Critical Care Handbook of the Massachusetts General Hospital, Fifth Edition. Edited by Luca M. Bigatello, M.D., Hasan Alam, M.D., Rae M. Allain, M.D., Edward A. Bittner, M.D., Ph.D., Dean Hess, Ph.D., R.R.T., Richard M. Pino, M.D., Ph.D., Ulrich Schmidt, M.D., Ph.D. Philadelphia, Lippincott, Williams & Wilkins, 2010. Pages: 752. ISBN-10: 0781795664. ISBN-13: 978-0-7817-9566-1. Price: $57.95.

Covering the essentials of critical care, the *Critical Care Handbook of the Massachusetts General Hospital, Fifth Edition*, serves as a multidisciplinary expert review of the general principles and specific considerations in taking care of the critically ill patient.

This fifth edition is organized into two major sections. The first, with 16 chapters, explores general principles of critical care, including hemodyamic and respiratory monitoring, nutritional support, fluids and electrolytes, airway management, and principles of mechanical ventilation. The second section, with 28 chapters, covers more evidence-based specific management of systemic diseases, including renal failure, chronic obstructive pulmonary disease, and coronary artery disease.

The opening chapters provide an outline strategy for grasping the fundamentals of critical care. The outline format provides a simple review of the most commonly found problems in the intensive care unit. The chapter on hemodynamic monitoring is an especially useful and relevant review of the interpretation of data based on the application of basic circulatory physiology. The clear and concise chapters provide enough valuable insight to be practically useful at the bedside without providing more bulk than is needed in a manual format. The emphasis on practicality is again in evidence in the chapter on the use of ultrasound in the intensive care unit, in which a clear overview of the uses and limitations of point-of-care ultrasound and echocardiography in such units is provided. A brief review of ultrasound physics is given in addition to several figures comparing normal and pathologic anatomy.

The transverse view of the right internal jugular vein and carotid artery juxtaposed with a longitudinal view is precisely the type of bedside practical and tangible expertise needed before performing ultrasound-guided central line placement. The first section of this manual is filled with chapters providing clear figures, black-and-white illustrations, and tables of high quality. The practical outline form provides easy navigation of the material and would make this a favorite of the novice as well as the seasoned intensivist.

The second section of the book looks specifically at 28 areas of specific systemic management. This serves as a quick review of the pathophysiology involved and then directly addresses diagnostic and therapeutic goals. In the pulmonary embolism and deep vein thrombosis chapter, the management was particularly useful as the complications and contraindications of therapy were clearly outlined. The manual frequently provides the evidence that exists behind the recommendations given in these latter chapters. Where original work is not cited, pertinent reviews are indicated. Concluding is a useful appendix listing supplemental drugs commonly used, including their indications, dosage, effect, onset and duration, clearance, and any additional recommendations. Chapters are succinct, with clear discussion and summary points concluding each presentation.

This is an excellent overview manual of critical care. I strongly recommend this book as a valuable addition to the library of anyone who practices intensive care medicine and would appreciate a critical care manual that provides thorough, direct, and up-to-date management recommendations.

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Emerging Technologies for Teaching and Learning: Teaching 2.0. Int Anesthesiol Clin 48(3), Summer 2010. Edited by Viji Kurup, M.D., Stanley H. Rosenbaum, M.D. Hagerstown, Maryland, Lippincott, Williams and Wilkins, 2010. Pages: 166. Price: $162.00.

The quantity and sources of medical knowledge currently available present challenges to contemporary teachers and learners of medicine: what to learn, and when, where, and how to learn it. As faculty seek to maximize efficiency and efficacy of teaching without resorting to increasing the length of residency, students are seeking to optimize the efficiency and efficacy of learning, relying increasingly on strategies afforded by new technologies.

This issue of International Anesthesiology Clinics addresses the current status of teaching, learning, and technology in the context of the millennial learner, who is defined here as anyone born after 1980. The book derives its title "Teaching 2.0" from the term "Web 2.0." As this reviewer discovered on a Wikipedia query, Web 2.0 refers to the evolution of the World Wide Web from a historically static to a currently interactive and interconnected system. In keeping with this terminology, the book focuses largely on information and computer technology, particularly those interactive aspects of technology that facilitate teaching and learning.

