



EMERGENCY MEDICINE

H A N D B O O K

Critical Concepts for Clinical Practice

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Critical Concepts for Clinical Practice

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Dedication

I would like to thank my husband, Mark, my children (JP and the triplets), and my parents who have helped me realize the true meaning of life. To my mentors, especially Peter Rosen, for their encouragement and support. To the residents and students in Emergency Medicine who continue to inspire me . . . they are our future. May this book help new learners achieve a baseline foundation of clinical competence to care for our unique population of patients.

Lynn P. Roppolo, MD

I dedicate this book to our mentors, who prepared a path so that we might succeed; our peers, who are challenged daily by the trickery of illness and injury; and our students, who will continue to navigate through the uncharted waters that lie ahead.

Daniel Davis, MD

I hope this book helps its readers learn to trust in themselves and the science and art of practicing Emergency Medicine. I would like to thank my wife, Dara, for her support, infinite patience, and understanding, as well as my children, Jaida and Piper, for their inspiration and boundless energy.

Sean P. Kelly, MD

I dedicate this book to the students and residents who are attempting to become fluent in the language of Emergency Medicine. I hope this book helps in the journey to acquire self-confidence and competency.

Peter Rosen, MD

This book is meant for the newcomer to Emergency Medicine: the student who wishes an introduction to the field and an exposure to its responsibilities as well as the resident who has chosen the field for specialty training. It is also meant as an overview for those outside of the field who wish to know something about our discipline: how we practice, how we think, and what responsibilities are our concerns.

The act of introducing the specialty of Emergency Medicine to students and residents in training programs can serve to remind the more seasoned practitioners that we have great expectations, which may be impossible to realize without helping the students understand our approach to the patient, how we think in Emergency Medicine, and most importantly, what we expect the novices to know.

Of course, we immediately realize that it is the last category that is most unrealistic, based upon how much we forget about our own experiences as students, and how much our experiences in medical school, residency training, and postgraduate work have produced irreversible changes in us. It is exactly comparable to expecting someone to be fluent in a foreign language without special study, training, and experience. This book is our effort to introduce the student, emergency physician-in-training, and non-emergency physician to not only our language, but our logic, our style of clinical thinking, and our sense of the most important responsibilities.

There are many excellent textbooks of Emergency Medicine, but by the time of the editions that they now present, they are more like encyclopedias than places to begin the study of a new language. It is not only unrealistic to expect newcomers to have read the Rosen or Tintinalli text before they come on service in the Emergency Department (ED), but it is the wrong way to read these books. They should be used to read in depth about a given problem, to prepare a report or a lecture, or to find a reliable source of the evidence upon which these texts are based.

There are some other books that are much more condensed, such as the *Five Minute Consultation in Emergency Medicine* and the several reference pocket books that are currently available. They are terse, succinct, and well-focused. This is, in fact, the very problem they present for the student and new resident. One must already be fluent in the language of Emergency Medicine, and one must already know quite a bit about the subject to obtain the useful mnemonic advice that these texts provide.

Therefore we decided to collect what it is that we want our newcomers to begin with; an oversight into **how** we think, as well as **what** we think. We want to overcome the depressing sensation of being lost, when everyone else seems to have a role and knows what to do. We want to make our students and residents feel part of our operation, to behave and feel like colleagues,

not outsiders, and to have a foundation of information and language upon which they can build their fluency and expertise in Emergency Medicine.

It is impossible to communicate all these attitudes and facts without ending up with a sizable book. Our goal is not to have something every student and resident will have read before starting on the rotation, but something they can repeatedly turn to throughout their rotations, and through the subsequent course of their education to become familiar with our language.

We have attempted to be directive. This is not the place to dissect controversy, nor is it the place for wavering over decisions. We want the student and resident to learn that decisions have to be made, actions taken, and treatments given in a real world time frame that often does not permit long reflection. This book therefore represents our best knowledge and the kinds of solutions that we have chosen to solve controversy. We have tried always to communicate these ideas in recognizable forms as opposed to falling back on legend and jargon. We have tried never to tell our learners to have that all-time obfuscating jargon: "a high index of suspicion," but rather what to look for, and what actions to take.

Diagnostic accuracy is always difficult, and the hardest part of our responsibility lies in knowing what to look for, what questions to pose, and **HOW TO START!**

It is certainly true that the methodology of medical decision-making in Emergency Medicine must be different from that existing in other specialties. The diagnosis is of secondary importance, and may never be revealed in the ED. We must deal with patients whose disease state resembles that of thousands of other problems, and learn how to think on dual levels of concern: first, is there a life threat, and how must one intervene to protect the patient; and second, what is probable, and how must it be managed? Every patient then becomes a calculus problem of two variables: the statistically probable and probably not serious problem, versus the statistically rare but very serious problem.

We are further constrained by the task of performing a logical improbability: you cannot prove a negative, but that is precisely what we must do. You cannot admit every patient, you cannot order every possible diagnostic test, every therapy has a cost as well as a benefit, and we often do not have time for the disease state to declare itself, and present the "classical" signs and symptoms. What then represents adequate negative evidence? How far must we pursue the statistically improbable? What does help us to distinguish between diseases in their earliest manifestations?

These are the questions that befuddle even the most experienced emergency physicians, and our goal in this text is to try to provide a road map to start with, and to provide definitive answers, and not to present all sides to every controversy.

There is, of course, repetition throughout the book, because the beginner is not going to be capable of recognizing the importance of single facts. The book, however, will present many important traps, pitfalls, and dangers that we must try to avoid, and our suggested road maps to escape them.

Finally, this book expresses our desire to reinforce the humanity, ideals, and desires for beneficence that we have always found in our students and

residents. Over time, and with life's pressure, we often appear cynical and uncaring, and this is often mistakenly thought to represent sophistication and experience.

We wish to remind our newcomers, and ourselves as well, that Emergency Medicine is important; that we have millions of hurt, frightened, and unstable people for whom we are responsible. That what we do is important, and can make a difference. That all of what we do rests upon what Lewis Thomas (*The Youngest Science*, 1983) referred to as the "gift of affection" and our patients should feel that WE CARE!

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