Crisis Management in Anesthesiology, 2nd Edition

David M. Gaba, Kevin J. Fish, Steven K. Howard, Amanda Burden. Publisher Elsevier Saunders, Philadelphia, 2015. CAN \$104, 432 pages. ISBN 978-0-443-06537-8

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The first edition of this book was novel at the time of publication in 1994. It not only listed the practical actions to undertake in anesthetic crises, but in the introductory section, it also described the cognitive and behavioural skills needed for effective crisis management. Recognition of the importance of these “soft skills” in healthcare is illustrated in Miller’s *Anesthesia*. In 2015, this topic is promoted to Chapter 7, whereas in 2000, it was buried far back in Chapter 80. Gaba *et al.* have been influential in translating certain concepts from the highly reliable aviation world into anesthesia practice, and they created simulation-based courses in the process. Their term “Anesthesia Crisis Resource Management” (ACRM) is still used as shorthand to indicate courses that contain such content.

Twenty years later and with a fourth editor, Gaba *et al.* have compiled a second edition. How has this publication adapted to the changing anesthesia world?

The presentation is almost identical. This paperback is portable but not pocket size with font and formatting that are adequate though not particularly noteworthy. The e-book simply replicates the print version, but I personally found the e-version more convenient to search and navigate.

As with the first edition, this current publication is divided into two sections, “Basic Principles of Crisis Management” and “Catalog of Critical Events”.

In the first section, the original two chapters on dynamic decision-making and the principles of ACRM are

supplemented by two chapters, a chapter on teaching ACRM that concentrates on the use of simulation techniques and a chapter that focuses specifically on debriefing. All of the above chapters offer good reading, although the first chapter seems less current with most references well prior to 2000. The second chapter appropriately has a larger section on cognitive aids in crises, including the *Stanford Emergency Manual for Anesthesia* produced by a group with contributors to this book.

The added chapters serve as a general introduction to their topics and are slanted towards the personal opinions and practices of the authors, which they explicitly acknowledge. Overall, I consider this an invaluable approach; although more focus was devoted to individual cognition and behaviours in the simulation lab than to full integration of all team members into teams.

The book’s comprehensive second section comprises 99 critical events, up from the original 80. Certain generic crises, e.g., hypotension, are presented first, and then specific events are arbitrarily yet reasonably grouped (e.g., cardiovascular, obstetric, equipment). In my view, some of these events should be rated as non-emergent complications rather than as critical events (e.g., moderate hypothermia or peripheral nerve injury), whereas I did not find inadvertent intra-arterial injection in either edition.

Each event is presented under standard headings of definition, etiology, typical situations, prevention, manifestations, similar events, management, and complications. Under the management heading is a list of actions which are “described approximately in the order of things an experienced healthcare professional might check or do”. This (lack of) structure was intentionally chosen by the authors and helps to ensure that the reader avoids inadvertently focusing on one action to the exclusion of others. On the other hand, this approach also makes some complex sections less easy to follow (e.g., “Management

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of Difficult Intubation”). Non-North American readers may be surprised that no practical cognitive aid is referenced here.

The indexing is useful, although, as mentioned above, the e-book is superior for searching.

Who would find this book useful? The first edition pioneered the critical link between effective cognition and behaviours (as outlined in Section 1) and implemented lists of actions (as presented in Section 2). The link and the content remain critical, but in 2015, other resources are available for exploring these concepts and their practical application.

It would be rare to find an anesthesiologist who has not been exposed to these concepts, but those who consider themselves behind in this area will find Section 1 to be a valuable introduction. The first section might best suit clinicians charged with teaching crisis management in a

simulation setting and seeking an introduction to the area or those reading ahead in preparation for such instruction.

The “Catalog of Events” and especially the e-book could definitely be used by anesthetic teams faced with an emergent perioperative crisis, but as pointed out by the authors, it is not optimized in format or succinctness for real-time use. Those preparing for examinations, including maintenance of certification, or those preparing others for these exams will find this book to be an excellent resource.

In summary, this book contains essential information that all anesthesiologists should know or readily be able to easily reference; nevertheless, due in part to the success of the first edition it is no longer the only such resource.

Conflicts of interest None declared.