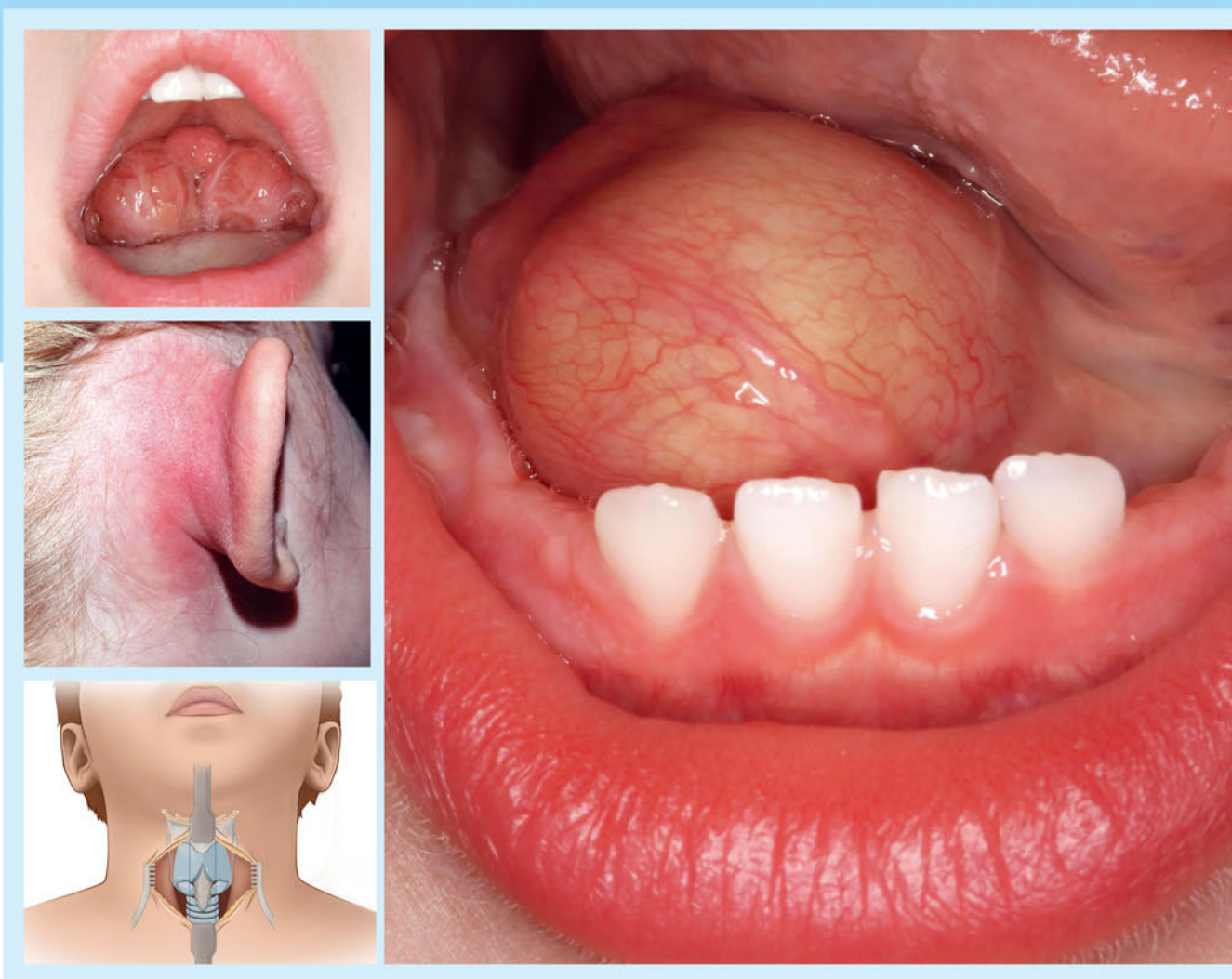


Pediatric Otolaryngology

Practical Clinical Management

R. W. Clarke



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For Doreen and Emmet Clarke

“Nanny and Emmet”

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Foreword

It gives me great pleasure to write the foreword to this new textbook of pediatric otolaryngology, which seeks to encompass the essentials of the subspecialty within a single volume.

Pediatric otolaryngology has only become a subspecialty in relatively recent times. The first children's hospitals were founded during early 19th century, and by the end of the century, the first pediatric ENT ward was in existence in the Children's Hospital of Warsaw. But it was not until the middle of the 20th century that pioneering surgeons began to establish pediatric otolaryngology as a distinct subspecialty. Pediatric intensive care developed in the 1960s, and initially, this produced an epidemic of subglottic stenosis secondary to the intubation and long-term ventilation of premature infants who in earlier years would have perished. This, in turn, stimulated the development of open surgical techniques for laryngotracheal reconstruction in the early 1970s, and for many years thereafter, development of the subspecialty in Europe and North America largely ran in parallel with the evolution of pediatric airway surgery. Today, there is a network of children's hospitals in major cities across the developed world, each with a thriving department of pediatric otolaryngology, where multidisciplinary teamwork has increasingly become the normal practice for managing children with complex, often multisystem medical and surgical problems.

As the subspecialty became established, pediatric otolaryngology societies came into being at both national and international levels. In 1973, the Society for Ear Nose and Throat Advances in Children (SENTAC) was founded in the United States. In 1977, the European Working Group on Pediatric Otorhinolaryngology held its first meeting, and this was the precursor of the European Society of Pediatric Otorhinolaryngology (ESPO), which is now the umbrella organization for all the national European

pediatric ENT societies and holds a large biennial congress attracting speakers and delegates from around the world.

As the subspecialty has become more important in clinical practice, postgraduate training and examinations in otolaryngology have been modified to incorporate it. A separate section in the British Intercollegiate FRCS examination was introduced in 1999, and in 2014, agreement was reached to add a pediatric section to the European Board Examination in ORL-HNS.

Since the middle of the 20th century, a number of textbooks on pediatric otolaryngology have been published, ranging from short handbooks to comprehensive multivolume reference works. There are now also various online resources, but nevertheless, the appeal of a printed book endures! There is, however, the need for a readable, single-volume book that is sufficiently comprehensive to prepare candidates for their higher surgical examinations, to act as a ready source of information for general otolaryngologists, and to serve as a quick point of reference for specialist pediatric otolaryngologists. Such a text sometimes derives from a successful course, and many of the authors of this book have taught on the annual British Paediatric Otolaryngology Course. Ray Clarke's dedication to teaching has inspired him to compile and edit this book, and in doing so, he has assembled an eminent group of authors to address all aspects of pediatric otolaryngology from a practical point of view, which will inform everyday clinical practice. I congratulate them upon their efforts and highly recommend their book to you.

*Martin Bailey, BSc, FRCS, FRCSEd
Secretary-General*

European Society of Pediatric Otorhinolaryngology

Preface and Acknowledgments

A small but increasing number of otolaryngologists devote the greater part of their professional time to children, usually in the specialist children's hospitals or the pediatric departments of large general hospitals. Pediatric otorhinolaryngology (ORL) is in the ascendancy and has changed out of all recognition during the professional lifetimes of the contributors to this book. Advances in endoscopy, in techniques to unravel the etiology of hearing loss, in the recognition and rehabilitation of the hearing-impaired child, in anesthesia and perioperative care, in diagnostic imaging, and in our understanding of the very different pathophysiological responses of children to disease have all made for an exciting, rewarding, and growing subspecialty. We are increasingly cognizant of the impact of disease on families and of the need for multidisciplinary teams to communicate with and to support children and their families often over a period of several years and, in some cases, over the lifetime of the child.

For the foreseeable future, it seems likely that ORL generalists with a mixed adult and pediatric workload will continue to manage many, probably most, ORL interventions in children; I hope this book will fulfil a need for them not easily met by the standard ORL texts. While the dedicated pediatric ORL will want to supplement his/her reading with recourse to the larger reference tomes, I hope this small book will be a useful working text covering most of the clinical scenarios he/she will come across. I am aware of the increasingly important place of pediatric ORL in the formal examinations and assessment of aspiring ORL specialists, and the chapters ahead will more than adequately cover their needs.

