BOOK REVIEWS


Reviewed by: Joanne G. Kowiatek, MPM
UPMC Presbyterian

The concept of this book is taken from the feature called, “Ask the Joint Commission,” in the journal, Hospital Pharmacy, written by Darryl Rich, a pharmacist from the Joint Commission on Accreditation of Healthcare Organizations, who is an expert on this topic. The same question and answer format is used in Ask the Joint Commission: Understanding JCAHO Requirements for Hospital Pharmacies, which includes reviewed and updated questions and answers to reflect the Joint Commission’s interpretation of these issues from 1993 to September 2002. The questions and answers are grouped by subject area: “General Accreditation,” which provides a general overview of the accreditation process, “Storage and Security, Prescribing and Ordering, Pharmacist Review of Orders, Preparation and Dispensing, Automated Dispensing Devices,” “Labeling,” “Expiration Dating,” “Sample Medications,” “Patient Education,” “Clinical Pharmacy Service/Care Plans,” “Adverse Reactions and Adverse Drug Events,” “DUE/MUE,” “Performance Improvement,” “Human Resources Management,” “Patient Rights,” “Provision of Alternate-Site Pharmacy Services,” and “Miscellaneous.” The book also includes an appendix with contact information for state boards of pharmacy and other important organizations and agencies.

Ask the Joint Commission: Understanding JCAHO Requirements for Hospital Pharmacies is well organized. When it is necessary to inquire about a specific topic, it was easy to find the question and answer relating to that topic by using the index. A great deal of information was provided using the question and answer format. The questions included are ones most commonly asked in the hospital when reviewing policies and procedures to ensure compliance. The responses provide sufficient detail to answer the questions posed. Often the same question was asked several times in different ways, so there was some repetition of questions and answers within the same subject heading and under other related subject headings in the book. Repetition of questions and answers was often helpful to truly clarify a complex question, though at times it was necessary to reread the same questions and answers to clarify what the author was actually saying. Some of the answers were lengthy and had the potential to be confusing.

In conclusion, I found Ask the Joint Commission: Understanding JCAHO Requirements for Hospital Pharmacies to be a very helpful and comprehensive reference for a hospital pharmacist preparing for a JCAHO survey and to help answer questions that often arise to determine compliance to JCAHO standards. This reference also would be useful for physicians, nurses, pharmacy students, hospital administrators, and others preparing for a JCAHO survey or wanting to gain a better understanding of the interpretation of the medication use standards and compliance. An additional benefit in using this reference is that its focus is on medication-use safety and the prevention of medication errors. I would recommend using this reference over others in publication that are not directly related to the JCAHO, since the author is directly responsible for surveyor management and development at the JCAHO.

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According to the editors, this is a resource text for students and new participants in the field of radiopharmaceuticals and for postdoctoral fellows and research scientists in drug companies that wish to use radiopharmaceuticals and positron emission tomography (PET) to evaluate their compounds. Indeed, the text offers a large number of topic areas that provide a wealth of information on the chemistry of radionuclides, strategies for the synthesis of radiolabeled compounds and basic mechanistic information important to the targeting of radiolabeled molecules to a specific site. Early chapters are devoted to the production of radionuclides. Radionuclide characteristics, production reactions, targetry, and radioisotope separation techniques are in common to these chapters. Subsequent chapters are devoted to radionuclides of importance such as N-13, O-15, C-11, F-18, and Tc-99m, as well as several others. Topics presented include radiolabeled probes to monitor gene therapy, mechanism of target specific uptake using examples of muscarinic receptor-binding radiotracers, radiolabeled antibodies for tumor imaging and therapy, dynamic neurotransmitter interactions measured with PET, and the chemistry of copper radionuclides and radiopharmaceutical products. The text covers a wide variety of topics of relevance to research and applications in imaging. Considerable emphasis in the text is placed on the synthesis and utilization of radiotracers for PET imaging.

Topics are addressed by outstanding scientists in a particular area of radiochemistry. Each chapter provides broad coverage of the area and extensive referencing. Authors present a large number of compounds with generalized statements about synthesis and other aspects of relevance. The reader is directed to references for details including extensive reviews of the topic area for the chapter. Although the text is primarily focused upon chemistry and synthesis, certain chapters provide considerable information relevant to clinical nuclear medicine. Examples are two chapters on tumor imaging, radiopharmaceuticals for studying the heart and a chapter on the chemistry of gallium and indium radiopharmaceuticals. Important practical clinical aspects are noted throughout most chapters in the text, but to a lesser degree.

