

# Pharmacology case studies

for nurse prescribers



Edited by  
Donna Scholefield,  
Alan Sebti and  
Alison Harris

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# Introduction

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An understanding of pharmacological principles is essential for all healthcare professionals involved in administration, patient education and the prescribing aspects of medicine management. This knowledge has become increasingly important with the extension of nurses' prescribing responsibilities in recent years (DH 2004).

Despite the need for a sound knowledge of pharmacological principles, research has shown that nurses sometimes lack in-depth knowledge, particularly in physiology and pharmacology. Indeed studies have shown that nurses themselves are aware of their limited knowledge in these areas (King 2004).

Nevertheless, nurses have continued to develop their competencies and advance their level of practice as non-medical prescribers. Nurse prescribers are now practising within every discipline of nursing and midwifery, both in the community and hospital setting. The Nursing and Midwifery Council (NMC) has set out the standards of education and practice expected of nurse and midwife prescribers (NMC 2006). These standards should be read in conjunction with this text to support professional, ethical and accountable prescribing practice.

The main aim of this book is to provide nurses undertaking the non-medical prescribing (NMP) programme with a basic introduction to pharmacological concepts, embedded in specific conditions, through case studies and self-assessment questions. By utilising a case study approach, we aim to help readers link pharmacological concepts with clinical practice.

Nurses who undertake the NMP programme come from a variety of clinical backgrounds but many of the conditions presented here will be commonly seen across all healthcare settings. The text will thus be a helpful resource for all nursing students, for registered nurses who administer medicines and particularly for those students undertaking the NMP programme, who may be unfamiliar with the basic concepts of pharmacology. In addition, the book will help students to understand some of the more technical pharmacology terms used in the British National Formulary (BNF) and may also provide a useful teaching resource for lecturers teaching the non-medical prescribing programme.

However, we would also like to take this opportunity to remind the reader that (in line with the NMC standards and competencies) potential prescribers should only prescribe within their own sphere or specialist area of practice and competence.

## Objectives

### The authors' objectives are to:

- Provide an overview of common conditions and their pharmacological management
- Demonstrate how to use the British National Formulary effectively
- Utilise a case study approach so that practitioners can apply pharmacological principles to real-life events
- Use self-assessment exercises to further challenge and engage the reader
- Give nurses an understanding of the fundamental pharmacological and physiological principles required for practical prescribing
- Support nurses in the pharmacological component of the non-medical prescribing programme.

## How to use the text

It is not the authors' intention that this book should be used as a stand-alone text. Rather, it should be read in combination with other pharmacological and pathophysiological texts so that the questions may be fully addressed. A list of 'References and further reading', including key texts, national guidelines and frameworks, is provided for each chapter.

There are also sample answers, which can be developed further, for the activities found at the end of each section. Readers will gain greater knowledge and understanding of pharmacology if they consider the questions and then carry out some independent study (using the information in the 'References and further reading' list) before viewing the answers. The case studies presented focus on the practical realities of applied pharmacological concepts. NB the names used in the case studies do not refer to real individuals. A glossary and a list of abbreviations are also provided.

It is hoped that this book will give the reader an appreciation of the value of having a sound pharmacological knowledge base in order to deliver safe practice, effective prescribing and ultimately improved patient care.

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