Improving Primary Care: Strategies and Tools for a Better Practice. *By Thomas Bodenheimer and Kevin Grumbach. New York: McGraw-Hill; 2007, 400 pp. US $32.95 Paperback. ISBN: 9780071447386.*

America's embattled primary care system is nearing the breaking point. Primary care clinicians are expected to provide continuity of care for patients within an increasingly fractionated medical environment. They face ever-expanding hours with no corresponding rise in reimbursement rates, leading to high levels of job-related dissatisfaction. And while much of the work of primary care involves managing complex chronic illnesses such as diabetes and hypertension, such important long-term clinical issues are often forced to the back burner in favor of addressing patients' more acute medical problems within the space of a rushed 15-minute office visit, resulting in frustration for both patients and providers. Perhaps it is no surprise, then, that medical students in recent years have increasingly turned to specialties other than primary care for their residency training, further shrinking the supply of available clinicians on the frontlines of American medical care.

It is in light of this grim situation that the excellent book, *Improving Primary Care: Strategies and Tools for a Better Practice*, was written. The authors, both faculty in the Department of Family and Community Medicine at UCSF, together boast 50 years of primary care experience in a variety of clinical settings. This extensive firsthand knowledge is abundantly evident in their facile and authoritative command of the many challenges facing primary care. Yet rather than bemoaning the trends in medicine and society that have given rise to the current plight of their field, Bodenheimer and Grumbach devote the bulk of their text to outlining practical suggestions for adapting primary care to the changing medical climate. The authors expertly weave together history, personal experience, and extensive evidence from the medical literature to put forth their suggestions for building the "New Practice Model" for primary care. And it is difficult not to be convinced by their pragmatic approach.

While *Improving Primary Care* seems mostly to be geared at primary care doctors — particularly those in private practice — the book is written in an accessible way that will be appreciated by a variety of caregivers, not just physicians. Indeed, the authors take special care to point out that much of the primary care need in the United States is increasingly being filled by allied health professionals such as nurse practitioners and physician assistants.

One of this book's most appealing features is its clever use of fictional vignettes to illustrate particular topics. For example, in a discussion about improving care for patients with chronic illnesses, the authors contrast two hypothetical doctors' offices to highlight the benefits that would be achieved by implementing planned chronic disease-management visits. These vignettes are scattered throughout the text, and they go a long way toward enlivening what might otherwise be a somewhat dry, jargon-heavy discussion. Another attractive feature is the extensive set of tools located in the book's appendices that include everything from worksheets to sample dialogues designed to help primary care clinicians implement the strategies outlined in the preceding chapters.

Despite some minor organizational flaws, Bodenheimer and Grumbach's new text is an informative, practical guide that adds a much-needed perspective on how to adapt primary care to the modern medical environment.

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Neurons in Action 2: Tutorials and Simulations in NEURON. *By John W. Moore and Ann E. Stuart. Sunderland, Massachusetts: Sinauer Associates; 2007, 200 pp. US $39.95 Spiral-bound. ISBN: 9780878935482.*

Neurophysiology is often the bane of many medical and graduate students due its reliance on concepts from biology, physics,

engineering, and mathematics. In this carefully designed book, John Moore and Ann Stuart demystify the basics of nerve function through a series of logical and well-written text-based tutorials with accompanying computer simulations.

The journey through the book and CD allows readers to gradually build a solid foundation of neuronal biophysics, beginning with basic properties of membranes to more advanced concepts of synaptic integration and action potential threshold. Familiarity with biology and some introductory physics is necessary, but senior college students, graduate students, and others who are interested in physiology can benefit very much from this experience as either an introduction to neurophysiology or as a refresher on certain concepts. Furthermore, simulated experiments are not only cleaner and cheaper, but readers can make manipulations which are impossible or difficult to do experimentally ("What happens if I change axon diameter?" or "What happens if I change the ion concentrations inside a neuron?"). Medical students who feel uncomfortable with their knowledge of membrane physiology would come away with a better understanding by going through the first half of the book. The computer-based format is ideal for professors and teaching assistants to use in the classroom.

The inclusion of classic experimental papers on the CD also makes the experience somewhat of a history lesson as well. The authors pay homage to classical experiments on the squid axon, neuromuscular junction, and beyond. Readers will feel like they are stepping into the shoes of Hodgkin, Huxley, Katz, and Eccles.

The entire simulation environment is contained on the CD, can be easily installed locally on a PC or Mac, and runs quickly using Mozilla Firefox. However, it should be noted that the simulations are styled after the NEURON software program, used in basic science research and pioneered by Moore and others. Therefore, new users may have a hard time in the beginning with some quirky features and displays. In some of the tutorials, steps must be done in a particular order, which can make independent "experimenting" somewhat confusing. However, after the first few lessons, this format and style become second nature.

Overall, Moore and Stuart certainly have created a highly recommendable method for learning and teaching neurophysiology. Readers can now, from the comfort of their own homes, finally vanquish those former physiology demons in a fun and interactive manner — and learn a bit of history, too.

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X-Ray Crystallography of Biomacromolecules. *By Albercht Messerschmidt. Weinheim: Wiley-VCH; 2007, 318 pp. US $175 Hardcover. ISBN: 9783527313969.*

X-ray crystallography is still the primary method for obtaining high resolution structures of macromolecules. If you are interested in getting a quick overview of this topic, this is not the best book for you. If, however, you would like to understand the theory behind X-ray crystallography or are interested in adding this method to your toolset, *X-Ray Crystallography of Biomacromolecules* by Albrecht Messerschmidt is the perfect reference book. While the book discusses the production of recombinant proteins as well as methods used to obtain crystals, the primary focus is on the theoretical basis of solving a crystal structure. Several practical examples also are included at the end, all of which are detailed, up to date, and useful. They are tutorials on various computer programs used during model building, complete with step-by-step instructions and examples of macros, input files, and electron density maps.

Overall the text is very dry. In general, the chapters contain minimal introduction to fundamental chemical, biological, and physical principles, so a good understanding of