The title of the text is somewhat misleading as the word radiopharmaceutical indicates a product approved for human use. The text provides information on a tremendous number of radiolabeled compounds. While these compounds are not radiopharmaceuticals by definition, the chemistry and synthesis information could be of importance to a scientist conducting research in an area described within the text. The book is valuable and should be available to scientists and graduate students in a school of pharmacy. The text is also valuable for scientists interested in the development of radiopharmaceuticals or applying radiotracer principles to drug development.

Reviewed by: Christopher L. Cook
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Many pharmacists desire to implement pharmaceutical care into their practice. The barriers to changing from a product-based business model to a service-based business model have been formidable. An effective marketing strategy is essential to changing the perspectives of consumers and third party payers and to promoting the abilities of the pharmacist practitioner. *Marketing for Pharmacists* provides a practical and easy to understand guide for practicing pharmacists who are looking to understand the fundamentals of marketing and how to implement a marketing strategy into their practice.

This text uses pertinent examples relevant to current pharmacy practice to illustrate the principles of marketing. The author consistently and effectively integrates marketing concepts with practical aspects of pharmacy management. The book also provides practitioners with clear links between abstract and intangible business concepts and everyday practice.

The text of *Marketing for Pharmacists* is divided into six sections containing a total of 13 chapters. The first half of the book is focused on the assessment of the market and its players. The first section covers the foundations of marketing and introduces the reader to how marketing is used within pharmacy and why it is an area that must be addressed for a pharmacy practitioner to successfully promote his product. The fundamental concepts of marketing are covered in the second chapter giving an essential overview of marketing basics. The second section examines how a pharmacist can market his/her services and how to manage and design these services. The third section then looks at consumer behavior and the evaluation of consumer satisfaction.

The second half of the text moves into how to address and effectively plan to communicate with your target patient population. The fourth section examines planning marketing strategy and introduces the reader to several ways to market pharmaceutical products and services. The fifth section looks into how to break the population into market segments and promote specifically to a defined population. The last section of the text is authored by Norman Carroll and addresses pricing and distribution of pharmacy products and services.

The presentation of the material within each section and chapter is sufficient to cover the primary theoretical ideas; however, this text should not be considered an exhaustive review for any of the marketing concepts. *Marketing for Pharmacists* does address the salient theoretical foundations for each of the core subjects presented. The text does not dwell on theory, but directs the reader instead toward a hands-on application of each concept, presenting explanations in practical terms. References are provided at the end of each chapter for those desiring to investigate certain topics more fully. This book is recommended for any practicing pharmacist who desires to develop marketing activities and integrate pharmaceutical care into their practice. This book should be required reading for pharmacy management courses and practicing pharmacists.

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RICHARD J. EPSTEIN. Human Molecular Biology: An Introduction to the Molecular Basis of Health and Disease. New York, NY: Cambridge University Press, 2003. xxxi + 623 pp. $150.00 (hardback); $60.00 (paperback).

Reviewed by: Kathleen Boje, PhD
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This text superbly integrates cutting-edge information from molecular genetics, biochemistry, pharmacology, and clinical medicine to provide a framework in which to understand health and disease. The author is a skilled and thoughtful scholar, teacher, and writer, who has a deep appreciation of his readership. The prose offers delightful reading with its intellectually captivating explanations, analogies, and discussions. The book is richly illustrated with colorful figures and photos. Throughout the book are colored, highlighted sections on molecular biology, pharmacology, and clinical medicine that provide background or supplemental information to complement the main themes of the chapter. There are two tables of contents, one that presents the contents in brief (sections and chapters), and the other that presents an extensively detailed outline of each chapter (including headings and subheadings) that allows quick reference. In short, this text is a paragon for all textbooks to emulate.

The textbook is divided into five sections, with each section consisting of five chapters. For reader convenience, a glossary of terms and abbreviations is thoughtfully presented before the first chapter. Each chapter is organized to present the main themes, which are supported by highlighted, supplemental enrichment sections entitled, "Molecular Minireviews", "Pharmacologic Footnotes," and "Clinical Keynotes," which are dispersed appropriately throughout each chapter. There are numerous colored figures, tables and photos that complement the prose. The page layout provides ample writing space for personal annotations. Each chapter closes with a succinct summary, quiz questions, and enrichment reading. The suggested readings in the "Enrichment Reading" section are humorously subdivided into “Bedtime Reading,” “Cheap’n’Cheerful,” and “Library Reference”.

