Basic Pharmacokinetics and Pharmacodynamics: An Integrated Textbook and Computer Simulations
By Sara E. Rosenbaum, Ph.D.

Description: This is primarily an introductory book on kinetics and actions of drugs for pharmacy and medical students. It also may serve as a refresher and self-study guide for other basic science and clinical practitioners needing an appreciation of these topics.

Purpose: The author’s goal is to provide a conceptual and mathematical framework for understanding pharmacokinetics and pharmacodynamics. She makes the case that this can only be accomplished by “understanding, not memorizing” the material. This is indeed the case, and the presentation and development of concepts in this book should enable students to develop that understanding of these fundamental concepts and their applications.

Audience: This should be a very successful book for pharmacy and medical students beginning their study of pharmacokinetics and pharmacodynamics. I would expand that audience to include graduate and postdoctoral students in basic biomedical sciences. It also can be used as a reasonable study guide for occasional practitioners in need of a self-directed refresher.

Features: Concepts are initially introduced in quite simplified terms and then developed through the addition of relevant features. Where appropriate, this development includes quantitative mathematical treatments and graphical representations. The inclusion of math and graphical presentations supports the development of understanding, as opposed to mere memorization. It is notable that the mathematical derivations and developments are truly step by step—unlike some treatments of this type that combine multiple steps in the transition from one equation to another, greatly complicating the process for novices. This same, thorough approach is used to work through examples in the book. The tables and figures effectively support the text. Most chapters also include a number of sample problems to allow readers to apply the principles. The book includes access to online computer simulations to illustrate many of these points. There are several appendixes, including one presenting a review of exponents and logarithms and another a review of rate equations. Although I would like to say these topics are prerequisites with which students should already be familiar, this is not the case. Including these resources will be very helpful to many students. I have but two criticisms. Occasionally, the presentation of topics is oversimplified—case in point would be the figure and discussion for oral absorption, which include hepatic clearance from metabolism but not from biliary secretion of parent drug. Also, the computer simulations do not add much beyond what is quite clearly presented in the text.

Assessment: In short, this is a thorough and well-designed presentation and development of key concepts in phar-
macokinetics and pharmacodynamics. It is a very useful textbook, and one that I would be comfortable using in both medical and graduate teaching.

Rating: ★★★

Reviewed by Gregory Reed, Ph.D., University of Kansas Medical Center

Cultural Competency for Health Administration and Public Health
By Patti R. Rose, M.P.H., Ed.D.
Published by Jones & Bartlett Learning, 5 Wall Street, Burlington, MA 01803, 2011. 173 p. Price $62.95 (soft cover).

Description: This book sends the message to health administrators and agencies that cultural considerations should be woven into the fabric of their endeavors.

Purpose: The author attempts to raise expectations for health administrators, especially those in public health, to assess and address cultural competence in their organizations. This is a daunting and worthy endeavor, but this book and most others of its kind seem to minimize the determinants of cultural bias and barriers to effectiveness. The book does succeed in providing suggestions, exercises, and resources for assessing the maturity of an organization in terms of cultural competence.

Audience: It appears that the book is written for a broad audience of existing and aspiring health professionals, while specifically targeting health service administrators. Indicated by her commitment to exploring cultural diversity and public health, the author offers credible and interesting perspectives.

Features: Health administrators who read this book will certainly get the message that both the culture of recipients of care and institutional culture are critical to success of the enterprise. The book includes some important advice, such as selecting a CEO and a board of directors who embody the cultural values and further the mission of a given program. It also includes methods, suggestions, and resources for assessing cultural competence. In this age of community participatory engagement, there may be more dramatic ways to illustrate the impact of cultural competency/incompetency in health organizations.

Assessment: This book may serve best as a prelude to more in-depth discussion and case study analysis of cultural competence/incompetence at the organization level.

Rating: ★★★

Reviewed by Karin Opacich, B.S.O.T., M.H.P.E., Ph.D., University of Illinois at Chicago School of Public Health

Essential Evidence-Based Medicine, 2nd Edition
Edited by Dan Mayer, M.D.
Published by Cambridge University Press, 100 Brook Hill Drive, West Nyack, NY 10994-2133, 2010. 442 p. Price $57.99 (soft cover).

Description: This book on evidence-based medicine was developed in association with a course at the Albany Medical College for their longitudinal Comprehensive Care Case Study. The first edition was published in 2004.

Purpose: The mission of the Albany Medical College was to teach students how to become lifelong learners, and the

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goal of this book is to equip physicians to become critical consumers of medical literature. This is a most noble goal considering the fast pace of change in medicine.