The book begins with an overview describing first the characteristics of the adult learner, then delineating the features of the millennial student as a learner in general and as a user of technology. The book then delves into the various technologies relevant to teaching and learning, addressing also the subject of simulation as a mandatory component of the maintenance of certification in anesthesiology program. It introduces the concept of including the patient as another

type of learner who seeks information from the Internet, and it concludes by discussing the importance of wellness and ecologic responsibility in anesthesiology practice.

Most of the work concerns itself with presenting information for, presumably, a relatively technology-naïve and premillennial audience, highlighting those technologies and techniques that work well with the millennial learners' style. The spectrum of technical information catalogued in this volume ranges broadly from general conceptual explanations, such as podcasts and blogs, to descriptions of virtual learning systems and technical definitions related to Web 2.0. Subject matter features practical "how-tos," examples of curricular content, and the theoretic underpinnings of virtual or Internet-based learning and interaction.

Concurrent with the reading of the distinguishing features of millennial learners, one realizes the many similarities between these and nonmillennial learners. Although millennial learners have perhaps never known life without the Internet, many nonmillennial learners may be equally conversant with technology. However, lest one assume that familiarity with technology corresponds to use of that technology, a surprising finding presented in this book is that although awareness of Web 2.0 technology in both populations may be high, actual use of the technology in both medical student and medical practitioner populations was low. With regard to descriptions of the three types of today's learners, the self-motivated student, the student who goes through the motions, and the students "who tune us out," it seems that these are indeed accurate descriptions of learners across all generations.

The rapidity of change in technology may indeed far outpace the change in human teaching and learning habits. Nevertheless, it is incumbent upon an engaged lifelong learner to maintain an active interface with developing technology. This book provides a glimpse into an array of technologies that provides opportunities to leverage contemporary teaching and learning strategies.

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ERRATUM

High Incidence of Burnout in Academic Chairpersons of Anesthesiology: Should We Be Taking Better Care of Our Leaders?: Erratum

In the article that appeared on page 181 of the January 2011 issue, the cross-sectional nationwide survey that was included as the appendix refers to "program directors" and should have instead referred to "chairpersons."

Reference

De Oliveira Jr GS, Ahmad S, Stock MC, Harter RL, Almeida MD, Fitzgerald PC, McCarthy RJ: High incidence of burnout in academic chairpersons of anesthesiology: Should we be taking better care of our leaders? ANESTHESIOLOGY 2011; 114:181–93

ERRATUM

In the articles that appeared on page 317 of the February 2009 issue and page 576 of the March 2010 issue, an error was discovered in the units of measure for nitric oxide production. The correct units throughout these articles for nitric oxide production are picomoles per milligram protein.

Role of Heat Shock Protein 90 and Endothelial Nitric Oxide Synthase during Early Anesthetic and Ischemic Preconditioning: Erratum

Reference

Amour J, Brzezinska AK, Weihrauch D, Billstrom AR, Zielonka J, Krolikowski JG, Bienengraeber MW, Warltier DC, Pratt Jr PF, Kersten JR: Role of heat shock protein 90 and endothelial nitric oxide synthase during early anesthetic and ischemic preconditioning. ANESTHESIOLOGY 2009; 110:317–25

Hyperglycemia Adversely Modulates Endothelial Nitric Oxide Synthase during Anesthetic Preconditioning through Tetrahydrobiopterin– and Heat Shock Protein 90–mediated Mechanisms: Erratum

Reference

Amour J, Brzezinska AK, Jager Z, Sullivan C, Weihrauch D, Du J, Vladic N, Shi Y, Warltier DC, Pratt Jr PF, Kersten JR: Hyperglycemia adversely modulates endothelial nitric oxide synthase during anesthetic preconditioning through tetrahydrobiopterin– and heat shock protein 90–mediated mechanisms. ANESTHESIOLOGY 2010; 112:576–85