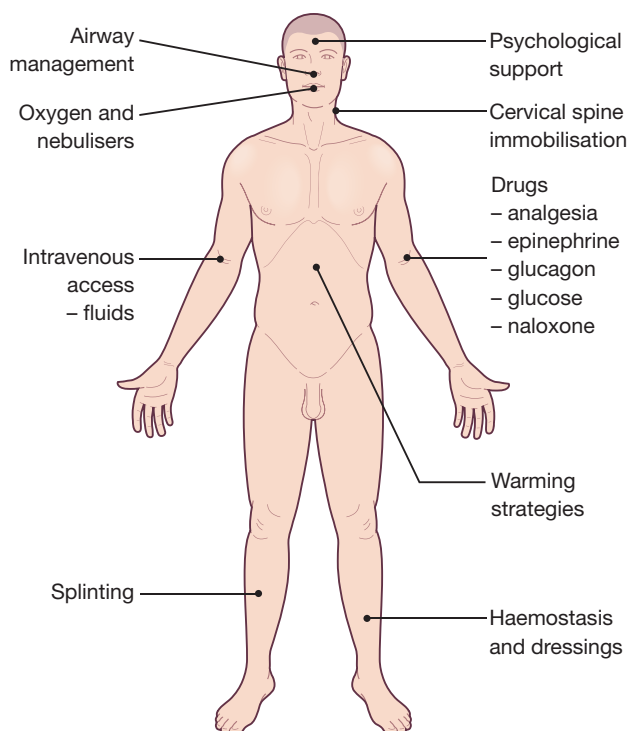


Figure 2.4 CASMEET

- **C**all sign
- **A**ge of patient
- **S**ex of patient
- **M**echanism of injury or mode of illness
- **E**xamination carried out
- **E**stimated time of arrival
- **T**reatment given

Figure 2.3 Care provision



Depending on the local services provided, pre-hospital care is delivered by a range of individuals using a variety of vehicles (Figure 2.1). Overall, about 25% of patients attend an emergency department (ED) via ambulance. Emergency ambulances are usually staffed by two qualified paramedics who can provide a range of advanced life support treatments. However, one or more crew members may be a technician with a more limited skill set. Support or transport crews may have skills limited to just basic life support. Some ambulances use volunteer personnel who have widely differing skills.

Many ambulance services have single responders using cars, motorcycles or bicycles. These are usually paramedics, although nurses and doctors may also be employed. They are able to attend quickly, start emergency treatment and decide whether an ambulance or transfer to hospital is required.

Finally, helicopter emergency medical services provide rapid critical care to carefully selected patients in large urban or rural areas. These are staffed by highly trained medics and paramedics, and often respond to major trauma and critical illness. These teams may also use fast-response cars.

Pre-hospital environment

All patients attending the ED have come from one of a variety of pre-hospital environments. This may be their home, work, school, residential care facility or public place. The environment will dictate the approach required by pre-hospital personnel. Whatever the environment an assessment of the scene takes place first (Figure 2.2). Scene assessment begins after the dispatch operator has provided information that will indicate whether the problem is an injury or illness, for example.

On arrival, pre-hospital personnel need to determine the safety of the scene, any hazards or risks, access, number of casualties, nature of the illness, mechanism of injury and the need for extra help. They will need to rapidly assess for and declare a major incident if appropriate. They frequently work alongside other emergency service personnel (e.g. police, firefighters). ED staff should remember that working in the pre-hospital environment is very different from working within the comfort, safety and support of an ED.

Patient assessment

As with patient assessment in an ED, pre-hospital patient assessment is a dynamic process. Using a structured approach, pre-hospital personnel need to quickly distinguish critical (or time-critical) illness or injury from less urgent problems.

History

Accurate history taking is an essential part of patient assessment (Chapter 3). A patient may be alone or accompanied by friends, relatives, bystanders, colleagues, carers or healthcare professionals. There may be varying levels of background information available. The quality of this information will ultimately have an impact on the quality of the handover between pre-hospital and ED staff.

Physical assessment

Pre-hospital personnel use an 'ABCDE' approach to patient assessment (Chapter 4). Paramedics have advanced physical assessment skills similar to those of a doctor or nurse practitioner. They also have a range of skills and equipment (e.g. electrocardiogram) for measuring vital signs, blood sugar level, etc.

Psychological assessment

A significant minority of individuals requiring pre-hospital care do so because of mental health problems. Pre-hospital personnel need to determine the risk of the individual to themselves or others, and the severity of the current crisis (Chapters 39–41).

Care provision

Because pre-hospital personnel need to make autonomous decisions regarding care provision, they formulate a working diagnosis based on their assessment. They use this to inform a plan of action, which may include:

- Further assessment
- Interventions
- Calling for further or more advanced help
- Following a care pathway
- Transfer to an ED or other service.