Putting this book together has been, much like pediatric ORL, a collaborative effort. I have been greatly helped by many friends and colleagues. I am indebted to the chapter authors, who patiently stuck to their brief of focussing on practical advice in the day-to-day management of children and their families and who showed great forbearance in accepting delays, indulging my many requests for changes, updates, and rewrites, and in putting up with my sometimes ruthless and seemingly quirky editorial changes to ensure consistency and harmony between chapters. Vicki Gregory supported me and the chapter authors throughout with her almost saintly patience, courtesy, and charm. She made many

substantial contributions to the text and suggestions to help with clarity of some difficult concepts. The book truly would not have happened without her. My former "Chief" and mentor, Peter Bull, FRCS, emeritus consultant at Sheffield Children's Hospital, who has always been a source of inspiration to me, generously put at my disposal some of his excellent collection of clinical images. Dr. Shiv Avula, pediatric radiologist in Liverpool, supplied many of the radiological images, and the team at the Medical Photography Department at Alder Hey were ever helpful and supportive.

I have been privileged to supervise, teach, and examine numerous young ORL specialists over the years and have taken great joy from seeing them progress. Much that I have learned from them, and from what they tell me are their learning needs, has found its way into this book in the "nuggets of wisdom" that I have incorporated in most chapters as "key points" and as highlighted text boxes.

Like all pediatric ORL specialists in the United Kingdom and throughout Europe, I am indebted to Martin Bailey, FRCS, Secretary-General of the European Society of Pediatric Otorhinolaryngology (ESPO) and thank him for his generous foreword.

Lastly, I thank my wife Mary for her support throughout and for putting up with my many hours on the computer when I should have been attending to more mundane domestic duties!

I am most of all grateful to the children and families I have known in a long career in pediatric ORL. The poet Seamus Heaney evokes the sense of wonder and magic that a child feels during his first contact with the world of medicine and healing when he describes his local doctor visiting the Heaney farmhouse in the 1940s, "*like a hypnotist unwinding us*."^{*} That sense of wonder transcends all of the technological and scientific advances and remains a constant source of joy to those of us who work with children. Few of our patients will go on to be Nobel prize-winning authors, but they may vividly remember their first encounter with us. What a privilege we enjoy in looking after them!

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* The phrase is from Seamus Heaney's "Out of the Bag" in the collection "Electric Light," Faber and Faber, London, 2002.

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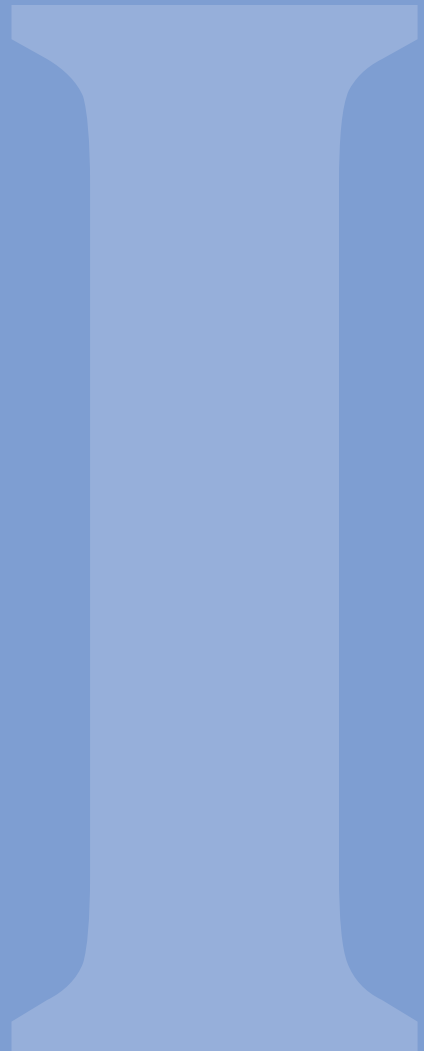
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Part I

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1 Introduction to Pediatric Otolaryngology

R. W. Clarke

1.1 Introduction

The majority of ear, nose, and throat (ENT) specialists have experience in both pediatric and adult practice; many work in hospital or clinic settings where both adults and children are cared for. A growing number of clinicians in recent years have focused their practice exclusively on children and work in a specialized children's hospital or in the children's section of a larger general hospital.

This specialization and streamlining of expertise has made for great advances in the management of children with otorhinolaryngology (ORL) disorders.

1.2 Training and Accreditation

The diagnosis and management of ORL conditions in children forms an integral part of the syllabus for all ENT surgeons in training. Examinations in ORL, including the European Board Examination,¹ put much emphasis on this, and in general, otolaryngologists are well trained in the principles of looking after children with common disorders of the upper respiratory tract. Although subspecialization in ORL is largely based on "system" (otology, head and neck surgery, rhinology) rather than on age, a growing number of otolaryngologists now choose to undertake advanced training in a fellowship program in one of the major children's hospitals with a view to taking a special clinical interest in the care of children. In addition to basic and fellowship training, it is essential that all of us who care for children have up-to-date knowledge and skills in topics such as child protection, prescribing for children, analgesia, and pediatric resuscitation, and that we continue to maintain and refresh this knowledge and skill.

1.3 History of Pediatric Otorhinolaryngology

Doctors have treated ENT disorders in children from the beginnings of medicine, centuries before otology or laryngology emerged as discrete specialties. There are references to tonsillectomy in some of the earliest clinical texts, for example, Celsus's "De Medicina" dating from the first century. Tracheostomy for the relief of airway obstruction has been known since ancient times.^{2,3} Congenital deafness, craniofacial dysmorphism, infective disorders of the head and neck, and perinatal airway obstruction were recognized and described long before otorhinolaryngology developed. As the age of enlightenment and scientific discovery progressed throughout the 18th and 19th centuries, clinicians began not only to bring the principles of

science to bear on their work, but also to focus their attention on particular body systems and, in some cases, specific diseases (medical specialization). Otology grew largely from the early endeavors of the clinics of Adam Politzer (1835–1920) and Josef Gruber (1827–1900), who treated both adults and children at the Allgemeines Krankenhaus in Vienna, Austria, where they hosted hundreds of pupils from all over Europe and North America. These pupils included Sir William Wilde (1815–1876) and Joseph Toynbee (1815–1866) in Britain, each of whom published what were to become definitive English language textbooks of the new specialty.^{4,5} Toynbee's avowed aim was "to rescue aural surgery from the hands of quacks." Wilde's book includes a substantial section cataloguing and recording the etiology of deafness in children, and an impassioned essay championing the cause of improved education for "deaf mutes." Wilde also described an early form of myringotomy (► Fig. 1.1,

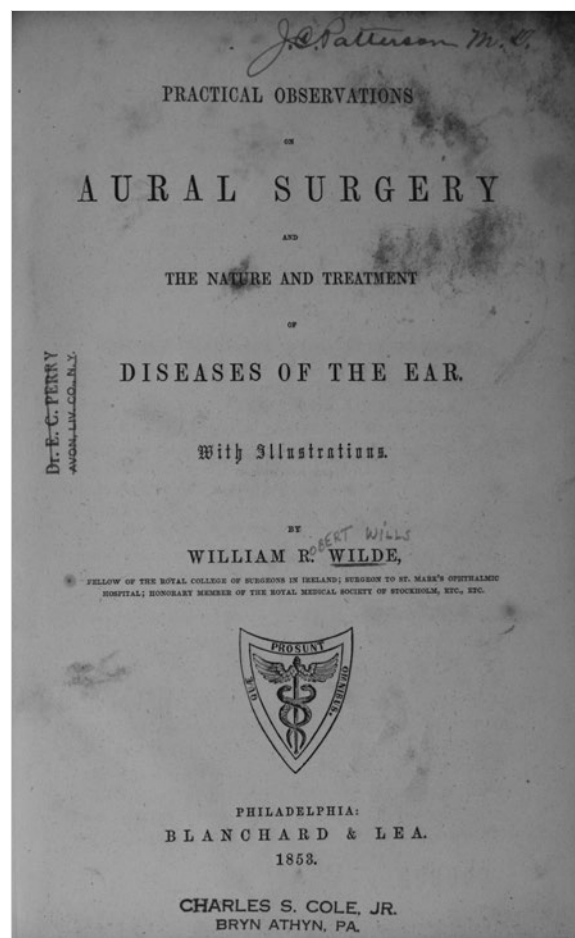


Fig. 1.1 Frontispiece of Wilde's textbook (1853).

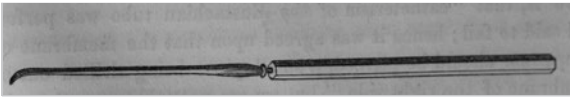


Fig. 1.2 Wilde's myringotomy knife, as illustrated in Wilde WR. Practical Observations on Aural Surgery and the Nature and Treatment of Diseases of the Ear. Philadelphia; Blanchard and Lea: 1853.