Audience: This is a book that every clinician can use in this era of the proliferation of the phrase "evidence-based." It explains it and puts it in perspective.

Features: The acquisition of this skill must begin as medical students, honed through the residency years to become a habit by the time they become attending physicians. While there are some statistics in the book, these are presented extremely well so that they are not an impediment to success. The chapters are divided according to basic concepts—definitions of evidence-based medicine, study design, measurements, the concept of bias, and types of errors and scientific integrity. The book then moves into the use of diagnostic tests, practice guidelines, and meta-analysis. Topics are covered well, and compared to most statistics books, this one is a very easy read. An accompanying CD-ROM has exercises to reinforce what readers find in the book. It is well done, particularly with the calculators readily available for users.

Assessment: This is the best book on evidence-based medicine and the foundations for the evidence that I have ever come across. It is very easy to read, and each chapter can be read as a standalone explanation of a particular concept. I highly recommend this for the personal libraries of students, residents, and attending physicians.

Rating: ★★★★★

Reviewed by Vincent Carr, D.O., M.S.A., FACC, FACP, Uniformed Services University of the Health Sciences

Herbal Supplements: Efficacy, Toxicity, Interactions with Western Drugs, and Effects on Clinical Laboratory Tests

Edited by Amitava Dasgupta, Ph.D., and Catherine A. Hammett-Stabler, Ph.D.


Description: This book is exactly as advertised—a comprehensive treatise on herbal supplements and their efficacy, interactions with Western drugs, and effects on clinical laboratory tests.

Purpose: It is intended as a comprehensive resource on herbal supplements, known toxicities, and impact on clinical laboratory tests. The latter is a rather unique area not addressed well by current resources.

Audience: The book is dedicated to healthcare workers, who presumably are the primary audience. It would be useful to anyone interested in complementary and alternative medicine—healthcare professionals (MDs, nurses, medical laboratory scientists, clinical toxicologists, clinical chemists, and other allied healthcare professionals) as well as the lay public. The editors and authors are well-respected authorities in their fields of expertise.

Features: This is a really helpful book. It is divided into five sections. The first is an introduction and overview; the second covers effects of herbal remedies on specific organ systems; the third, drug interactions; the fourth, contamination of herbal remedies with toxic chemicals; and the fifth, analytical issues (interferences with therapeutic drug testing, laboratory detection of plant poisoning). The writing is concise and clear. The similarly formatted chapters give the book a unified style. Despite delving into thorough and detailed literature reviews, the writing is very accessible and (yes) riveting. I very much enjoyed learning lots of new material, such as the untoward effects of common seasonings (e.g., garlic, ginger, fruit juices) on drug levels and metabolism, the relatively unrecognized excess iodine consumption related to kelp ingestion, etc. This truly is a fascinating book.

Assessment: This is a wonderful addition to the field of laboratory medicine. You need this book if you ever have to answer questions on how herbal supplements affect clinical laboratory tests.

Rating: ★★★★

Reviewed by Valerie Ng, Ph.D., M.D., Alameda County Medical Center/Highland Hospital

Pediatric Informatics: Computer Applications in Child Health

Edited by Christoph U. Lehmann, M.D., FAAP, George R. Kim, M.D., FAAP, and Kevin B. Johnson, M.D., FAAP


Description: Part of the Health Informatics series begun in 1998, this is the first book specific to pediatrics. This comprehensive book describes the specific informatics aspects of pediatric medicine, including set up, input data needs, and privacy issues with inpatient and outpatient pediatric patients. It also includes many web resources for more information.

Purpose: The purpose is to outline the scope of the evolving field of pediatric informatics and provide a resource for those developing technology to help children’s healthcare providers do their job more efficiently.

Audience: The book is geared mainly for healthcare IT developers working with pediatric providers to set up and understand the needs of pediatric patients. For pediatricians, it is an introduction to the current topics in healthcare IT. This is a good starting point for both groups.

Features: It covers the medical, economic, technical, and organizational perspectives of IT in child health. It is well organized and comprehensive, including subspecialty-specific IT information, case presentations, and brief summaries at the end of each chapter. Topics such as privacy, emails, order entry, online evidence-based medicine tools, and telemedicine are covered.

Assessment: This is a good first attempt geared for healthcare IT professionals who are trying to meet and understand the specific needs of those who provide care to pediatric and neonatal patients.

Rating: ★★★

Reviewed by Matthew Cortez, M.D., Ochsner Clinic Foundation