Clinical Research

F. Gao Smith, J. E. Smith (eds)
Bios: Abingdon, UK, 2002, 206 pp; indexed, illustrated

Occasionally, a book appears on the market that makes you envious that it was not around when you needed it yourself. Clinical Research by F. Gao Smith and J. E. Smith is such a book. In this slender volume, the authors have managed to compress virtually everything that the fledgling researcher needs to know for a successful start, from choosing the best time in one's career to get involved in research to dealing with peer review reports of the finished manuscript.

The authors have organized the information in 41 concise chapters that can be loosely grouped under the headings: basic considerations, study design, data analysis and presentation. One finds in Chapter 2 a short but comprehensive overview of the research process, beginning with the choice of topic and supervisor, through searching the literature and defining the hypothesis, designing the research protocol and record keeping, matters of Ethics Committee approval and government registration, applying for funding and grants, and, finally, writing the paper. These topics are then taken up in more detail in the following chapters.

Study design, data collection and data analysis account for 25 of the 41 chapters. This is appropriate considering the fact that poor study design and incorrect statistical analysis are among the primary reasons why submitted manuscripts are rejected. In these chapters, the reader is guided through the issues of randomization, determining sample size, calculating power, collecting data and choosing the appropriate statistical methods for data analysis. The most important of these are described briefly but adequately in individual chapters.

There is one shortcoming worth mentioning: the chapters on grant applications, Ethics Committee approval, which academic degree to aim for and what time during training is best to get started are restricted to conditions in the UK (and perhaps Ireland). This slightly reduces the usefulness for readers outside the British Isles, although the basic considerations, if not the details, remain the same for other countries as well.

In summary, this book should be required reading for anyone intending to become involved in clinical research. The novice, as well as even more experienced investigators, can avoid wasting time, producing useless data, having manuscripts rejected and squandering precious resources by spending a few hours studying the chapters.

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Clinical Teaching – A Guide to Teaching Practical Anaesthesia

J. D. Greaves, C. Dodds, C. M. Kumar, B. Mets (eds)
Swets & Zeitlinger: Lisse, The Netherlands, 2002, 276 pp; indexed, illustrated

I have been teaching clinical anaesthesia to residents and students for many years and have been muddling my way through this task with a modicum of clinical success, but with little formal training in the didactics of medical teaching. Imagine my joy when I stumbled across Clinical Teaching – A Guide to Teaching Practical Anaesthesia. I was certain that this multi-authored book would provide me with the
techniques and tips that would facilitate my endeavours to instil my knowledge and skills into the budding anaesthetists under my supervision. On leafing through the book, I found text highlighted in boxes that seemed to condense the salient points, and illustrations that promised to loosen up the dry subject matter.

The table of contents raised my hopes even further. In the first section, ‘Setting the scene for learning’, there were chapters on Assessment of clinical competence, The non-technical skills of anaesthetists, Problem-based learning, and Educational supervision and monitoring. The clinical teaching section promised Teaching practical procedures, Giving feedback and monitoring progress and Helping trainees to develop decision-making skills: I was certain that the reward for my efforts invested in working through this book would be my becoming a better teacher.

Problem-based learning (PBL) sounded like just the right chapter with which to begin. I was offered a theoretical treatise on what PBL might or might not be (‘There is no consensus as to what constitutes Problem Based Learning…’), and was informed in the final paragraph of the chapter that ‘A programme of faculty development is the key to successfully introducing a programme of problem based learning discussions’.

Edified by this, I turned to the chapter on non-technical skills. I learned that ‘The most important thing to remember is that non-technical skills training is about teaching people to behave in a safe and effective manner at all times, in all situations and to be good anaesthetists’. Suitably enlightened I decided to skip the theoretical embellishments and go straight to the chapter Teaching practical procedures, expecting that this would offer some how-to-do guidance. It began with a review of the literature showing that there is no test that will predict future performance requiring manual dexterity. This was followed by a review of the literature on learning curves. I learned how many endoscopic sphincterotomies, Ivor Lewis oesophagectomies or cataract phaco-emulsifications I would have to perform to become proficient at the tasks. I was explicitly warned not to teach something that I could not do or had never done. The final paragraphs of the chapter actually imparted some useful information on theoretical considerations of the practical teaching process.

The third section of the book is on the use of simulators for teaching. Although it was not exactly what I was looking for, it had a proper structure and gave information that one could use in daily practice. It seemed oddly out of place and would have profited from being in a different position.

Although this book suffers from repetition, superfluous information, poor structure and is fraught with faulty orthography, poor punctuation and unusual grammar, one must assume, in all fairness, that someone could profit from reading it, although, in all honesty, I cannot imagine who that could be.

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Data Interpretation in Critical Care Medicine

B. Venkatesh, T. J. Morgan, C. J. Joyce, S. C. Townsend
ISBN: 0-7506-5273-X; Price £21.00

This little book comes hard on the heels of Clinical Data Interpretation in Anaesthesia and Intensive Care edited by Bonner and Dodds and published by Churchill Livingstone. The similarity in title is striking so how do they compare? One difference is that Bonner and Dodds (from the UK) include an introductory section in each chapter on how to interpret sets of results while Venkatesh and colleagues (from Australia) take a running jump at each section with no preamble. There is no chance, therefore, to get the brain ‘switched on’ to each section. The main difference, though, is that Bonner and Dodds is orientated to the UK primary Fellowship Examination while Venkatesh and colleagues is primarily for candidates preparing for the Australian Fellowship Examination in Intensive Care Medicine (FJFICM). Therein lies the crucial difference as the questions for the latter are inevitably much more complex.

The book is divided into 10 sections, each one orientated towards a specific clinical area, such as ‘Blood Gases, Cardiovascular, Respiratory Mechanics, Haematology, Intoxications and Radiology’. The set of ‘snap shot’ questions is followed by the answers and then an extensive list of further reading at the end of
each section. I am not sure how useful the latter would be to the reader as they include some pretty obscure and dated references.

Personally, although data interpretation is clearly important, I find the whole process of coming to a diagnosis or proposing a management strategy from the data presented rather artificial. Often the clinical details are very brief, in some cases non-existent. I found this rather off-putting at first. In addition, some of the diagnoses are either extremely obscure (such as rhinocerebral mucormycosis) or orientated towards more tropical climes, such as management of a Vibrio vulnificus infection! In addition, the poor quality of some of the artwork made diagnosis almost impossible, e.g. a chest radiograph showing a ventriculo-peritoneal shunt and some of the ECGs, reproduced at quarter normal size.

However, do not be put off by the above. There are some excellent clinical and data scenarios and the reader is rewarded many times over by attempting to answer the questions. For example, having gone through the section on ‘Respiratory mechanics, ventilation and oxygenation’, I really did feel much more confident in explaining pressure and flow waveforms to one of our residents who is studying for the primary Fellowship of the UK Royal College of Anaesthetists.

I suspect that in the UK and Europe, this book will prove most useful to senior residents and consultants working full time in Intensive Care and, to a certain extent, Accident and Emergency and Anaesthesia. It should also encourage these departments to construct their own scenarios and build up their own libraries of questions for data interpretation. Those studying for primary Fellowship in Anaesthesia in the UK might well find some of the scenarios rather too complex.

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