► Fig. 1.2) and tympanocentesis for “strumous otitis” (otitis media with effusion), myringoplasty, and a surgical approach to drain the mastoid for suppurative mastoiditis in children.

Laryngology advanced in parallel, and it was well into the 20th century before the two disciplines combined as “otorhinolaryngology.” The early laryngologists—Morell Mackenzie and Sir Felix Semon, both in London—had substantial pediatric practices. Mackenzie described recurrent respiratory papillomatosis in a postmortem specimen of the larynx of a child who had died in a “home for the friendless.” Semon did much to popularize tonsillectomy; he was a laryngologist to the British Royal family and undertook the procedure on the grandchildren of Queen Victoria, making it a fashionable intervention in the drawing rooms of the aristocracy.⁶ Laryngeal tuberculosis and congenital syphilis were common causes of laryngotracheal stenosis, and by the early 20th century, there were well-established techniques for tracheotomy and for airway dilatation in children. Diphtheria was an important and often fatal cause of airway obstruction, and acute epiglottitis became a common indication for tracheostomy.

Gustav Killian in Freiburg pioneered suspension laryngoscopy and tracheobronchoscopy, and the technique was soon extended to children. Chevalier Jackson in Philadelphia became a celebrated teacher of pediatric airway endoscopy throughout Europe and the United States.

Children's hospitals were established in Paris (1802), Berlin (1830), St Petersburg (1834), Vienna (1837), and Great Ormond Street, London (1852). As these hospitals expanded, otologists and laryngologists joined the staff, particularly in Eastern Europe. Dr Jan Gabriel Danielewicz opened the first pediatric ENT ward in Warsaw shortly after the end of the second world war.⁷ By the 1950s, designated children's ENT wards were becoming commonplace in the larger children's hospitals. Children's health in general improved greatly after the Second World War due to improved sanitation, availability of antibiotics, and widespread adoption of vaccination programs (see Chapter 2).

Pediatric ENT surgeons are acutely aware of the debt they owe to pioneers in other scientific disciplines. Endoscopy was greatly advanced by the discovery of the rod lens optical system by physicist Harold Hopkins in the United Kingdom⁸ and developed and refined by the Storz company in Germany. Advances in anesthesia, intensive care, and neonatology are such that many chil-

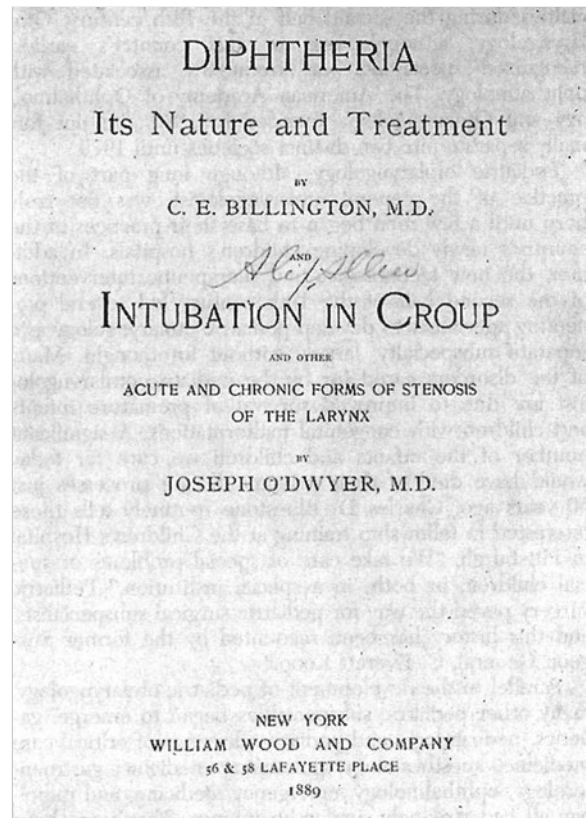


Fig. 1.3 O'Dwyer's paper on endotracheal intubation (1885).

dren who now come under our care are graduates of special care baby units, neonatal intensive care units, or the pediatric intensive care unit (PICU). They often have complex perinatal histories including congenital anomalies, extreme prematurity, and cardiorespiratory diseases that would have been fatal in an earlier generation.

Joseph O'Dwyer of New York (► Fig. 1.3) is credited with the first successful endotracheal intubation in a child, but the technique was not widely taken up until the 20th century when it was popularized for the management of diphtheria and croup. Modern pediatric anesthesia owes much to the early endotracheal tubes of Magill.⁹ As anesthesia progressed, so did the new subspecialties of pediatric anesthesia and intensive care. Prolonged endotracheal intubation and management on a PICU only became commonplace from the 1960s onward. As recently as 1955, Wilson,¹⁰ in the first English language textbook of pediatric ENT, wrote of tracheostomy in children: “these are desperate cases at best, and it may be a comfort to remember that the worst thing that will happen is that the patient will die. This is a likely event in any case.”

Pediatric airway endoscopy even in the very young is now a safe day-case undertaking, and the fear and trepidation that surrounded tracheostomy in children is happily a distant memory.

Audiology has its own history. Physicians, pediatricians, otologists, and teachers took a keen interest in the hearing impaired child from the earliest times, but the profession of audiology began in the 1920s when the first audiometers became commercially available. Early devices for measuring hearing—known as “sonometers” or “acoumeters”—were produced in the late 19th century, and a variety of trumpet devices were used as primitive “hearing aids.” Electronic hearing aids became available in the early 20th century, gradually becoming smaller and more efficient. The modern-day digital aids are highly sophisticated programmable devices. The term “audiology,” and with it a more effective organization and regulation of the specialty, came after the Second World War. Education and teaching of the deaf child progressed hugely in the 20th century. Edith Whetnall in London was a pioneer in this area. She established a network of clinics, which became a model for the assessment and treatment of hearing impaired children, and her textbook, “The Deaf Child” (1964), was the standard work for many years.⁴ Cochlear implantation, developed in the 1970s and, refined and improved upon throughout the next 30 years, transformed the lives of hearing impaired children and their families (see Chapter 15) in the developed world.

The assessment and rehabilitation of the hearing impaired child has advanced greatly in recent years (see Chapter 13 and Chapter 15), and pediatric audiology is an important and growing medical specialty.

1.4 Ear, Nose, and Throat Societies

As subspecialties develop, practitioners need to meet to exchange ideas, foster education and learning, and to advocate for their specialty interests. Ad hoc meetings of otolaryngologists with an interest in pediatric work took place at various venues particularly in Eastern Europe from the early 20th century. The European Working Group in Pediatric ENT was formed in 1973 and later became the European Society of Pediatric Otorhinolaryngology (ESPO).¹¹ The Society for Ear Nose and Throat Advances in Children (SENTAC) was formed in 1977 and the American Society of Pediatric Otolaryngology (ASPO) first met in 1985.¹² Most national ENT societies have a group focusing on pediatric practice, and there are now many national pediatric ORL societies.

1.5 Organizing Otorhinolaryngology Services for Children

The philosophy and thinking that influences how we care for children has undergone a radical transformation in recent years. Doctors are no longer seen as infallible.

Parents are well informed and expect full participation in decision-making. They expect that their child will be treated in an environment that serves the needs of the child and family, and that carers and other staff are fully trained not only in delivering health care, but also in the principles of looking after children and families. There is growing expectation that service organization should be driven not by the needs of professionals but by the needs of children and families. These legitimate expectations put an onus on us as doctors and planners when setting up services for children.

ORL is the specialty with the biggest pediatric surgical workload. It is important that we as ORL clinicians are to the fore in driving service changes forward to best serve children, families, and the next generation of specialists.

Children should be treated safely, as close to home as possible, in an environment that is suitable to their needs, with their parents' involvement in decisions, and with the optimal quality of care.¹³

Despite the desirability of treating children close to home, children with unusual or complex conditions or who are in need of highly specialized intervention will have their care best delivered in one of a small number of more specialized settings, where resources and skills are concentrated.

Political priorities, cultural preferences, resources, and governance arrangements inevitably differ across jurisdictions and in different health care models and settings. It is impossible to be too proscriptive about how pediatric ORL services should be managed in any one system, but the fundamental principles and aspirations are the same.

1.5.1 Hospitals and Clinics

Clinicians caring for children and young people should undertake a level of pediatric clinical activity that is enough to maintain minimum competencies. This is rarely a problem in ORL due to the mixed adult and pediatric nature of the specialty. Most ENT interventions in children—both out-patient consultations and surgery—are delivered by ENT surgeons with a mixed adult and pediatric workload and in a hospital or clinic setting that caters for both adults and children.

