

CLINICAL MANIFESTATIONS AND ASSESSMENT OF RESPIRATORY DISEASE – 5TH EDITION

Reviewed by Michael McPeck BS RRT FAARC

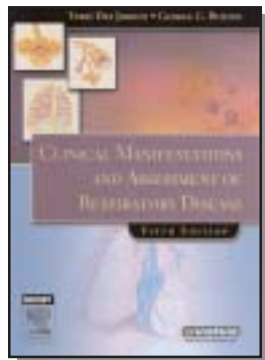


We'll start by asking: What's the point of a book about clinical manifestations and assessment of respiratory diseases? Admittedly, it's a trick question, considering who's likely to be reading this. Well, if this were an ordinary textbook, the point might be to prepare the medical student for his or her rotation through Pulmonary Medicine. But this is no ordinary textbook. This is a book aimed squarely at respiratory therapists. Why would they need assessment skills?

Patient assessment and a comprehensive understanding of the intricacies of respiratory disease is the foundation upon which therapist-driven protocols (TDPs) are built. In the early 1980s one of the authors, Dr. George Burton, who, along with Judy Tietsort, RN RRT, was instrumental in creating the TDP movement and empowering respiratory therapists to take a broader role in patient care. One of the basic tenets of TDPs is to "assess and treat," with emphasis on the assessment. It can be argued that a treatment regiment (policy and procedure) without therapist-conducted patient assessment to guide it is not really a TDP in the sense that Burton and Tietsort originally envisioned. So, the key to TDPs is patient assessment and this is the book that can be used to help protocol therapists develop and hone their patient assessment skills.

The first edition of this book was published in 1984. The field has changed immensely since then but the book is as pertinent

now as it was then, perhaps more so, considering the economic pressures on the healthcare system. Accordingly, the authors have made great efforts to keep the book current, relevant and up-to-date. The book has 654 pages divided into 14 parts, 3 sections and 45 chapters



plus case studies, references, a glossary and a 17 page section containing 35 "Netter-esque" color plates depicting the anatomical representation of respiratory pathophysiology. Each chapter ends with a number of multiple choice and true-false self-assessment questions.

The artistic design of the book is quite handsome and highly functional. The design makes it very easy to read without fatigue and to thumb through and find things you may be searching for. The black on white serif font is large enough to read without squinting. Headings, subheadings, some figures and table backgrounds are rendered in one or two shades of violet, making for a pleasing look and crisp, snappy, easy-on-the-eyes rendering of the drawings. The drawings are exceptionally well done and help to convey technical information and concepts very well. Except for the special section of color plates, all photographs are in black and white, and most are of chest radiographs.

There is simply too much content to review in detail so I will attempt to summarize it instead. Part I of the book deals with Assessment of Respiratory Disease, and includes chapters on the patient interview, physical exam, pulmonary function studies, ABG assessment, radiologic exam of the chest and other types of patient assessments. This foundation is immediately built upon by two chapters on TDPs: the first of which defines the essence of a TDP program and the role of the RT within it. The second chapter on TDPs is about information recording skills and is included to assist the RT in communication of patient assessment data, a factor that is key to many TDP programs. I have always felt that RTs who are most likely to complain about "lack of respect" are usually the ones with the poorest communication skills and who often lack the confidence and competency to effectively communicate with physicians. Physician confidence in respiratory therapists conducting TDPs will be enhanced by proper communication of patient assessment data and this book will help prepare protocol therapists accordingly.

Parts II to IV delves into the specifics of obstructive airway disease, various cardiorespiratory diseases, infectious pulmonary diseases and pulmonary vascular disease. The main text of the book does not go overboard with pathophysiology in recognition of the fact that there are probably many more sources of appropriately detailed information in that regard. Instead, the book focuses on the specific pathophysiology that you really need to know, while standing at the bedside, to properly assess a patient with an eye toward selecting the most appropriate therapy.

Parts V to XII cover the following topics: chest and pleural trauma, disorders of the pleura and chest wall, environmental lung diseases, neoplastic disease, diffuse alveolar disease, chron-

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ly traced the O₂ supply line with her hand. It went over the back edge of the radiant warmer, dropped down, but did not trace back up the wall to the O₂ flow meter. Instead, it ran to a blender mounted on the wall behind the radiant warmer below the level of the mattress, and thus could not really be seen by those doing the resuscitation. The blender was set at room air. The O₂ connecting tubing that was connected to the O₂ flow meter that was mounted on the wall simply ran down the wall onto the floor and was laying there behind the radiant warmer. This error was corrected and the baby was finally resuscitated. This patient did not have a normal neurological outcome.