The five sections encompass a continuity of themes, each of which is subdivided into five chapters: “Section I: From Molecular Biology to Human Genetics,” with chapters ranging from biomolecular evolution to protein structure and function; “Section II: From Molecular Genetics to Human Biochemistry,” with chapters covering nutrition and energy, membranes, channels, cell surface receptors, adhesion molecules, and cytoskeletal proteins; “Section III: From Molecular Biochemistry to Human Cell Biology,” with coverage of signal transduction, lipids, cytokines, hormones, growth factors, hematopoiesis, cell cycle, apoptosis, and ageing; “Section IV: From Molecular Cell Biology to Human Physiology,” with chapter content on development, metabolism, blood, immunity, and neurobiology; and “Section V: From Molecular Physiology to Human Molecular Biology,” with chapters focused on genetics, including experimental systems, engineering, cloning, knockouts, transgenics, mapping, testing, and therapy.

This text is written for health care practitioners and could be a keystone or supplemental resource for courses in cell and molecular biology, biochemistry, or pathophysiology. Additionally, the text would be an invaluable reference for courses offering a perspective on the molecular basis and therapy of diseases.

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Reviewed by: Shaun Dillavou
University of Georgia

In short, this book covers all you ever wanted to know about pharmaceutical care but were afraid to ask. Knowlton and Penna have done an exceptional job of collecting and conveying the past, present, and future of a rapidly changing and developing profession.

The book is divided into two parts. Part one (The Context Surrounding Pharmaceutical Care) comprises the majority of the text. The authors begin by taking a brief look at pharmaceutical care from a professional perspective. The history of pharmaceutical care is presented, tracing the events that have evolved the practice from its conception to present day.

The authors discuss many topics surrounding pharmaceutical care ranging from the US healthcare system to the drug use process and methods of error reduction. Each section of part one presents a unique topic, defines it, presents any pertinent background, and finally informs the reader how it is relevant to pharmaceutical care.

Part two presents a discussion of the implementation of pharmaceutical care. The authors examine the scope of pharmaceutical care and how advocates are transforming current practice and expanding the roles of pharmacists in all areas. Included in this section is a list of landmark events that have resulted in the advancement of pharmacy and pharmaceutical care.

Implementation of a service requires steps for marketing and promoting demand for a beneficial service. The authors let us know that pharmaceutical care is no exception, no matter what the practice setting. The concept touches community and ambulatory pharmacies, not just hospitals and long-term care facilities. Pharmaceutical care is heading down a path marked with obstacles, however. Knowlton and Penna inform us that the groundwork has been established. Compensation for pharmaceutical care has so far not taken hold. The authors believe the “who, what, when, and how” of compensation may be determined in the near future though. While I may not share in their optimism, I do share in their excitement for the advancement that we have seen over the past few years.

Several chapters discuss the impact on managed care, the integration of technology, performance-improvement tools (quality assurance, JCAHO), and the ethics of pharmaceutical care. The final chapter examines pharmaceutical care as it has advanced and affected various countries in Europe. Not only is our profession growing here, it also is expanding all over the world.

Does this book belong in your library? Despite where you are in the profession of pharmacy, the answer is “yes.” There is much to be learned for every pharmacist or student of pharmacy in this text. No matter the arena of pharmacy in which you practice or intend to practice, pharmaceutical care will have an impact in it if it has not already. This book is a good place to start to see where pharmaceutical care is going to take you.

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Reviewed by: Marcus Droege, PhD
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As stated on the back cover, this text is intended to be a “how-to guide on implementing and evaluating seamless care programs” including “strategies, practical tools and case examples”. It is on the second objective that the text really delivers. More than 20 individuals with mostly pharmacy backgrounds have authored the 12 chapters, four case studies, and two appendices. In chapter 1, the author provides definitions, background information, and a delineation of seamless care from other models of patient care, ie, pharmaceutical care practice and disease state management. A discussion of drug-related morbidity follows in chapter 2. Beginning in chapter 3, some thoughts on the difficulties in implementing seamless care, including logistics, interpersonal, and interdisciplinary aspects of the patient care process, are offered. This discussion is followed by a presentation of implementation issues from the perspective of several different “players” in health care, administrators, hospital and community pharmacists, and pharmacy managers, as well as nurses in chapters 4-8.

