The primary aim of this book is to assemble data needed by clinicians in their daily decision making.

The format differs from usual textbooks in that it assumes a basic knowledge of pediatric urology and so is focused on pivotal clinical questions. Each chapter begins with a statement of the primary and secondary aims for the diagnosis and treatment of the condition, followed by a synopsis of the evidence we found for those aims. Information from the primary sources is summarized so that readers know how studies were done and reported.

To write the book an outline for each chapter was made including questions frequently encountered in diagnosis and management, and then broad-based computer searches were done to identify articles potentially answering them. We followed the general methodology of a guidelines panel to review materials and results for pertinent information to extract.

We gave greater emphasis to meta-analyses, such as Cochrane Reviews, RCTs, and prospective studies, as well as to well-done retrospective analyses with clearly defined objectives and well-described results. In the absence of these, useful information still could be obtained from primary sources that otherwise would not rate high in current evidence-based standards.

Why do this?

Numerous studies report wide variations in practice among pediatric urologists, despite the obvious truth that recommendations a patient receives should not be an accident of geography. One step towards greater consistency is summarizing the expected findings and outcomes from diagnostic and management options. Rather than base decisions on surgeon opinion and preference, this book facilitates rapid review of published data to guide treatment.

Study of the available evidence for most topics in this book also highlights need for multicenter cooperation to enroll sufficient patients in trials to answer important clinical questions. Most urologic conditions in children simply do not affect sufficient numbers of patients for single centers to perform high-quality studies. For example, no RCT proves benefit of antibiotic prophylaxis in children with either prenatally detected hydronephrosis or VUR, and several centers would need to pool their patients to power such a trial.
Management of various conditions by pediatric urologists has been challenged by outside specialties for focusing too much on surgical outcomes rather than benefits to the child. We are experts in correcting reflux, or predicting when it will spontaneously resolve, but pediatricians are asking which children need this expertise. A common theme throughout this book is that there is less evidence on health benefits from therapy than on surgical success rates. To that end, the book may also stimulate new avenues of research.

Writing this book has changed our own practice in many ways. When questions arise, for example, in preoperative conferences, we no longer ask each surgeon what he or she would do, but instead review available published information to narrow the options. Although we each trained in different centers and bring different perspectives to discussions, this process has reduced variations in our individual practice, with the additional benefits of simplifying on-call coverage, instructions to nurses, and fellow training. Studying the sometimes weak evidence on which clinical decision making is based has stimulated us to design better prospective trials, some in collaboration with other centers.

Here are three specific examples of changes made in our practices prompted by this book. We operate much less often on an “undescended” testis in boys older than 1 year, especially when records from the hospital and initial primary care provider indicate it was descended at birth, given the evidence cited in Chap. 5 that even specialists are sometimes fooled by retractile testes and most of those testes not in the scrotum after a normal newborn exam return to the scrotum during puberty. We no longer consider baseline renal function or diuretic washout times indications for pyeloplasty, since repair most often does not improve differential function and “obstructive” drainage curves do not predict future function loss. We now use results of semen analysis at age 17 to recommend varicocelectomy, since testicular size discrepancy does not appear to correlate with fertility potential.

Our work inevitably has similar shortcomings as textbooks. It is not possible to include every published study in a review, and while we tried to cast a broad net to identify articles and then extract the best data from them, we still could have overlooked a pertinent report. To minimize intrusion of our own opinions we emphasized summaries from the original sources, but it is difficult to be completely objective.

Nevertheless, we believe this book will be useful to pediatric urologists in training and at all stages of practice, and hope it helps to improve care for the children entrusted to us all.

The book is designed for use as a manual, and so studies are sometimes mentioned in several sections within a chapter. It was written over a 1.5-year period beginning in March 2011, with final editing completed in October 2012. An outline with specific clinical questions was used as a guide by authors, who then performed computer searches to identify articles containing information to answer those questions. After drafts were completed and edited, we met as a committee, repeating selected computer searches and reviewing and critiquing each chapter to finalize the manuscript.
Two authors have advanced degrees of relevance, one a Master’s in Public Health and Epidemiology and the other a Master’s in Clinical Studies. Nevertheless, the Editor bears final responsibility for the reporting in this book.

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