# Essential Clinical Skills in Pediatrics

A Practical Guide to History Taking and Clinical Examination Anwar Qais Saadoon



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A Practical Guide to History Taking and Clinical Examination



Anwar Qais Saadoon Al-Sadr Teaching Hospital Basra Iraq

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- To the Iraqi people who fought terrorism, sacrificing their lives for freedom and peace.
   Without their sublime sacrifices, I could not have written these words for the world.
- To the striver Iraqi doctors who are doing their best, working day and night to treat and save the lives of millions of people, not only in Iraq but across the globe as well.
- To the world's best family:
  - My father, who taught me how to leave my imprint wherever I go.
  - My mother, my constant source of love and kindness. Without her warm-heartedness, I would not have been able to pass through the journey of life.
  - *My sisters and brothers, especially Ayman, my teacher and mentor.*
- To my dear relatives, in particular, my uncles Ali Saadoon and the great teacher Muhammad Abdallah. I will never forget their support.
- To all my friends, especially my soulmates, Marwan Abdulrahman and Samer Jawad.
- To the respectable teachers and wonderful students at Basra Medical College. I am proud to be a part of them.
- *To those people who still live in my heart and will stay there forever.*

Any book that is written should solve a problem. And if the book solves that problem it is worthy of publication and purchase. Such is the case of *Essential Clinical Skills in Pediatrics* by Dr. Anwar Qais. As a young medical student, Dr. Qais found that he needed a reference that would assist him in history taking and physical exam skills. That was the problem—no such reference existed. In subsequent years, and with additional training in pediatrics, he prepared a volume that solved that problem. He has done so in a fashion that is both useful and elegant.

The book, although brief, covers all the important issues in pediatrics. There are two parts: one on history-taking skills, with specific direction based on symptoms being assessed. The 31 symptoms chapters include all the pertinent topics of child healthcare, both acute and chronic complaints. The second part deals with the physical exam of the child at all stages of development. Throughout the book, there are many charts, graphs, and special lists pointing out clinical tips and key points. This makes the book very readable and user-friendly. I particularly like the fact that Dr. Qais has included pertinent points of family history and social history, which are often issues of critical importance. I also appreciated the clear instructions about setting the stage for an interview and tips on interpersonal connection with the patient and family.

This book is well written and very helpful. Instead of delivering information around a topic, it tells the reader what to do, what to ask, and what to examine. The reference section is complete and informative and serves as a starting point for more in-depth reading on particular diseases and conditions.

Indeed, Dr. Qais saw a problem and has solved it with the production of this book. I recommend his learning guide for students, residents, and practitioners of pediatrics.

Stephen Ludwig Professor of Pediatrics Children's Hospital of Philadelphia Perelman School of Medicine University of Pennsylvania Philadelphia, PA USA

Anwar Qais Saadoon should be congratulated on the publication of his textbook, *Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination.* The content and style are of high quality and make the information very accessible to a student or clinician who wishes to learn both the art and the science of good history taking and clinical examination.

Eliciting an accurate and complete history and the performance of a thorough and reliable clinical examination remain the foundation on which both the diagnosis and the assessment of a patient's progress are built. It is easy to forget this in these days when investigations are so readily accessible, but clinical skills will always be fundamental to medical decision making. So many times, I have seen a diagnostic problem solved by a consultation with an experienced doctor, and it is very common to see this come about when the consulted doctor returns to the basics, takes a good history, and performs a good examination.

History and examination in pediatrics pose particular challenges to the clinician's skills when the patient often cannot tell their own story, and when the examination may be influenced by the degree of cooperation. The book has very practical tips to assist with this.

This book would be very suitable for both undergraduate and postgraduate students learning pediatrics.

The key points are well emphasized. I enjoyed the introductory tips on how to prepare for the consultation.

The writing style, similar to a student's lecture notes, and the liberal use of illustrations make the content live up to the title—it is indeed both essential and practical.

> Mike South Professor of Pediatrics University of Melbourne Royal Children's Hospital Murdoch Children's Research Institute Melbourne, VIC Australia

"To study the phenomenon of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."

-Sir William Osler

In the majority of cases, clinical diagnosis can be made on the basis of a detailed history supplemented by careful physical examination of the patient. This is the clinical method, and mastery of the clinical method is the key to the art of medicine. When the patient is a child, this is more challenging, as patients can vary from a preterm newborn to a fully grown adolescent, and medical conditions vary greatly at different ages. Moreover, in the younger child, the doctor may be faced with unwillingness of the patient to be examined and yet have the requisite skills to acquire the necessary clinical information.