Hospitals that undertake the care of children should be committed to exemplary standards of care, with the involvement of senior staff in ensuring that the specific requirements of children are met. In a hospital with several otolaryngologists on staff, one should ideally be designated as lead for pediatrics so that he/she can advocate for children at the highest level and can coordinate management, transfer, and referral of children with complex needs who may need treatment in a specialized center.

Well-established liaison networks and good communication with specialist centers, pediatricians, community pediatric services, social services, parents, and advocacy groups are a cornerstone of good pediatric practice.

It is best practice that children are seen at a designated children's clinic.

Ideally, a registered children's nurse should be available to supervise this clinic. It should be "child-friendly" with suitable toys, papers and pens, and facilities for parents and siblings (see Chapter 2).

Ideally, and where operating room scheduling permits, children scheduled for surgery should have that surgery performed on a dedicated children's operating list.

The operating room staff will need to be suitably trained, and in particular the anesthesiologist should be competent in pediatric anesthesia with a sufficient workload and throughput to maintain his/her skills in the perioperative care of children. Children under the age of 3 years will usually require more specialized anesthetic care, and the professional associations that govern anesthesia in different jurisdictions have their own recommendations with which anesthesiologists will generally be familiar. If at all possible and provided it is safe, children should be admitted and discharged on the same day ("day" surgery or "ambulatory care").

Children are best looked after in a children's ward rather than in a mixed ward with adults, again with appropriately trained and accredited nursing staff. Parents will usually wish to stay with the child overnight, and provision should be made for them.

If children require overnight nursing care, for example, following adenotonsillectomy for obstructive sleep apnea, experienced pediatric ENT nurses are usually best placed to look after them. A small number of children will need more thorough monitoring and supervision perhaps with one-to-one nursing care, admission to a high dependency unit, or exceptionally a PICU.

1.5.2 Emergencies and Transport

Hospitals that admit children must be prepared to deal with emergency presentations. Making provision for such emergencies well in advance is an integral part of a pediatric service.

ORL emergencies best dealt with locally include post-tonsillectomy hemorrhage, foreign bodies in the aerodigestive tract that require immediate removal, quinsy, and neck abscesses, provided the emergency team, particularly the surgeon and anesthetist, are appropriately trained and skilled to deal with the scenario. Many of these emergencies can be safely dealt with in a general hospital setting, but some children will need to be transferred to a specialist center, including on occasion a center with a PICU that may be some distance away. The nature of the emergency will determine the need for transfer, but there are occasions when a child with a relatively straightforward condition that would usually be easily dealt with locally may need to be transferred. This may be due to the availability of staff and facilities, but factors unique to the child can also be important. A child with significant cardiorespiratory comorbidity (e.g., congenital heart disease) may be best looked after in a tertiary center where anesthesia and medical pediatric facilities are more suitable. There is an acknowledged higher morbidity related to anesthesia and perioperative care in children with developmental delay or multiple disabilities, and consideration should be given prior to surgery whether surgical care should be undertaken in a specialist center.

It is important that senior clinicians engage with hospital management to make sure that policies and protocols are in place, including networked arrangements with a tertiary receiving center and defined mechanisms for speedy liaison with a transport or "retrieval" team of which there are now several, each serving different areas.^{14,15} The initial priority is resuscitation of the child followed by stabilization so that he/she can be safely transported. This may involve a senior ENT surgeon, not only for ENT emergencies but also to ensure that the child has a safe and stable airway. If the child needs an alternative airway, endotracheal intubation is usually preferable and is nowadays safely undertaken by skilled and trained anesthesiologists, pediatricians, or intensive care physicians. In exceptional circumstances, a tracheotomy may be considered, but this is nowadays a very rare occurrence indeed. If the child is to be transported, a senior clinician, in liaison with the senior clinical staff at the receiving center, needs to decide on the best mode of travel, and the skill mix and seniority of the staff that accompany the transport team. Analgesia is an important component of the care of the sick child at all times, but can be easily neglected in a fraught emergency situation. Assessment and treatment of pain must start at first presentation and should be regularly reassessed.

"Retrieval" teams are an increasingly important part of networked care for children. These teams may include pediatricians, anesthesiologists, intensive care physicians, nurses, paramedics, and a pediatric otolaryngologist. These teams have particular training needs, including ongoing attention to maintaining their skills, and the otolaryngologist will often have a key role in the team.

1.6 Key Points

- Pediatric ORL is not new; ENT surgeons have always looked after sick children.
- Developments in medicine, anesthesia, and intensive care have brought about a need for increasingly specialist care for children with ORL disorders.
- Dedicated children's ENT wards were established in Eastern Europe from mid-20th century.
- The improvements in endoscopy brought about by the discoveries of Harold Hopkins transformed pediatric airway care.
- ENT surgeons with a substantial involvement in the care of children need to take a strong advocacy role to make for better services for children.
- Children frequently need to be transferred to specialist centers. Arrangements for safe transfer often involve the local ENT surgeon.

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2 The Pediatric Consultation

R. W. Clarke

2.1 Introduction

A good pediatric first consultation is far more than a forum for making a diagnosis and planning management. It is an opportunity to establish a rapport with a family who may need to see you many times over the ensuing years. It can be used to familiarize the child and family with the hospital, the clinic, and the members of the team who may be looking after them during one or more admissions and outpatient visits.

Otolaryngologists are well trained in the general principles of history taking, examination, and consultation in both adults and children, but there are aspects of the pediatric consultation that set it apart. Children and their parents will often vividly remember their earliest encounters with a doctor. For many, this will be the child's first contact with clinics and hospitals, and may set the scene for subsequent visits. Attention to a few details can make for a far better experience. It is worth putting time, effort, and preparation into making the exchange as pleasant as possible for the child and family and as productive as possible for the doctor and the other health care professionals who will look after the child.

It goes without saying that the health and welfare of the child are paramount and must be at the forefront of any decisions made, but the decision to see you will have typically come from the parents (often the mother) who may be extremely anxious, perplexed, and wondering if they are "doing the right thing."

This makes for one of the important differences between the adult and pediatric consultation: the diagnosis, the discussion of management options, and the decision-making are essentially "by proxy" and will usually involve the parents or carers rather than the child. The older child may be able to express her views, but with babies and young children, you need to look after essentially two patients, the child and the parent or parents.

2.2 Setting Up

2.2.1 The Waiting Area

The clinic experience for the family starts well before they see you. Easy road access, car parking, a bright and friendly environment with adequate facilities for food and drinks, baby-feeding facilities, wheelchair-friendly access, and an environment where children and parents feel safe and welcome not only contribute greatly to parental and child satisfaction with their visit but also probably influence outcomes. Planning modern children's hospitals is a highly skilled endeavor and ideally will involve close liaison between the building architects and



Fig. 2.1 The entrance foyer, Royal Liverpool Children's Hospital, Alder Hey.

their design team, clinicians, hospital staff, children and their advocates, and planning authorities (► Fig. 2.1).

A bright, spacious waiting room well stocked with toys, pens, paper, crayons, and computer games and able to withstand the rough and tumble that is inevitable in a group of children will make for a far happier experience than a cramped shared facility (► Fig. 2.2). Play therapists are invaluable, and if the hospital authorities can be persuaded to hire a professional clown, better still.

It goes without saying that easy access to bathrooms, baby-change facilities, and adequate space for breast-feeding mothers is essential.

2.2.2 The Clinic Room

One of the paradoxes of caring for children is that despite their small size they need far more space than adults. A clinic room needs to accommodate two parents, the



Fig. 2.2 The ENT waiting area.

child—sometimes in a Moses basket or a pushchair—one or more siblings, equipment such as oxygen cylinders or a ventilator, the doctor, a nurse, and often one or more medical students or trainee surgeons. This is in addition to the equipment required for ear, nose, and throat (ENT) examination and treatment. Ideally, each clinic room will have a microscope, suction apparatus, a camera, a light source and stacker system with a monitor for nasal and airway endoscopy, image capture facilities, and a range of flexible and rigid endoscopes (► Fig. 2.3). Discreetly put away as many sharp instruments, such as hooks, picks, and needles, as you can so they are not on display. They are better stored on a shelf out of view as they can be extremely intimidating to young children. Hand-washing facilities are, of course, mandatory. The physical environment needs to be safe with no sharp or pointed corners, spirit lamps, or loose cables.

