Book Reviews

Simulators in Anesthesiology Education
Lindsey C. Henson, Andrew C. Lee (Eds.). Plenum Press, 1998. 124 pages. ISBN 0-306-45775-X

The past decade has seen an increase in the use of simulation in the education of doctors, nurses and other health care proffessionals. Much of this activity has been centred around the operating room, with realistic recreation of the environment using medium to high fidelity simulators. In addition, part-task simulators, such as computer-screen only devices, have advanced.

The range of this activity is well described in a compilation of eighteen presentations from the Second Annual Conference on Simulators in Anesthesiology Education. This conference was held at Rochester, New York from May 31 to June 2, 1996 (with the book appearing just under two years later).

The first paper is the text of the key-note address given by Professor R.L. Helmreich (and co-authored by the late Dr. H-G Schaefer), on the topic of human factors and crew resource management in the operating room. Thereafter follow papers on such topics as "Teaching high school students" (use of the simulator to supplement science and health programmes) to "Issues in starting a simulator program" (a 'primer' for those who might wish to do so) to "Computer analysis of cerebrovascular hemodynamics during induction of anesthesia" (development of a seven-compartment constant volume model of intracranial haemodynamics which allows comparison of drug administration schedules to control intracranial pressure and preserve cerebral blood flow during different phases of anesthesia).

Most papers present detailed and useful information. For example, the "Technical workshop: Mathematical and computer models" takes the reader through the typical steps in constructing a scenario to model a morbidly obese patient undergoing general anaesthesia for an intra-abdominal procedure. An example is even given as to how to overcome the physiological and pharmacological shortcomings of a commercial simulator. In contrast, "What can you do with a simulator? Quality assurance" starts off with definitions of 'quality', 'quality assurance' and 'quality improvement' and then goes on to review simulators and anaesthesia and the various anaesthetic simulators in quality assurance in what is, unfortunately, quite a superficial way, describing only their relation to what he defines as the 'structural' aspects of care.

Overall this volume fulfills its aim in providing a point of reference in the development of medical simulation. I would recommend this book to those with an interest in simulation and to those who participate in the teaching of various health care personnel, including both resident and staff anaesthetists.

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Critical Care of the Surgical Newborn
Don K. Nakayama, Carl L. Bose, Nancy C. Chescheir, Robert D. Valley (Eds.) Futura Publishing Company, 1997. 610 pages. $150.00 (US). ISBN 0-87993-653-3

The focus of this textbook goes beyond critical care, as the editors have endeavored to produce a comprehensive work that covers all aspects of neonatal surgical disease. The text is authored almost exclusively by Faculty of the University of North Carolina at Chapel Hill. It consists of 39 chapters divided into four parts, General Treatment, General Pediatric Surgery, Neurological Surgery, and Urologic Surgery. Each chapter of the latter three parts of the text is devoted to a particular disease entity. The intended readership is surprisingly broad, ranging from practicing subspecialists to physicians in training and specialty nurses.

Most surgical diseases encountered in the newborn population are covered. Information is presented in a clear and consistent fashion. In keeping with the editor's goals, the subject material is broadly covered. including fetal assessment, obstetrical care, postnatal diagnosis, associated congenital anomalies, pre and post operative care, anaesthetic management, surgical techniques and long term prognosis. The unfortunate consequence of this all-encompassing approach is that the discussion of individual topics has had to remain relatively superficial.

Both practitioners and trainees in Anaesthesia and Critical Care will find the lack of in-depth discussion of the material limiting. Space constraints allow for little more than a listing of fluid and electrolyte disorders. Treatment of anaesthetic topics is largely limited to overviews and descriptions of practice at Chapel Hill. For example, concerning awake caudal anaesthesia for neonatal hernia repair, the author presents the Chapel Hill recipe, using up to 3.75 $mg \cdot kg^{-1}$ bupivicaine, with-

out further discussion of dosing of caudal bupivicaine in neonates. This is unfortunate, given the recommendation by some authorities that neonatal caudal bupivicaine doses not exceed 2.5 $mg \cdot kg^{-1}$.

In summary, for anaesthetists and critical care physicians, this book serves as a good overview of neonatal surgical disease. For authoritative resource material covering anaesthetic and critical care management however, a more focused textbook would have to be consulted.