Dr. Anwar Qais has produced here a very useful book, aptly entitled *Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination*, as this describes exactly what the book aims to do: namely, to provide in an accessible way a concise summary of clinical pediatrics based on the practical application of the clinical method.

The first part deals with history-taking skills and symptomatology in over thirty common conditions in general pediatrics. A detailed account of the specific history to be explored in each condition is followed by key points outlining essential facts underlying these specific points in the history.

The second part deals with the physical examination of both the newborn and the older child.

The text is very readable, being presented in a lecture-note format with highlighting of important facts and supplemented with marginal notes, clinical tips, boxes, and tables where appropriate. The whole text is extremely well referenced, with over 190 references provided.

This small volume will be of great value both to undergraduate medical students and to postgraduate pediatric trainees working for their higher professional qualifications.

Peter B. Sullivan Associate Professor of Pediatrics, Medical Sciences Division University of Oxford, Oxford University Hospital NHS Trust Oxford, UK

There is no monopoly on wisdom with regard to what makes a good book. What works for one learner will not work for another, and so additions to the world literature are incredibly welcome. This new book tackles old topics with enthusiasm. At its heart, it aims to provide guidance on how to take a good history and examination. This is no small undertaking. When we asked to summarize the required undergraduate teaching for UK medical schools, we were able to condense the curriculum into the single statement: "Be able to take a history and examination, and provide basic life support for a child and/or young person." This book tackles the former in considerable detail. It differs from other books by offering detailed referencing for the interested reader, covering each system in depth.

It is with some chagrin that I have, over the years, reflected upon the lack of examination skills that I picked up in medical school. It was not until I studied for the MRCP (UK) clinical examination that I developed a "polished routine" and as I point out to students, "the sooner you learn a proper technique, the sooner you will start to gain experience." I would, therefore, advise readers to practice, practice, practice.

This book will help you to start; it acts as a beginning. Every journey requires a beginning, and this seems like a solid place to start. Only experience and repeated exposure to examination in all ages will result in mastery of physical examination. Be courageous; take careful histories and complete thorough examinations on every child you see. Commit to a diagnosis before seeking senior review and in a few years reflect on your own journey.

Will Carroll Honorary Reader in Child Health Chair of MRCPCH Theory Examinations, Keele University Stoke-on-Trent, UK

# Preface

"The best of people are those who are most beneficial to people." —The Prophet Muhammad (PBUHHF)

During my study of pediatrics in the fifth year of medical college, I encountered a problem: There was no single, reliable, and concise reference pertaining to easily and comprehensively taking the history and conducting a physical examination of a newborn or older child. Such a resource would be useful in carrying out the objective structured clinical examination (OSCE). The lack of a single resource forced me to use multiple books for adequate knowledge regarding history taking and physical examination, and I had to use additional references for OSCEs. Searching multiple resources was very difficult and time-consuming. In the midst of this challenge, the idea for this book arose.

I have written this book to help others overcome the problems I had encountered. I have tried my best to make it as simple as possible. Moreover, I have striven to make this book comprehensive, informative, practical, and clinically oriented, justifying its title, *Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination*.

The book is divided into two main parts, and their order has been revised to provide an intuitive structure:

- Part I discusses history-taking skills and the evaluation of the common pediatric symptoms; it contains more than 30 "History Stations," with key points, case scenarios, and many tables.
- Part II gives a close look at the clinical examination of the newborn and older child.

This book is addressed to undergraduate medical students preparing for clinical exams. It will also be helpful for a wide audience of postgraduate pediatric trainees working toward higher professional qualifications. Here is hoping that this book fulfills its aim of providing an essential and concise summary of clinical pediatric practice, not only in Iraq but in the rest of the world as well.

Basra, Iraq

Anwar Qais Saadoon

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Further, my sincere appreciation extends to the faculty of the Department of Pediatrics at Basra Medical College, and in particular, the Head of the Department, Professor Sawsan I. Habeeb, who encouraged me to put this book together; Professor Mea'ad K. Hassan; Professor Jenan G. Hassan; Assistant Professor Aida A. Manther; Dr. Baha' Al-Ethan; Dr. Assim K. Assim; Dr. Hussein J. Mohammed; Dr. Miami K. Yousif; Dr. Duha S. Jumaa; Dr. Jawad K. Atiya; Dr. Abbas A. Khazaal; Dr. Hanan R. Abood; Dr. Asa'ad I. Ashour; and Dr. Aliaa M. Radhi. I am thankful to all those great teachers who taught me the basics of pediatrics.