Audiological testing rooms are an integral part of an ENT consultation and should be adjacent to the clinic so that the child can easily move from one room to the other.

The preceding represents an ideal state of affairs and many ENT surgeons have to see children in less than optimum circumstances, but it is important that we as clinicians advocate as robustly as we can for the best facilities for our pediatric patients.

2.2.3 Support Staff

Reception staff and care assistants who have had training and experience in dealing with parents and children help to make for a better clinic experience. Best practice is that



Fig. 2.3 Examining a child's ear using the otoendoscope. The parent can see the screen image, which can be recorded and kept.

a registered children's nurse should ideally be available “to assist, supervise, support, and chaperone children,”^{1,2} but clearly arrangements will vary in different jurisdictions and in different health care settings.

Audiological professionals are an integral part of pediatric ENT practice, and as a minimum, a fully registered audiology technician with appropriate facilities for audiometry and tympanometry should be available for all children's ENT clinics.

Other professionals may be needed depending on the nature of the clinic, for example, a speech and language therapist for voice disorders or cleft palate, or specialist audiological personnel for children with bone-anchored hearing aids or cochlear implants.

Trained specialist nurses who liaise with families outwith the clinic, for example, in supporting home tracheostomy care, greatly enhance the clinical experience for parent and child. Some units arrange a “preadmission” clinic so that when a child is scheduled for surgery, he/she can have preoperative checks in advance of the day of admission. A dedicated nurse usually runs these clinics, and it can be useful for the family to meet her/him at the first clinic visit so that they can plan ahead. If the family does not speak the same language as the doctor and clinic staff, an interpreter may be needed, and this should, of course, be arranged well in advance of the visit.

Many ENT surgeons run “specialist” clinics with a focus on multidisciplinary care, for example, an allergy clinic will require an ENT surgeon and a specialist in pediatric allergy. It is important to strike a good balance between involving the required staff and overwhelming the child with a surfeit of adults in a single room.

2.2.4 Preparing for the Consultation

A visit to the hospital is a routine event for the doctor. It is a major episode in the life of the child and parent.

The parents may have had to book time off work, child care for siblings, a day off school for the child, and transport for the trip. Ideally, the children's clinic must be separate from the adult clinic. If it is not possible to have a clinical area and a set of consulting rooms that are used exclusively for children throughout the working week, they should be scheduled for a dedicated pediatric session; children should no longer be seen in a "mixed" adult and pediatric setting. It can be very uncomfortable for children and their parents—and for adult patients and their relatives—if they are allocated the same clinic and have to share a waiting area. Parents or children must not feel rushed in clinic; if you have to hurry them along, the clinic has not been properly planned.

Take time to read the case notes, including the results of investigations, if applicable, before the child enters the room. If the child has a chronic medical condition or a syndrome, read up on it in advance if you can. This should be relatively easy in most settings nowadays as so much information is available online. Parent and child will appreciate continuity, and if you are seeing a child for repeat visits, it is ideal if the same doctor sees them each time.

2.3 The Consultation

2.3.1 The History

Greet the child by name, make eye contact, and introduce yourself and any other staff in the room. Establish who is with the child—it may be a parent, a carer, or a grandparent. Be clear on who is going to give you the history and make sure the child gets an opportunity to speak if she is old enough. Doctors are taught to take very focused histories, but in a pediatric setting it is often better to ask an open question such as, "What are your worries about Kirsten?," rather than steering the parent down a particular set of symptoms. Many doctors regard themselves as good communicators because they can explain illnesses and procedures in easy-to-follow terms, but of course communication is a two-way street and listening without interruption can be more useful than talking. It is essential that the parent, usually the mother, feels that her account has been carefully listened to and understood before you probe with more direct questions. Watch the child, look at the mother's facial expressions, note how she interacts with the child, and pick up as much information as you can from both verbal and nonverbal clues.

Listen well and talk less until it is clear that the parent feels you have the full picture.

If the parents offer to show you the child's growth chart, a record of their visits to the doctor, diary entries, photographs, or short video clips, do look at them. The parents will feel any record of their child's health is important and they may give you much information, for example, about the child's overall development or, in the case of video clips, the child's sleep pattern. The birth and perinatal history may be important, particularly with airway pathology, it is helpful to ask the mother about the delivery, whether the baby was term or premature, whether there were any concerns about breathing and feeding as a newborn, and in particular whether there was any airway intervention, for example, an endotracheal tube or a period on the special care baby unit.

Good consultation skills can be taught, learned, and improved upon with constructive feedback and should be an important part of training and assessing surgeons as they progress toward independent practice.

Parents may be angry, upset, seeming not to listen, or challenging in a variety of ways, but unless they are overtly abusive or threatening, they should be carefully listened to and treated with the utmost courtesy.

2.3.2 Examination

The examination begins as soon as the child comes into the room. An astute clinician will note the child's gait, breathing pattern, and state of alertness as he/she is taking the history. Once they have had a chance to settle in the clinic room, most young children are happy to be examined. Smaller children are best examined sitting on their mother's knee.

Explain in an age-appropriate way what is going to happen and do not persist if the child is fractious or struggling.

It is not appropriate to restrain an older child for the purpose of an elective clinical examination, but the parent can gently but firmly hold a baby or toddler to facilitate otoscopy, examination of the nose, and examination of the neck.



Fig. 2.4 Testing the nasal airway.

Most children will tolerate otoscopy, and if there is wax or debris, it is usually possible to remove it by suction to get a better view. Use the biggest speculum that will comfortably fit in the ear canal. If you need a better view, use the microscope, which should be as well tolerated as a standard otoscope. Thin otoendoscopes with high-quality cameras and viewing monitors are becoming more widely available and represent a good opportunity to record findings, to facilitate better explanations of pathology to parents, and as an aid to teaching.

A good way to start a nasal examination is to assess the nasal airway using a cold metal spatula to look for the pattern of condensation (► Fig. 2.4). Children do not like Thudicum's speculum; you can get a good view of the nasal cavities by simply elevating the tip of the nose and looking with a good light source, but again high-quality endoscopes have made rhinoscopy far easier and better tolerated. In a cooperative child, you should get a good view using a standard 0- or 30-degree telescope. Although some surgeons like to use a local anesthetic spray, the author has not found this useful, and, in general, if a child will not tolerate a nasendoscope, he/she will tolerate a spray even less so, and you are better getting the best view you can using a headlight.

To examine the pharynx, use a standard headlight. Children dislike tongue depressors; the author very rarely uses them. You can get a good view of the nasopharynx using a telescope with an angled lens gently placed between the tonsils.

Examining the larynx can be difficult in an older child, but flexible transnasal endoscopy will give you a very good view in a cooperative older child or in the case of a baby who is gently but firmly held by the mother. As with nasendoscopy, the author has not found local anesthesia very helpful as it can cause as much distress as the endoscope. Clearly, if a child is anxious or distressed, it is inappropriate to proceed, and if you have to get a view of the larynx, then you may need to arrange admission for a general anesthetic.

Neck examination should focus on observation for lumps, bumps, sinuses, and asymmetry, gently palpating to assess for lymph nodes. "Lymphadenopathy" is probably a misnomer in children as some degree of lymph node enlargement is physiological and should cause no alarm (see Chapter 25).

2.3.3 Investigations

Few, if any, investigations are needed for most common ENT presentations in children.

Pure-tone audiometry (provided the child is old enough) and tympanometry are essential components of a full ENT examination. Radiological imaging may be needed depending on the pathology, and ultrasonography is commonly used to quickly assess neck swellings. Some ENT surgeons are now skilled at getting good ultrasound images in clinic. If the child needs blood tests, then he/she should have local anesthetic cream (e.g., EMLA cream, an emulsion containing lidocaine and prilocaine) before being sent for phlebotomy. Photography can be useful, for example, for facial and neck lesions, and close liaison with a skilled medical photography department will make for a much better pediatric ENT service.

2.3.4 Management Plan

The parents have come to see you to hear your opinion on their child's condition and to discuss management options with you. In most cases, you should be able to make a plan having taken a history and conducted the examination.

This part of the consultation is vital and must not be rushed.

Very often there will be more than one option, including and perhaps most important avoiding any intervention, and it is essential that you present each of the options and get a feel for how the parents want to proceed. Diagrams, models, and wall charts can be very helpful in trying to explain pathologies and interventions, and it is good practice in writing to the referring clinician to copy in the parents, using this as an opportunity to reinforce and amplify any explanations you may have given. If a decision is made to admit the child for surgery, it is ideal if a date can be agreed with the parents, but this is not always possible and practice will vary in different settings. The more information parent and child have about

the admission process the better. Many units run a “pre-admission” clinic when the child and family can visit the ward and meet the staff. Parents greatly appreciate information leaflets and some surgeons maintain good quality websites with video clips and explanations of common ENT conditions and interventions.

