



## Neuroanesthesia Crisis Manual

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The field of anesthesiology has a proud history of reducing morbidity and mortality by focusing on safety and innovation. This approach has often drawn comparisons to the airline industry, which similarly aims to minimize deleterious outcomes through diligence. Checklists and crisis manuals are tools initiated by the airline industry that are gradually being incorporated into use in anesthesiology. The *Neuroanesthesia Crisis Manual* is an excellent example of moving toward safer care by using focused tools available at the bedside.

The *Manual* itself is divided into sections based on the physiologic derangement encountered. These sections include airway, breathing, cardiac effects, and deficits, as well as electrolytes and “other”. Within each section grouping, there are several focused topics, such as “accidental extubation in the prone position” for the airway and “intraoperative seizures” during deficits. The content is designed to provide quick access to evidence-based interventions that are appropriate to the problem at hand. Each topic is covered within two pages, containing information regarding diagnosis (including the differential diagnosis), treatment, and other pertinent details. The discussions of each topic is thorough yet succinct enough to assist during crisis management. Furthermore, the discussion is based on a literature review and includes guidelines and best practices.

Should one be faced with one of these many situations, useful information for diagnosing and treating the patient could be found immediately. The writing is clear and with brevity. For example, the following tips for management of a ruptured aneurysm state, “Adenosine first dose: 6 mg, second dose: 12 mg; rapid ventricular pacing.” You could

effectively and safely treat your patient in an emergency with these quick tips and suggestions.

One of the most unique sections of this manual is dedicated to intravenous access extravasation. This is a topic pertinent to all patients, especially with the recent push to rely on peripheral intravenous access instead of central venous access. The dosing and possible interventions are well described, including separate sections for the treatment of osmosis-, vasoconstrictor- and pH-related agents. There is even a helpful guide if you are unsure how to characterize the extravasated agent properly.

Any anesthesiologist or trainee can rely on this *Manual* to guide patient care in an emergent situation. The information is sufficiently detailed with weight-based dosing, making it applicable to pediatric patients as well. The authors do caution, however, that pediatric patients may have unique problems that are not the focus of this manual. It is clear, though, that the *Manual* was designed to assist in the management of any acute diagnosis in neuroanesthesiology irrespective of patient age.

At the end of the *Manual*, there is a “Neurocrisis Report Form” that can be incorporated into event-tracking or quality-improvement initiatives. It is a template for the provider to document any adverse event as well as relevant patient information. This could be an important tool for evaluating the frequency and appropriateness of interventions for any emergent neuroanesthesia situation.

The *Neuroanesthesia Crisis Manual* is a wonderful resource for the trainee or attending anesthesiologist who may be faced with adverse events in neuroanesthesiology. It provides a quick and useful reference to help guide the provider to diagnose and treat the problem in a timely manner.

**Conflicts of interest** None declared.

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