I would also like to state my gratitude for Professor Stephen Ludwig, Professor Mike South, Professor Peter Sullivan, Professor Hamish Wallace, Professor F. Bruder Stapleton, Professor Jeremy Friedman, and Dr. Will Carroll for their kind forewords or recommendations.

In addition, I would like to express my sincere and heartfelt thanks to all doctors at Dermatology Division and Plastic Surgery Division at Al-Sadr Teaching Hospital for their kind support.

My appreciation also extends to the brilliant copyeditor, Dr. Albert M. Liberatore; without his help and support, I could not take this book forward.

I also need to thank Dr. Samer S. Hoz and Mr. Thomas Charles, who gave me stimulating suggestions and support while I was putting this book together. Lastly, I offer my special thanks to the talented Iraqi illustrators Mohammad I. Nasser, Hussam A. Zachi, and Omar Riad for their wonderful figure sketches.

# **About the Book**

- *Essential Clinical Skills in Pediatrics* is a concise learning guide dedicated to the full scope of pediatric history taking and clinical examination for use in OSCEs.
- Instead of delivering information about a topic, this book guides the student or clinician simply and methodically regarding what to ask when taking a history and how to perform a comprehensive physical examination.
- *ECS in Pediatrics* offers more than 30 "History Stations" covering the most common pediatric cases, as well as 10 "Examination Stations" covering examinations of the different body systems.
- The lecture-note style and the use of key points, clinical tips, notes, tables, figures, charts, and boxes listing the most important features render the book reader-friendly.
- The quick-read bulleted text and short sentences facilitate the easy-to-read format.
- *ECS in Pediatrics* contains many illustrations showing the correct way to perform clinical examinations.

# **About the Author**

**Dr.** Anwar Qais Saadoon is a Resident Physician at Al-Sadr Teaching Hospital in Basra, Iraq. Graduating with distinction from the University of Basra College of Medicine in 2013, he has been a member of the Iraqi Medical Association since 2015. Dr. Qais has published several medical articles, which have been cited by numerous national and international newspapers, websites, and satellite channels. In 2015, he served as a manager of Al-Mudaina District Primary Health Care Center.

Dr. Qais has attended numerous conferences on pediatrics and conducted academic presentations in the field of pediatrics. Currently, he is pursuing a number of academic research projects and working on two books. In his free time, he enjoys reading, writing, spending time with his family in Basra, and sitting on the banks of the Euphrates, in conversation with his friends.



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Part I

History-Taking Skills and Symptomatology



# **Basics of History Taking**

Asking questions is the ABC of diagnosis. Only the inquiring mind solves problems.

-Edward Hodnett

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#### 1.1 Introduction

1. A child is sick. The parents are worried. And time is of the essence. Few moments draw upon the full scope of a doctor's knowledge and skill as when an unwell child presents with an as-yet-undiagnosed condition and needs your help. Before you can treat the condition, of course, you must diagnose what it is—and doing that will require you to take a history, carry out a relevant physical examination, and conduct investigations to confirm what the history and examination suggest. For the pediatrician, all of these are made significantly more challenging by the fact that your patient may not be capable of contributing to your diagnosis the way an adult would. Asking just the right questions and looking for all the right signs are crucial. And helping you to do that is the purpose of this book.

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- 2. Before the start of the interview, be sure to read all referral letters and past information.
- 3. If the child is not old enough, the best person (informant) to give the history is the child's mother or someone else closely involved in the child's care. If the child is old enough, however, you may direct questions to him or her.