2.4 Normal Growth, Development, and Child Health Promotion

Otolaryngologists are not experts in assessing and monitoring child development, but all health care professionals who deal with children need to acquaint themselves with the major events in children’s normal progression and to be alert to signs that all is not well. Some important milestones are shown in ► Table 2.1, but of course children develop at different rates, and it is the overall pattern of progress that is important.



The otolaryngologist may be the first specialist the parents see if a child is slow to speak, develops obstructive sleep apnea related to muscle hypotonia, or presents with suspected earache or hearing loss when a neurodevelopmental disorder is to blame. Parents who worry about their child’s progress need to have their concerns taken seriously, and if you are in any doubt or have concerns about a child’s overall growth and development, seek the opinion of a general pediatrician.

It is very reassuring for parents to record and plot their child’s milestones so as to keep a permanent record. Arrangements for this vary in different jurisdictions and in different health care settings. Parents in the United Kingdom are given a “personal child health record” or “Red Book” in which they can plot their baby’s progress (► Fig. 2.5 a, b) and record events such as hospital visits, developmental milestones, test results, and immunization history.

Table 2.1 Some milestones in normal child development

0–4 wk	Likes looking at faces
4–6 wk	Starts to smile
4–12 wk	Lifts her head
4–6 mo	Babbles and makes noise
6–8 mo	Sits up
10–18 mo	Walks
18 mo to 2 y	Uses two or more words together

Parents and health care visitors will usually plot a baby’s weight and length on a graph such as the standard “growth charts” (► Fig. 2.6), which are included in the “Red Book.” Poor weight gain or “failure to thrive” can be a feature of a number of ENT disorders such as severe laryngomalacia or obstructive sleep apnea. A good plot on the growth charts, while by no means excluding serious disease, is at least very reassuring for both doctor and parents. In the case of a baby, the author finds it very helpful to enquire how he/she is progressing in terms of weight gain and to ask for a look at the graph.

2.5 Promoting Child Health

ENT specialists, like all health care personnel, have a duty to promote good health. Breast-feeding should be encouraged, and in situations where ENT intervention can facilitate breast-feeding, for example, surgery for tongue-tie or correction of choanal atresia, it should be offered promptly, otherwise the momentum may be lost. Many ENT disorders in children, such as otitis media with effusion, rhinitis, and respiratory infections, are related to parental smoking; thus, parents may need advice and counseling. While vaccination regimes are generally the responsibility of family practitioners and community nurses, it is useful to be aware of the normal routines. ► Table 2.2 shows a typical immunization schedule for the United Kingdom.

2.6 Pediatric Medical Assessment

ENT surgeons are not medical pediatricians, but if you are seeing a significant number of children, you will inevitably come across conditions that are best diagnosed and dealt with by pediatrician colleagues. Some knowledge of these conditions can help early detection and referral so that parents and children are offered support as soon as is practicable. Attention deficit hyperactivity disorders (ADHDs), autistic spectrum disorders (ASDs), and “child protection” issues may well present first to the otolaryngologist.

2.6.1 Attention Deficit Hyperactivity Disorders

Every clinician will be familiar with the child who fidgets, will not sit still, and seems to have a poor attention span. Parents will often volunteer that the child is “hyperactive” or disruptive. In extreme cases, this may constitute a behavioral syndrome termed attention deficit hyperactivity disorder. This condition is now thought to affect 3–4% of children worldwide. They occasionally present with suspected hearing loss or poor sleep patterns.

Your child's developmental firsts

Babies want to explore the world around them. Your baby grows and learns faster in the first year than at any other time. There are many things that all babies and young children do, but not always at the same age or in the same order. Use these pages to note down when your child does things for the first time.

Finding out about moving...

Lifts head clear of ground,
aged:.....

Rolls over,
aged:.....

Sits with support,
aged:.....

Sits alone,
aged:.....

Stands holding on,
aged:.....

Stands alone,
aged:.....

Walks holding on,
aged:.....

Walks alone,
aged:.....

First outdoor walk,
aged:.....

Finding out about words...

Smiles,
aged:.....

Laughs,
aged:.....

Babbles,
aged:.....

Copies noises,
aged:.....

Says "mama" – to anyone,
aged:.....

Says recognisable word,
aged:.....

Helps turn pages in a book,
aged:.....

Joins two recognisable words,
aged:.....

Speaks in sentences,
aged:.....

Finding out about moving

Finding out about words

Fig. 2.5 (a, b) Example pages from a Personal Child Health Record in the United Kingdom (the "Red Book"). (© Harlow Printing Limited. Reproduced with permission.)

The defining features are hyperactivity, impulsivity, and inattention, but, of course, these characteristics are distributed in varying degrees throughout the population.

While ADHD diagnostic criteria vary somewhat, the core feature of the diagnosis is that these symptoms are associated with "at least a moderate degree of psychological, social, and/or educational or occupational impairment." ADHD is not a categorical diagnosis, and it should only be made with great care following a thorough assessment by a skilled and experienced pediatric team. A diagnosis of

ADHD has serious potential implications; it is generally a persisting disorder. Most affected children will go on to have significant difficulties in adulthood, which may include continuing ADHD, personality disorders, emotional and social difficulties, substance misuse, unemployment, and involvement in crime. Management may involve social and educational services, the family doctor and his/her team, specialist pediatricians, and, of course, the child's family, and can be very taxing.³

2.6.2 Autistic Spectrum Disorders

Autism was once thought to be an uncommon developmental disorder but is now estimated to occur in at least

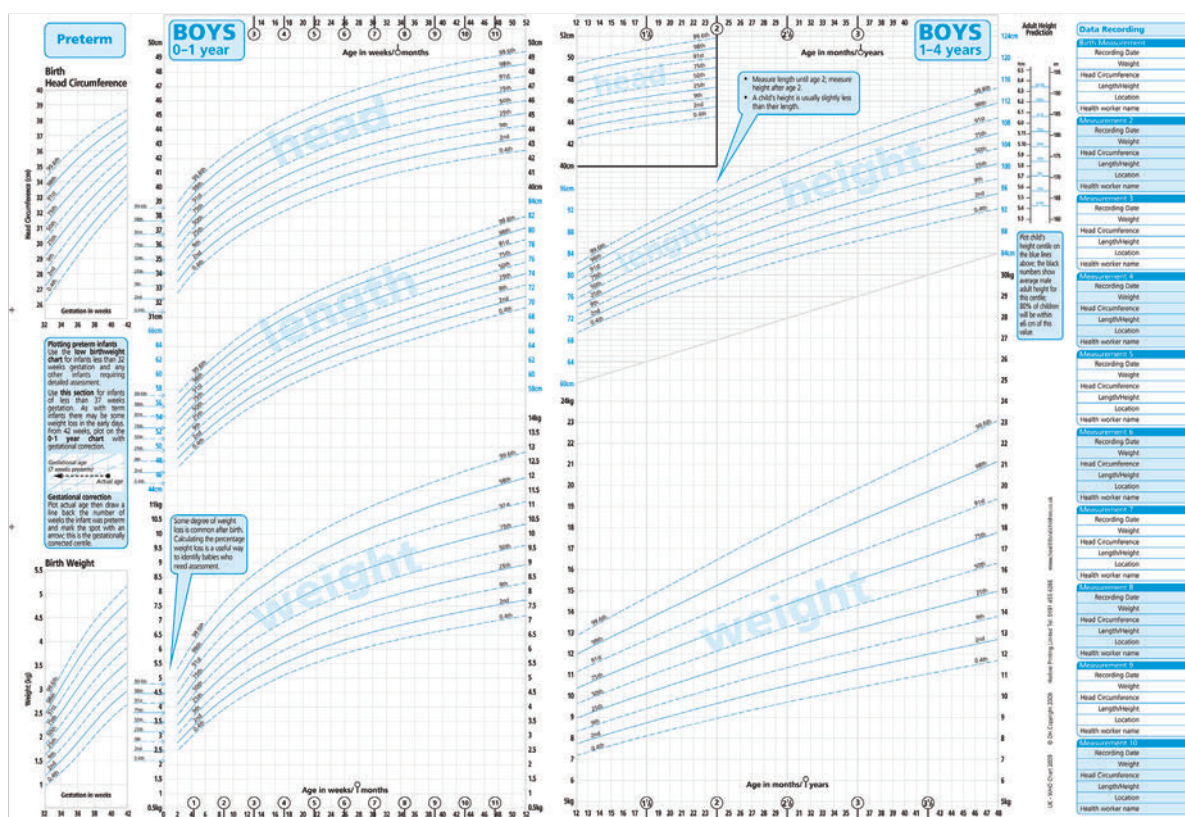


Fig. 2.6 UK-WHO growth charts for boys aged between 0 and 4 years. (© 2009. Royal College of Paediatrics and Child Health. Reproduced with permission.)