Interventions

Depending on the scope of the practitioner, available resources and local protocols, a range of emergency interventions are provided using an ABCDE approach (Figure 2.3). Specific examples include the provision of cardiopulmonary resuscitation (CPR) during cardiac arrest and the management of emergency childbirth.

Transfer to ED

Conveyance of a patient to an ED or other service is guided by protocols and care pathways, for example:

- Acute coronary syndrome (ACS)
- Acute stroke
- Major trauma.

Pre-hospital personnel triage the patient and determine whether a 'pre-alert call' is required to allow the ED to prepare for their arrival. The 'CASMEET' mnemonic is used to structure a pre-alert call (Figure 2.4). Blue-light transfer is used to minimise transfer time and patients are usually admitted directly to the resuscitation area. Most patients are not transferred to an ED by blue light.

Handover

Handover is a crucial point in the patient journey and requires good communication and documentation skills on the part of both groups of staff. Each ED has its own approach to receiving ambulances, but it should be carried out in a thorough and efficient manner. It should also be patient centred and protect patient dignity and privacy as far as possible. It is essential that all the relevant information is correctly received and recorded to ensure continuity and safety, and to maximise patient outcomes.

3

Triage

Figure 3.1 MTS general discriminator flow chart

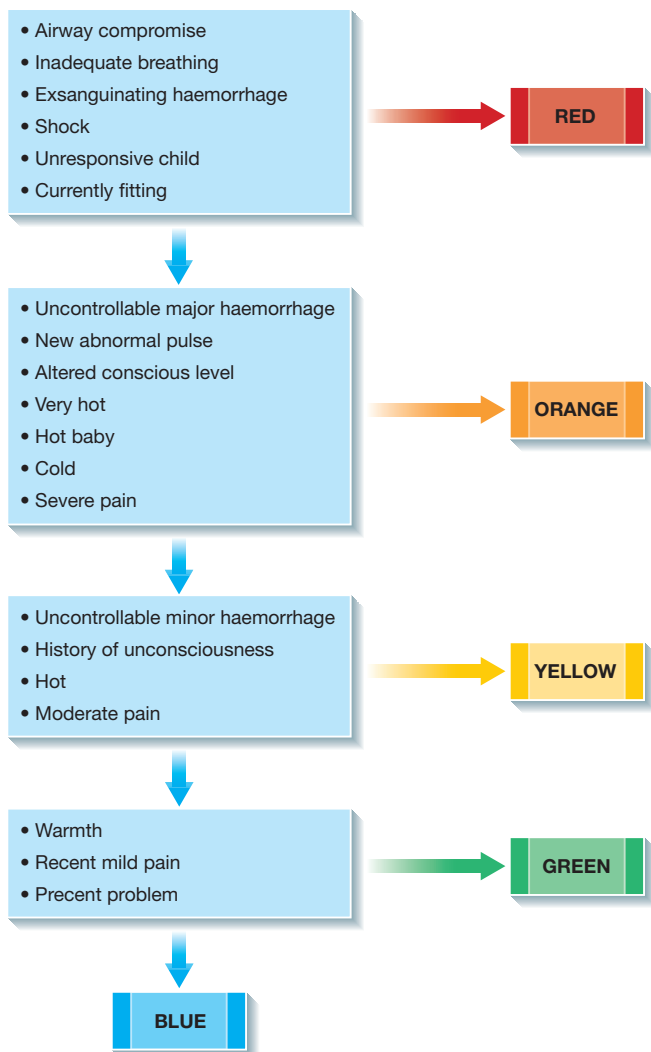


Figure 3.2 MTS triage categories

Number	Name	Colour	Target time
1	Immediate	Red	0
2	Very urgent	Orange	10
3	Urgent	Yellow	60
4	Standard	Green	120
5	Non-urgent	Blue	240

Figure 3.3 MTS stages of triage

- Problem identification
- Gathering and analysing
- Evaluating and selecting
- Implementing
- Monitoring

Source for Figures 3.1 and 3.2: Manchester Triage Group. *Emergency Triage*, 3rd edn. (2013). Reproduced with permission of John Wiley & Sons, Ltd

Triage is a system used to sort patients into categories based on priority. Priority is determined by a focused initial assessment that identifies specific criteria. The priority category indicates the time the patient is deemed safe to wait before being seen by an appropriate decision maker, usually an emergency department (ED) doctor or nurse practitioner.

Triage originates from the development of battlefield medicine during the Napoleonic war. The word 'triage' comes from the French verb 'trier', which means 'to sort'. It was introduced into

EDs in the 1980s, replacing what was essentially a 'first come, first served' system with ad hoc prioritisation.

Triage is the job of experienced, specially trained ED nurses. It is a high-risk activity and must be undertaken by those with the appropriate level of knowledge, skills and competence. Overestimating the severity of an illness or injury is less dangerous for patient care, but will have an impact on the smooth running of the ED. Underestimating the severity of illness or injury, and therefore creating a protracted waiting time, can have a significant impact on patient outcomes.