Chapter 9 addresses documentation issues, advanced by an outline of how technology can be used to facilitate data collection in chapter 10. Concerns for patient privacy and confidentiality, discussed in chapter 11, are handled in the context of Canadian law, which limits the chapter’s relevance for US readers. Finally, chapter 12 emphasizes the need for evaluation of seamless care services.

As can be seen from the review of the chapters, this text covers a lot of ground. Inevitably, the interested reader is left with too little information on several occasions, because the text is lacking in-depth discussions that would make it a better resource. For example, Chapter 12 discusses the need to evaluate seamless care programs, methodological aspects in outcomes research, and program evaluation, as well as general considerations regarding research design, all in less than 10 pages.

The presentation of the topic areas regarding the implementation of seamless care services is followed by four case studies addressing medication histories and seamless care experiences in oncology and geriatrics. These case studies are once again situated in the Canadian context, but might nevertheless be relevant for practitioners and faculty in the United States.

Appendices include an abbreviated copy of the proceedings of a seamless care workshop along with a number of promotional materials directed at pharmacy awareness. Although I commend the authors for compiling a practical guide to seamless care, the text fails to deliver a convincing rationale for introducing yet another name for providing evidence-based, quality-assured pharmacy services. Much of what is presented is “old news” and can be found elsewhere in the professional literature. As such, the text will make a useful addition to a personal library for individuals interested in an introductory text on seamless care that offers numerous real-world examples for pharmacy. It would be difficult, however, to utilize the text in the pharmacy curriculum.

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The importance of structural genomics in bioinformatics cannot be overestimated. The unraveling of the human genome followed by several animal genes provides unheralded opportunities not only for understanding life processes at the molecular level, but in advancing medicine to heights not thought of during the 20th Century. Until the protein folding problem is solved, genetic information relevant to biochemical mechanisms and structure-based drug design requires structural determination of large biological molecules and complexes. The reason for the importance of structural biology is simple: three-dimensional protein and receptor structures enable scientists in these fields to correlate reactivity and advance science rapidly. This is the reason an inordinate share of Nobel Prizes have been granted to individuals who have performed structural analysis on important molecules via x-ray crystallography, NMR, electron microscopy and mass spectrometry. The publication of Structural Bioinformatics is timely and provides a much-needed link that bridges genomics, proteomics, and pharmacogenomics. The 29 chapters cover the landscape thoroughly from defining bioinformatics and structural bioinformatics to the future of structural genomics. Many outstanding leaders in the field have contributed to the publication. It does not get bogged down with mathematical and statistical jargon and hard to comprehend methodology. The historical approach given in some chapters is very helpful to someone new in the field.

The introductory chapters cover the fundamentals of protein structure, DNA and RNA structure, computational aspects of high-throughput macromolecular crystallographic NMR and electron microscopy structure determination, and molecular visualization. The second section provides chapters on data representation and databases. Section three deals with comparative features, with chapters on protein structure evolution using the SCOP database, the CATH domain structure database, structural assurance, a new approach to all-atom contacts structure validation, and structure comparison and alignment. While some of these chapters are narrow in scope they add completeness to the overall topic. There are two chapters in Section 5 on protein interactions that provide important fundamentals and understanding. While Section 6 on drug targets is limited, the chapters provide an overall flavor for structure-based drug design. Section 7 provides readers with an overview for protein structure prediction and provides those with a limited background in this area an opportunity to understand the various approaches and methodologies. The last section contains a chapter on the future of structural genomics, including numerous examples of the great progress being made, with the exception of membrane protein structures determination.

Overall the book nicely covers a rapidly expanding field of science. The chapter on molecular visualization makes a strong point on the need to reduce myriads of data to something that the human brain can process and recognize. The photograph of John Kendrew looking at a floor to ceiling stick model of insulin (one of the first protein structures determined by x-ray crystallography) quickly makes the point of the chapter succinctly. The atoms are just visible through the forest of vertical support rods. This reviewer believes the overall content and low cost of the paper back edition easily warrant this text a place on the bookshelf of anyone interested in understanding the importance of structural biology in bioinformatics.

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