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Anaesthesia in the Bahamas. A Model For Developing Countries
Glen Beneby. Commonwealth Of The Bahamas Nassau Guardian (1844) Ltd, 1996. 100 pages.

Most anaesthetists who practise in Canada have limited knowledge of anaesthesia in other countries, particularly in the developing ones. We have our national society that was formed more than fifty years ago; The Royal College that oversees training and ensures maintenance of academic standards, and we have easy access to anaesthetic equipment, drugs and educational material. The situation is very different in many countries.

Dr. Glen Beneby, Medical Staff Coordinator and Head of the Department of Anaesthesia at Princess Margaret Hospital, describes the establishment and evolution of anaesthesia as a specialty in the Bahamas, focusing mainly on the past twenty years. It is an independent nation of 700 islands with 260,000 inhabitants and more than 3.5 million visitors per year where human and financial resources are limited.. Dr. Beneby graduated from the University of the West Indies, trained in anaesthesia, in the United Kingdom and returned to the Bahamas in 1986. Since then, the Department of Anaesthesia has become self-sustaining through his internal recruitment of young physicians at the internship level. The scope of anaesthetic services has been broadened, a department infrastructure with support staff established, and assistance from equipment and pharmaceutical supplies negotiated.

The book begins with the history and development of anaesthesia at the Princess Margaret Hospital, its expansion in the 1970s and rapid modernization and expansion of services in the past decade. The role of anaesthetists in the Operating Room, Intensive Care and Pain Services is then explained for the benefit of non-anaesthetist readers. This is followed by the main body of the book, an excellent and detailed description of the challenges of developing a first class Department of Anaesthesia, in a developing country. Some of these challenges are only too familiar to heads of Canadian Departments! All must be addressed, especially when yours is the only tertiary care government care hospital in your country.

Sincerity and commitment to innovation and improvement in the government hospital for the benefit of inhabitants are prerequisites. Private practice cannot take priority. Dr. Beneby addresses department funding, the role of clerical support staff and medical suppliers, involvement in intensive care, training of anaesthetists and anaesthetic assistants, and maintenance of equipment. Sources of financial support for training, upgrading facilities and purchasing equipment are listed. He also emphasizes the value of both basic training in the Bahamas and advanced training and practice in developed countries to provide overall experience. For the latter, the Bahamas benefits from its proximity to North America, and returning specialists in all branches of surgery have had a positive effect on the expansion and improvements to the Department of Anaesthesia to supply their needs. No mention is made of the number of trained anaesthetists who do not return to the Bahamas.

The concluding chapters describe further development in the 1990s, the present status of the anaesthesia department, aspirations for the future, and abstracts of the departments research papers. The book provides useful information on development and provision of anaesthesia services in circumstances different from our own. Many countries, particularly in Africa, face problems of even greater magnitude.

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Assisting the Anaesthetist
N.S. Morton (Ed.). Oxford University Press, 1997. 255 pages. $56.50 ISBN 9-19-262443-1

Since, in the editor's own words, this book is not a detailed and technical book, a more appropriate title would have been "Anaesthesia for the assistant". It is also a collaborative work of many authors and it suffers a little from this approach.

The book gives a good overview of what anaesthesia is about, starting with the preparation of the patient and extending into the postoperative period. The value of a trained assistant is mentioned in the preface and highlighted many times especially in the chapters about emergencies and about regional anaesthesia. Each chapter ends with a few interesting references and key learning points. Some interesting safety features are described and merit highlighting: such as the risk of explosion from nitroglycerin patches with direct application of the defibrillator paddles or the

risk of stretching and damaging a nerve plexus by improperly blowing up a pressure cuff.

However, the book contains insufficiencies or errors, of which we shall highlight a few. Vaporizers not only "dislike being dropped" but it is an important safety feature to remove them from service until they have been checked and recalibrated. Concerning the set up of an arterial cannula, the diagram is so badly drawn that it is not of highschool level. An algorithm is lacking in the failed intubation drill, and there is no detail of a difficult intubation cart. The recommended dose of 10 $\mu g \cdot kg^{-1}$ naloxone is an overdose.

In summary, this is an interesting first edition of an "Introduction to anaesthesia for assistants". In a second edition, the errors and omissions should be corrected and we suggest more input from the assistants.

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