Table 2.2 Typical vaccination schedule in the United Kingdom

Age	Vaccine
2 mo	5-in-1 (DTaP/IPV/Hib) vaccine ^a Pneumococcal (PCV) vaccine Rotavirus vaccine Men B vaccine
3 mo	5-in-1 (DTaP/IPV/Hib) vaccine, second dose Men C vaccine Rotavirus vaccine, second dose
4 mo	5-in-1 (DTaP/IPV/Hib) vaccine, third dose Pneumococcal (PCV) vaccine, second dose Men B vaccine, second dose
12–13 mo	Hib/Men C booster, Hib, fourth dose MMR vaccine, given as a single jab Pneumococcal (PCV) vaccine, third dose Men B vaccine, third dose
2–4 y	Children's flu vaccine (annual)
From 3 y and 4 mo (up to starting school)	MMR vaccine, second dose 4-in-1 (DTaP/IPV) preschool booster, given as a single jab ^b
12–13 y (girls only)	HPV vaccine, two injections given between 6 mo and 2 y apart ^c

Abbreviations: DTaP, diphtheria, tetanus, acellular pertussis; Hib, Haemophilus influenzae type B; HPV, human papillomavirus; IPV, inactivated polio vaccine; MMR, measles, mumps, and rubella; PCV, pneumococcal conjugate vaccine.

^aProtects against five separate diseases: diphtheria, tetanus, whooping cough (pertussis), polio, and Haemophilus influenzae type B.

^bProtects against diphtheria, tetanus, whooping cough (pertussis), and polio.

^cProtects against cervical cancer.

Table 2.3 Some features of autistic spectrum disorders in pre-school children

Spoken language	Delayed speech development Frequent repetition of set words and phrases
Responding to others	Not responding to their name being called Rejecting cuddles
Interacting with others	Not aware of other people's personal space Intolerant of people entering their personal space Avoiding eye contact
Behavior	Repetitive movements Playing with toys in a repetitive way Getting upset if there are changes to normal routine

1% of children. Health care personnel need to be aware of some of the features so as to facilitate early diagnosis and intervention. The characteristic features are impairment in reciprocal social interaction and social communication, combined with restricted interests, and rigid and repetitive behaviors. In recognition of the great heterogeneity of autism, the term “autistic spectrum disorder” is now commonly used. The list of possible symptoms is very large indeed, but some key features are shown in ► Table 2.3. The diagnosis needs to be made with great care and warrants a full assessment by an experienced team. Families, carers, and the child or young person themselves can experience a variety of emotions, shock, and concern about the implications for the future. Some have a profound sense of relief that others agree with their concerns. Diagnosis and the assessment of needs can offer an understanding of why a child or young person is different from their peers and can open doors to support and services in education, health services and social care, and a route into voluntary organizations and contact with other children and families with similar experiences. All of these can improve the lives of the child or young person and his/her family.⁴

Children with ASD may present to the ENT clinic with language delay or suspected hearing loss.

Given the frequency of the condition, many children who present to the clinic will have a background history of ASD, and it is important to be aware of the condition because of its very common association with comorbidity. Autism is strongly associated with a number of coexisting conditions. Recent studies have shown that approximately 70% of people with autism also meet diagnostic criteria for at least one other (often unrecognized)

psychiatric disorder that is further impairing their psychosocial functioning. Intellectual disability (intelligence quotient below 70) occurs in approximately 50% of young people with autism. Deafness and other sensory impairments are more common and may be difficult to recognize.

Children with ASD need particular sensitive care and attention if they are admitted for surgery.

Many children with ASD find the company of other children distressing and are especially likely to become upset if they have to wait too long. In general, they should be assessed early by the anesthesiologist, considered for a sedative (premed), scheduled first on the operating list, and discharged as soon as they are fit. Day surgery is preferable unless there are very good medical reasons to keep the child overnight.

2.6.3 Functional Disorders

Just as in adult medicine, a significant number of children present to the ENT clinic with symptoms for which no organic pathophysiological explanation can be found despite a thorough examination and, in some cases, extensive investigation (► Fig. 2.7). The term “functional disorders” is often used to emphasize the notion that although there is no structural or anatomical abnormality that can be demonstrated, for example, on imaging, endoscopy, or microscopy, there may be physiological dysfunction. Terms such as “medically unexplained,” “psychogenic,” “stress-related,” “psychosomatic,” and “hysterical” were used in the past but have been abandoned as they were unhelpful, became derogatory, and implied a certain amount of “blame” on the part of the patient.

Functional disorders are emphatically not the same as factitious or feigned illness, and it is hugely counter-productive to make the child or parent feel that they are not believed.

The symptoms are very real to the patient and can cause great distress, which can be exacerbated if they are treated in an insensitive or judgmental way.

ENT symptoms include the following:

- Earache.
- Tinnitus.
- “Functional” or nonorganic hearing loss (see Chapter 14).

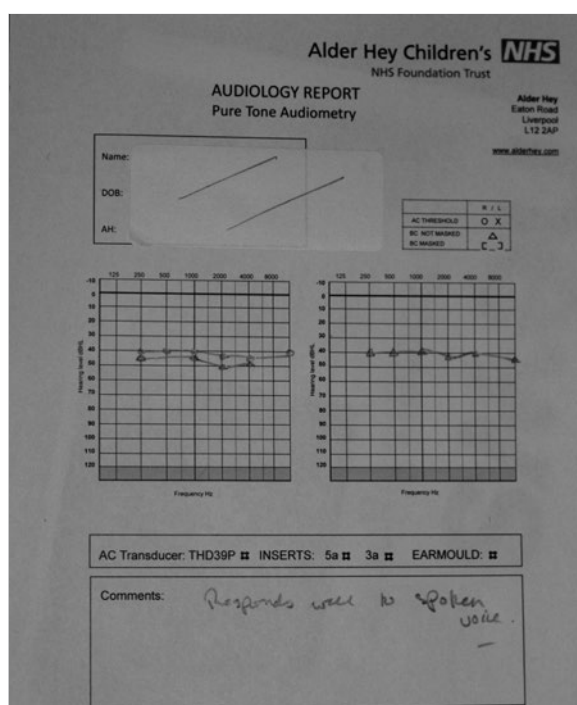


Fig. 2.7 Audiogram of a 13-year-old girl complaining of hearing loss. She responds well to normal conversation, and the audiology technician reports that her hearing seems better than the graph suggests. This is the typical pure-tone audiogram in “functional hearing loss.” Auditory brainstem response is normal.

- Dysphagia.
- Neck pain.
- Balance disorders.
- Dysphonia.
- Very occasionally, stridor.

The clinician's role is to take a full history; examine the child thoroughly; arrange investigations including audiometry, imaging, and endoscopy, as needed; and formulate a diagnosis. If you suspect a functional basis for the symptoms, it is reasonable to enquire into issues such as school, relationships with siblings, friends, and family, and whether there has been any change in circumstances. Parental disharmony, bullying at school, and the trauma of the physiological and psychological changes of puberty and adolescence can all have an impact on health and well-being, with somatic symptoms not uncommonly coming to the fore. An experienced clinician will need to strike a balance between a thorough investigation to out-rule an organic etiology and a more minimal approach focusing on history, examination, and reassurance that there is no worrying pathology. A sensitive and thoughtful explanation of the findings to parent and child will allay fears and make for a good rapport for follow-up visits.

There is often a background history of environmental or psychological stress, but a certain amount of anxiety, uncertainty, and insecurity is a part of growing up. Children can consciously or unconsciously describe symptoms that bring about some “secondary gain” for them, for example, time off school, increased parental attention in the event of a new sibling, and the benefits associated with being perceived as “sick.” Functional disorders are distinct from true malingering or feigned symptoms, although these do occasionally present. It is difficult to know on the basis of a single consultation whether there is any significant psychological morbidity, and too early referral to a psychological support service can be counter-productive.

