

Safe and Effective: The Eight Essential Elements of an Optimal Medication-Use System

MacKinnon NJ, editor. Canadian Pharmacists Association, Ottawa (ON), 2007. Softcover, 498 pages. ISBN 1-894402-31-6. \$72.00 for CPhA members, \$85.50 for CSHP members, \$90.00 for nonmembers.

Neil MacKinnon's latest publication, *Safe and Effective: The Eight Essential Elements of an Optimal Medication-Use System*, is not just another medication safety textbook. Rather, it is a well-organized view of medication safety obtained with a wide-angle lens. This broad perspective distinguishes the book from other medication safety references: MacKinnon has taken a foundational view of medication safety by identifying 8 essential elements required to ensure that the system supports safe and effective care. He then uses a zoom lens to focus on each element, identifying distinct, actionable opportunities for all health care professionals.

Initially, the scope of the high-level elements appears daunting and even intimidating; however, MacKinnon and his 48 authors from across North America and the United Kingdom break the concepts down into manageable components. This is accomplished by a combination of several specific features:

- an introductory commentary for each element, written by MacKinnon himself, linking the component chapters to medication safety
- learning objectives for each chapter, which help to ensure that the reader takes away the key messages
- case examples, which anchor the concepts by providing evidence of their application in Canada (for example, the Dalhousie Academic Detailing Service is featured as an example for the element "Appropriate Prescribing")

This format takes an overwhelming concept and reduces it to 18 comprehensible, manageable and, most importantly, achievable activities.

Although this format was extremely beneficial, I did have some suggestions that might improve the relevance of this text for practitioners. First, it would have been more relevant to have Canadian authors write the chapters on performance measurement; the choice of US and UK authors for these chapters may not have been the most appropriate because of differences in health care systems. Second, although the foundation of medication safety is relatively timeless, the principles to be followed are so dynamic that the information presented in this textbook may rapidly become outdated.

Overall, though, *Safe and Effective* represents a detailed, intense dissection of medication safety. MacKinnon has turned

a zoom lens on the medication-use system and has challenged practitioners to apply this lens to their own systems to protect the patients in their care.

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Introduction to Renal Therapeutics

Ashley C, Morlidge C, editors. Pharmaceutical Press, London (UK), 2008. 300 pages. ISBN 978-0-85369-688-9.

Introduction to Renal Therapeutics is written by members of the UK Renal Pharmacy Group and edited by 2 UK pharmacists with extensive experience in the field of nephrology. The book is designed for anyone new to renal pharmacy, as well as for students and for nonspecialists who care for patients with renal disease. The book is comprehensive in its attempt to cover all areas relevant to the care of these patients. There are 20 chapters, starting with general chapters on kidney function, interpretation of laboratory tests, acute and chronic renal failure, drug-induced kidney disease, complications of kidney disease, and drug dosing in renal failure, all of which are highly relevant to pharmacists. Additional chapters of particular interest cover other causes of kidney disease (e.g., autoimmune conditions, myeloma), management of kidney disease in pediatrics, management of various concomitant conditions in patients with kidney disease (e.g., pain control, diabetes), dietary considerations, and vaccination.

Each chapter has a general overview of the pathophysiology of the condition under discussion and the basic pharmacology of drugs commonly used for that condition. Case studies are included at the end of each chapter to enhance readers' understanding. The cases and questions are a good representation of the scenarios typically encountered in daily practice, and answers are provided at the end of the book. Because the book is written by UK pharmacists, some of the units are different from those commonly used in Canada (e.g., hemoglobin as grams per decilitre [g/dL] rather than grams per litre [g/L]). As well, some drugs, doses, dosage forms, and brand names are different from those of Canadian products (e.g., epoetin beta is not available in Canada, whereas sodium ferric gluconate is not mentioned and does not appear to be available in the United Kingdom). The

guidelines most commonly referenced are the European Best Practice Guidelines (<http://www.ndt-educational.org/guidelines.asp>) and those of the National Institute for Health and Clinical Excellence (<http://www.nice.org.uk/guidance/index.jsp>), although in some cases, the authors refer to the National Kidney Foundation Kidney Disease Outcomes Quality Initiative guidelines (<http://www.kidney.org/professionals/kdoqi/guidelines/>), which have been widely adopted in Canadian practice. Some target ranges appear to be different between these guidelines (e.g., those for phosphorus and intact parathyroid hormone). The target for glycosylated hemoglobin (HbA_{1c}) in the management of diabetes mellitus also appears to be different from that of the 2003 Canadian Diabetes Guidelines (<http://www.diabetes.ca/cpg2003/>).

The text offers a good overview of the issues pertinent to chronic kidney disease; however, this reviewer found that some of the recommendations for pharmacotherapeutic management are vague (e.g., targets, initial dosing, and monitoring parameters for drug therapy). The chapter on renal drug dosing provides general information on the handling of drugs for patients with renal impairment, as well as the basic principles behind and factors affecting drug removal in renal replacement therapy. However, given that the intended audience is pharmacists or pharmacy students new to nephrology, more specific recommendations would have been

valuable. The reader is often referred to the “summaries of product characteristics” (see, for example, <http://www.medicines.org.uk/>) for dosing information about particular drugs, but these documents are not commonly used in Canada. Interestingly, some controversial topics are not discussed (e.g., the reliability of the parathyroid hormone assay). In addition, certain controversial topics that were highly publicized in 2007 did not make it into this text (e.g., cardiovascular risk with thiazolidinediones and hemoglobin targets in anemia of chronic kidney disease).

In summary, *Introduction to Renal Therapeutics* provides a broad overview of the diseases and complications commonly associated with chronic kidney disease and will be of interest to pharmacists and pharmacy students not familiar with nephrology. However, the differences in practice and available pharmaceutical products between Canada and the United Kingdom will be confusing for Canadian practitioners new to this area.

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