A look at both of these episodes reveals what are called latent errors. These are errors that are waiting to happen, and are caused by systemic design issues. In both of these cases, these were skilled, capable clinicians, trying to do the right thing. They were not screw-ups or losers; they were clinicians you would be happy to work with. Yet serious errors were made that put these patients in grave danger. So what caused these mistakes? Unsafely designed systems caused these errors. Consider the N₂ episode. A flow meter and regulator that looks just like every other O₂ regulator and flow meter were placed on a nitrogen cylinder. Nurses and doctors don't get a lot of training on handling and identifying the contents of cylinders. And the team left for the O.R. without an RT in attendance. It was very busy at that time and the O.R. was calling and the team did not want to wait for the RT to finish what she was doing, so they left without the RT. Consider the systems that were involved; policies and procedures, staffing, transport, and compressed cylinder systems. There was no extant policy prohibiting using a regulator in an unsafe fashion, e.g. knocking off the pins. A safer alternative to this had not been developed. There was no policy requiring an RT attend every intubated transport. If staffing were better, an RT might have been available in a timelier manner. A mix-up with a jury-rigged O₂ regulator on an N₂ cylinder was definitely a latent error waiting to happen.

Consider the botched resuscitation. Mounting both an oxygen flow meter and a blender on the wall in such a fashion that they could not both easily be seen was also a latent error. In fact, one might argue that having a blender there at all was an invitation for a gas concentration mix-up. Why add the complexity of it? They weren't using an oximeter at the time, so there really was no way to titrate FIO₂. By having the blender there at all, you increased the risk of error. Thus, a latent error was waiting to happen. I know of no evidence to suggest that a blender during resuscitation reduces risk of retinopathy of prematurity.

The point of this discussion is our growing understanding that errors in health care are often caused by poorly designed systems. A culture that promotes reporting of errors and a compelling desire to learn from shared experiences in a blame free environment can help to make our care models safer for our patients.



ic noninfectious parenchymal disease, neurological disorders and sleep apnea, plus newborn and early childhood respiratory disorders. All-in-all, these 9 parts of the book contain a total of 21 specific chapters. Part XIII, entitled "Other Important Topics," deals with some miscellaneous causes of respiratory embarrassment or failure from largely exogenous sources such as: near drowning, smoke inhalation, thermal injury, postoperative atelectasis and respiratory failure requiring ventilatory support. The section, Part XIV, contains a number of case studies demonstrating typical features of the admitting history, physical examination, and course for some of the more common causes of respiratory disorders such as: chronic bronchitis, emphysema, asthma, pneumonia, pulmonary edema, flail chest, pneumothorax, acute respiratory distress syndrome, idiopathic infant respiratory distress syndrome and postoperative atelectasis.

One of the nice features of the book is the inclusion of the S.O.A.P. approach to respiratory assessment and treatment planning at various points throughout the various chapters. While not every hospital permits this convention to be used in the recording of patient assessment and progress notes, it is, nevertheless, a useful technique to help organize one's thoughts and impressions and to help configure a treatment plan, even if only used in training. As for opportunities for improvement, there are just a few things I think could be included in future editions to add even greater value to an already excellent text. For one, I would have liked to have seen more emphasis on differential diagnosis, particularly within the realm of related disorders. For example, Part XI on neurologic disorders starts with an individual chapter on Guillain-Barré Syndrome followed by an individual chapter on Myasthenia Gravis. Instead of just diving in to Guillain-Barré, I would like to have seen some introductory material on the general respiratory implications of neurologic diseases, including a list of all the relevant neurologic disorders, not just these two, and the distinguishing features (differential diagnosis) between them. Another area that I would have welcomed would have been a separate chapter devoted to diagnosis and implications of cough, inasmuch as cough is very frequently the first and earliest sign of impending respiratory disease and it is often one of the manifestations that is most difficult to pin down at certain stages of disease. And, just to be nit-picky, the chapter on pulmonary function testing could have benefited from a chart like Table 6-3 in the chapter on cardiovascular system assessment. But those minor issues aside, this is most definitely the book that needs to be read and reread by those respiratory therapists who are charged with the important responsibility of conducting TDPs. Although we don't have a crystal ball, my prediction is that TDPs will comprise a major share of future respiratory therapy activities in a growing number of hospitals. The future belongs to those who are prepared to handle it. This book will prepare you for the future and help you to be a better therapist.

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