A smart mother makes often a better diagnosis than a poor doctor. —August Bier

- 4. As much as possible, take the history while sitting in a calm, "child-friendly" room.
- 5. Have toys accessible for children of different ages, as this will facilitate your task.
- 6. Be holistic in your approach to the informant and the child. Aggressiveness and a rude attitude invariably backfire, causing bottlenecks in your interview and clinical workup.
- 7. Introduce yourself in a friendly manner and listen carefully to the informant's or child's report. You can then ask direct questions to fill in the gaps and refine the details.
- 8. Talking to the child must be done in a gentle, age-appropriate manner (see Fig. 1.1) [1].
- 9. Call the child by his or her given name to establish a rapport. Ask if he or she has a nickname and whether the child prefers to be called by that name.
- 10. During the interview, observe the child's play, appearance, behavior, and gait. Such factors may help you to make a reasonable diagnosis and offer the correct management [2].
- 11. Maintain good eye contact with both the child and the informant. Always be friendly and maintain a respectful manner and pleasant expression.
- 12. Give the child and informant your full attention, listen carefully to what they say, avoid having physical barriers between you and them, and try to make them feel at ease and comfortable.
- 13. It is helpful to use the same structured approach every time you take a history. Such an approach ensures that important points are not missed. This increases your efficiency too [3].
- 14. The following structural approach is appropriate:
  - Identity (patient demographics)
  - Chief complaint(s) (presenting complaint)
  - History of present illness (history of presenting complaint)
  - Past history:
    - Birth history

Prenatal

Natal

Postnatal and neonatal

- Past medical and surgical history



Newborn: First month of life (first 28 days of life)



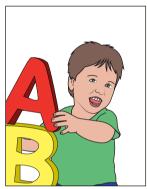
Toddler: 1 to 3 years



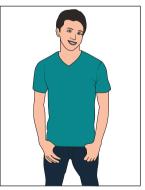
Schoolchild: 6 to 12 years (some consider it from 5 to 18 years)



Infant: 1 to 12 months



Preschool child: 3 to 6 years



Adolescent: 12 to 18 years (some consider adolescence to be the period from 10 to 18 years or from 12 to 20 years)

Child: Birth to 18 years (some consider a child <15 years)

Fig. 1.1 The different ages of children

- · Medication history
- Developmental history
- Immunization history
- Feeding/dietary history
- Family history
- Social history
- Review of systems
- 15. At the end of the interview, ask the informant whether he or she has any additional information to provide. Then thank the child and his or her family and explain the next steps.

#### **Clinical Tips 1.1**

To have effective conversations, follow these tips:

- Your words should be clear and audible.
- Start with open-ended style questions.
- Do not interrupt the informant.
- Use silence to encourage the informant to explain things.
- Try to be relaxed and unhurried.
- Do not use medical jargon during interaction with the family.
- You may need to clarify and summarize what you understand; it is better to do this more than once [4].

#### 1.2 Identity (Patient Demographics)

A patient's identity should include the following:

- 1. Child's name
- 2. Child's age in years (with months and days) and date of birth
- 3. Sex of the child
- 4. Address and birthplace
- 5. Nationality, ethnicity/race
- 6. Name and relationship of the informant (source of information)
- 7. Date and time of the interview or admission
- 8. Source of referral

#### Key Points 1.1

- Knowing the child's name is important for both identification and establishment of rapport.
- Write down the child's age, because each age group has different problems and developmental achievements; consequently, the approach to a child depends on his or her age.

- Knowing the child's sex is very important because some diseases are more common or occur only in a particular sex, such as hemophilia and Duchenne muscular dystrophy (DMD), which occur almost exclusively in males.
- The child's address and birthplace are of import in the history because certain diseases are common in some areas more than in others; for example, sickle-cell disease has a high prevalence rate in sub-Saharan Africa [5].
- The question of nationality, ethnicity, and race of the child may be important because some diseases occur more in people of certain nationalities, ethnicities, or races (e.g., Kawasaki disease is more common in Japanese children and acquired lactase deficiency is more common in African-Americans and Asians.) [6]

#### 1.3 Chief Complaint(s) (Presenting Complaint)

- The chief complaint may be a symptom, a sign, or an abnormal laboratory test result (or a combination of these items) that has caused the child or the parents to seek medical help.
- Always start with open questions, such as: "What is the main problem?" "Tell me why you are here?" "How is he/she?" "Why are you worried?" "How can I help?" These encourage the patient and the informant to open up and talk (see Box 1.1) [7].
- Clarify what they mean by any term they use, and always record the patient's (or informant's) own words.
- Note the duration of each complaint, recording the complaints in chronological order.

#### Box 1.1: The Three Main Styles of Questions [2, 8]

- 1. Open, permissive questions, such as "Tell me more about the pain," encourage the patient to talk. It is very useful to start with such questions when you are trying to find out what is going on.
- 2. Direct questions such as "When did the pain start?" look for a specific piece of information.
- 3. Leading questions such as "That is what worried you, isn't it?" may be deceptive and lead the patient to answer in an unacceptable way. No doubt, all these types of questions have their place in history taking.

If you don't ask the right questions, you don't get the right answers. A question asked in the right way often points to its own answer.

- Edward Hodnett