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BOOK REVIEW

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'Pharmacology for the prehospital professional'

Jeffrey Guy.

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Paramedics are increasingly dealing with complex health needs in the communities they serve. These needs are linked to an aging population where health emergencies occurring in the community may be associated with significant comorbidity. Patients may be taking medications – both prescription and “over the counter” – that are known to cause serious adverse effects and have the potential to interact with other drugs, including those administered by paramedics. In order to provide appropriate care for patients paramedics require a broad foundation of knowledge of pharmacotherapeutics that extends beyond the drugs that they are authorised to administer in their practice setting. Development of this requisite knowledge should be a major aim of education programs that prepare paramedics for practice, and this education will depend on suitable learning resources that clearly describe principles of pharmacokinetics and pharmacodynamics.

“Pharmacology for the prehospital professional” is a US text that claims to use a problem-solving approach to drug administration using clinical scenarios. The book begins with a brief summary of pharmacokinetic and pharmacodynamic principles, discusses legal aspects of drug administration, and describes drug administration procedures and patient safety issues. Following chapters then describe management of clinical problems under specific clinical syndromes such as anaphylaxis and congestive heart failure. Each chapter presents a brief clinical vignette before outlining the pathophysiology of the case. Management of the case follows, and this includes discussion of drugs commonly used to manage the condition.

As expected, drug nomenclature is based on US conventions and some drugs may be unfamiliar to paramedics working outside the US. However, this is a minor limitation. Although this text provides a summary of the actions of the classes of drugs used to treat the conditions that form the basis of each chapter, some readers may find that the brevity of the discussion will require the use of supplemental reading to develop a more extensive understanding of drug action. For example, the chapter on seizures makes only a brief mention of that action of benzodiazepines on gamma-aminobutyric acid (GABA) receptors. As the action of other drugs mentioned by this book such as valproic acid, propofol and flumazenil also target these receptors, some extended discussion may have provided scope for

contrasting the action of these drugs as well as other GABAergic agents such as gamma-hydroxybutyric acid, a recreational drug of abuse that may be encountered in some paramedic practice settings. Readers may also note some management recommendations that have little empirical support. One such example relates a recommendation to administer a “coma cocktail” of thiamine, dextrose and naloxone in cases of suspected opioid overdose, a practice that is uncommon in Australia and one that has been criticised as indiscriminate polypharmacy.¹

Each chapter concludes with a set of review questions, with recommended answers provided in the appendix. An accompanying DVD provides an extensive range of animations and video of procedures that include intraosseous drug administration, intramuscular injection techniques, and oxygen administration. For readers wanting a brief summary of drugs commonly used to treat medical emergencies in the prehospital setting this book may be a useful addition to an individual’s library.

Reference:

1. Bledsoe BE. No more coma cocktails. Using science to dispel myths & improve patient care. *J Emerg Med Serv JEMS* 2002 27:11 (54-60)

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