Many functional disorders are short-lived and should not be “overmedicalized.”

It is the author's practice in most circumstances to reassure the family that the majority of these symptoms are transient and rarely need intensive intervention. It is, of course, wise to bear in mind that depression, pathological anxiety, and rarely overt psychosis do occur in children and that skilled psychiatric help will be needed in some circumstances. Referral protocols vary, but most children's hospitals will have a child and adolescent mental health service team, who will see and assess children at short notice. Many hospitals and training programs will have specific policies covering this type of scenario, and again clinicians should ensure they have the appropriate training for the setting in which they work. Management must be tailored to the individual child and family and prognosis varies greatly.

2.7 Delivering Bad News

Parents, and older children, will remember with chilling clarity being told of their child's deafness, the need for a long-term tracheostomy, or a suspicion or confirmation of malignancy for many years after the event. Insensitive or even well-meaning but inexperienced handling of such situations can be very destructive.

If you have to impart such news, get the help and support of a senior clinician or, in the case of malignancy, of the oncology team.

Consider the setting, the availability of support staff, the need for further discussion, the need for detailed written information, and the time required. This type of

consultation should not be delegated to a junior member of the team and above all must not be rushed. In the case of a child needing, for example, a tracheostomy, it may be best to introduce the subject on one occasion and have more detailed and focused discussions with the family on another occasion. Hospitals and training programs will have specific policies covering this type of scenario, and again clinicians should ensure they have the appropriate training for the setting in which they work.

2.8 Consent and Parental Responsibility

It goes without saying that every medical intervention requires the consent of the patient. What is different in the case of young children is that they may not have the capacity and understanding (competence) to weigh the benefits and risks of an intervention, and consent will usually need to be given on their behalf.^{5,6,7,8,9} The interests of the child must, of course, take precedence over the wishes of others, even parents, but all clinicians will want to respect the legitimate concerns of parents, be they mothers, fathers, single, married, or divorced. It is wise to involve the child at all times if at all possible. The concept of “duty of candor” has recently been introduced in UK practice. The principle is that health care providers must be open and transparent with service users about their care and treatment, including when it goes wrong.¹⁰ The legalities that govern these processes vary in different jurisdictions and health care settings but the principles are broadly similar.

Once children reach the age of 16 years, they are deemed legally “competent” in the United Kingdom.

This means that they are responsible for decisions relating to consent themselves, but it is, of course, wise to involve parents if at all possible in major decisions in the young. If a young person up to the age of 18 years is not “competent,” for example, due to learning disability, reduced consciousness, or severe illness, then a parent or person with “parental responsibility” (see below) can give consent for them, but over the age of 18 years in UK law, a parent cannot give consent on behalf of a young person. This causes difficulties in the case of young adults with learning disabilities, many of whom remain under the care of children's hospitals. In these instances, the clinician must make the decision on the young person's behalf, ideally with the written agreement of another senior clinician and with the full approval of the parent, albeit with uncertain legal standing.

A child under the age of 16 years may well be able to understand the implications of a treatment strategy. In UK law, such a child who has “sufficient understanding and intelligence to enable him or her to understand fully what is proposed” is deemed “Gillick competent” or as it sometimes known “Fraser competent.” The decision as to whether a child fulfills the criteria for “Gillick competence” rests with the clinician; hence, teenagers undergoing tonsillectomy, for example, may give their own consent. The issues around consent in children can cause great sensitivity and are fraught with medicolegal pitfalls. If in any doubt, seek the advice of one or more senior clinicians.

The medico-legal framework governing consent in the UK was clarified in a recent judgment—the “Montgomery” case. This has placed even greater emphasis on the need for doctors discussing treatment options to consider whether a reasonable person in the patient's position would be likely to attach significance to the risk, or the doctor is or should reasonably be aware that the particular patient would be likely to attach significance to it.” In other words, the consent discussion should be open, frank, and customized for individual patient or family. Some families will attach greater significance to a particular risk than others, and the clinician needs to be mindful of these differences.¹¹

In the case of a child who is not “competent,” consent has to be sought from and given by a person with “parental responsibility.”⁵

This is usually one or both of the parents. The situation varies in different jurisdictions, but in England and Wales, “parental responsibility” is automatically given to the mother and to most fathers. A father will have parental responsibility if he is married to the child's mother or listed on the child's birth certificate (after a certain date, which varies in different jurisdictions). Fathers who do not have parental responsibility can get it via an agreement with the mother or they can apply for it through the courts. Grandparents, foster parents, and others who look after children do not have parental responsibility unless special legal arrangements have been made. Consent from one parent is legally valid, but it is best practice to obtain consent where applicable from both. A written record of consent signed by the doctor and the parent is an important document, and although a written record of consent is not legally mandatory, in general, no invasive intervention should proceed without it. Verbal consent for surgery is possible and, in many circumstances, entirely reasonable. If, for example, a newborn baby needs urgent surgery, very often the mother will be recovering in the maternity unit. The surgeon should

speak to her by telephone and explain the natural history of the condition, the implications of treatment, the consequences of not treating, and the timing of treatment. It is good practice to get another health care professional (e.g., a nurse) to confirm with the mother that she understands and agrees with what is being proposed and to record the exchanges in the case notes.

It may be necessary in emergency scenarios to proceed without consent, for example, when a child needs urgent intervention following an accident and the person with parental responsibility is not immediately available.

2.9 Child Protection

Every professional involved in the care of children needs to be aware of the potential for children to be subject to abuse or neglect.¹²

This can take the form of physical, emotional, or sexual abuse and may be perpetrated by family members, by friends and acquaintances, or by professionals who come in contact with the child. Professional regulatory bodies, for example, the General Medical Council in the United Kingdom, expect doctors working with children and young people to be especially conversant with the features of abuse and neglect and to act upon any concerns they have. Arrangements for raising such concerns vary in different health care settings and in different jurisdictions but the principles are essentially the same.

You should be familiar with the main presentations in your area of practice that can be caused by abuse and with the strategy for seeking appropriate advice and support.

Most children's hospitals will have a "child protection" team who can be contacted for advice in confidence. Anecdotal evidence would suggest that few ENT surgeons make a diagnosis of child abuse, but it is essential that they are aware of it as a possible explanation for some unusual presentations. Up to 75% of children who suffer physical abuse have injuries to the head and neck. Some ENT presentations that may be linked with child abuse are shown in Box 2.1. If you suspect that a child's symptoms may be due to abuse or neglect, you should seek advice from an experienced colleague. Most children's hospitals have a designated team headed up by a pediatrician "child protection lead," who has the expertise and sensitivity to give advice and support to you as a worried clinician and, where necessary, to explore the issue with the parents.

This is clearly an area where great sensitivity and delicacy is needed. An accusation of abuse or neglect can have devastating consequences for the child and family.

Box 2.1 Some Possible Nonaccidental Injuries in the Head and Neck

- Tears to the lingual frenulum.
- Bruises to the cheeks, lips, gums.
- Nasal injuries.
- Injuries to the pinna, especially "pinch" marks.
- Auricular hematomas.
- Traumatic perforation of the eardrum.
- Maxillofacial fractures.
- Dental trauma.
- Injuries to the palate, for example, due to forceful feeding.
- Bruising to the neck.

A very small number of parents deliberately bring about symptoms and signs of disease in their child in an attempt to gain attention from health care personnel. ENT examples include ear injuries, blocked tracheostomy tubes, and deliberate smothering. This is a serious psychiatric condition (Munchausen's syndrome by proxy) and needs urgent and expert management.

A small number of children may, for various reasons, be best looked after outwith their family setting, for example, by social services or the local authority. They may be placed in a designated care setting or with an alternative family (foster family). Arrangements will vary in different health care settings, but, in general, these children ("looked-after children" or "children in care") need particularly vigilant medical attention. They will usually have a named social worker, and close liaison with her/him is important in ensuring continuity of medical management, especially if they require surgery, investigations, or repeat follow-up visits.

2.10 Key Points

- A visit to the hospital is a routine event for the doctor. It is a major episode in the life of the child and parent.
- Children should be seen in appropriately staffed "child-friendly" clinics dedicated only to children.
- Audiological professionals and audiological testing facilities are an integral part of children's ENT clinics.
- Children with suspected ASD are increasingly common and may present to the otolaryngologist.
- Make sure you are familiar with the procedures governing consent in children in your health care setting. Read the guidance and keep up to date with changes.
- Health promotion and child protection is everybody's business. Know what to do if you suspect a child is being maltreated.

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