Pediatric Swallowing and Feeding

Assessment and Management

FOURTH EDITION

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Foreword

It has been more than 30 years since the first edition of this landmark publication *Pediatric Swallowing and Feeding: Assessment and Management* was published. The second, updated edition was published in 2002. The third, updated edition was published in 2020. Now, this fourth edition will continue to provide state-of-the-art information for clinicians assessing and managing pediatric patients with swallowing and feeding disorders across the globe. As in the previous editions, Joan Arvedson and Maureen Lefton-Greif, the editors, have compiled a text that brings together the world's experts for this seminal work. As the editors have always done since first publishing this text in 1992, fresh and innovative perspectives have been brought to this edition, including a number of new authors and chapters. All work is evidence-based, and new chapters include Chapter 12, Feeding with Craniofacial Anomalies, and Chapter 15, Dysphagia Services: Transitioning Through the Continuum of Care. There is an updated discussion framed by the World Health Organization's International Classification of Functioning, Disability and Health, informing clinical feeding evaluation procedures, interpretation, and management decision making while emphasizing recent shifts in the patient population. Truly, this fourth edition is a tour de force on this topic and worth revisiting even if previous editions have been studied.

On a personal note, during my decades-long career as a pediatric otolaryngologist at Children's Wisconsin, I was fortunate to work side-by-side with Dr. Joan Arvedson as, along with others, we created the first pediatric feeding and swallowing clinic in Wisconsin. We treated numerous patients together, and I learned a great deal from her. It was always wonderful to read each new edition of this text and see the evolving wisdom that I experienced in our patients on a daily basis translated for all around the globe to read and understand. With this practical and firsthand experience, I certainly highly recommend this work for any that endeavor to care for children and families with feeding and swallowing disorders or concerns.

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Preface

The fourth edition of *Pediatric Swallowing and Feeding: Assessment and Management* is being published at a time when the global incidence of swallowing and feeding disorders in infants and children continues to rise, along with increasing recognition of the multifactorial and interdisciplinary care required to optimize outcomes. Since the publication of the first edition in 1993, this textbook has served as a trusted primary reference for students, educators, clinicians, and researchers in the field of pediatric swallowing and feeding disorders.

We trust that this edition meets the current challenge of integrating new and evolving developments while remaining true to the salient and immutable basic concepts that underlie this area of practice. Notably, breathing and eating are essential to survival. Disruptions of these functions can lead to significant compromises in nutrition and growth, respiratory health, development, academic skills, and overall health and well-being. Medical, surgical, and genetic advances have increased the survival and life expectancy of medically fragile children, giving rise to new patient populations and disease phenotypes in which these challenges are increasingly observed. As a result, greater attention has been directed toward the multidisciplinary needs of these children. Nonetheless, the development of high-quality evidence to support the diagnosis and management of these children, as well as consensus-driven guidelines, have not kept pace with the growing recognition of the needs of these new pediatric populations. The World Health Organization's International Classification of Functioning, Disability and Health framework has been translated into the F-words: fitness, function, friends, family, fun, and future (Rosenbaum & Gorter, 2012). These concepts underscore the importance of function and participation as central to meaningful assessment and effective intervention. In pediatric feeding practice, this perspective highlights the importance of caregiver–child interactions that take into account cultural differences in sensitive ways and are developmentally supportive, nonstressful feeding experiences from the preterm period through adolescence and into adulthood. Focusing on only "oral skills" or "safe swallowing" is not enough.

This edition continues to build on the earlier editions, to which Dr. Linda Brodsky had contributed her extraordinary medical knowledge and substantial work in research and patient care in pediatric otolaryngology. We are deeply indebted to Dr. Brian Rogers for his clinical acumen in neurodevelopmental assessment, reflected in his contributions to the first three editions and carried forward into this edition. We remember both colleagues with gratitude and affection, and we miss them deeply for their clinical insight and the enduring influence of their work on the care of children and their families.

We are grateful to the many individuals who made this edition possible. First, we thank all the authors who generously shared their expertise and experience in

their respective areas despite demanding clinical and research responsibilities. We are also indebted to the editors at Plural Publishing, whose attention to detail, patience, and expertise were essential in bringing this book to publication.

We are especially appreciative of the families who granted permission for their children to be photographed, thereby helping to illustrate the broader purpose of our work and our shared commitment to improving the lives of all children with swallowing and feeding disorders.

Above all, we thank all the families and caregivers who have trusted us with the care of their children. We are continually inspired by their courage and strength, and we remain deeply grateful for the opportunity to contribute to the care of future generations of children with swallowing and feeding disorders. Finally, we extend our heartfelt thanks to our own families, to whom this book is dedicated.

Reference

Rosenbaum, P., & Gorter, J. W. (2012). The 'F-words' in childhood disability: I swear this is how we should think! *Child: Care, Health, Development*, *38*(4), 457–463. https://doi.org/10.1111/j.1365-2214.2011.01338.x

About the Editors

Joan C. Arvedson, PhD, CCC-SLP, BCS-S, is a speech-language pathologist, with specialty in Pediatric Feeding and Swallowing Disorders at Children's Wisconsin, Milwaukee, and clinical professor in the Division of Pediatric Gastroenterology-Department of Pediatrics, Medical College of Wisconsin. She is recognized internationally for her clinical work in pediatric swallowing and feeding disorders, lecturing/teaching, and scientific publications. The first two editions of this book were published while she was at the Children's Hospital of Buffalo/Kaleida Health in Buffalo, NY. The third and fourth edition editors are Arvedson, Brodsky, and Lefton-Greif. Drs. Arvedson and Lefton-Greif co-authored *Pediatric Videofluoroscopic Swallow Studies: A Professional Manual with Caregiver Guidelines*. Dr. Arvedson developed an online course, *Interpretation of videofluoroscopic swallow studies of infants and children: A study guide to improve diagnostic skills and treatment planning*. She also developed independent study videoconferences for the American Speech-Language-Hearing Association's professional development initiatives. Dr. Arvedson is a founding member of the American Board of Swallowing and Swallowing Disorders and was a member of the founding board of Feeding Matters, Inc. She is a member of the Gravens Consensus Panel for Infant and Family-Centered Developmental Care (IFCDC) in the Intensive Care Unit. Dr. Arvedson is a member of the editorial board of *Dysphagia*. She is past-president of the New York State Speech-Language-Hearing Association and the Society for Ear, Nose, and Throat Advances in Children (SENTAC).

She is a Fellow of ASHA and was awarded Honors of the Association in 2016. She has received honors from multiple professional organizations, most recently SENTAC Outstanding Contribution Award, 2024 and Gold Medalist by the Dysphagia Research Society, 2025. Most important: she continues to work with patients, families, and other professional team members locally, regionally, and internationally.

Linda Brodsky, MD (1952–2014), an internationally recognized pediatric otolaryngologist, was Chief of Pediatric Otolaryngology at the Children's Hospital of Buffalo/Kaleida Health in Buffalo, New York; Professor at the State University of New York at Buffalo Medical School; Director of the Children Hospital's Center for Pediatric Otolaryngology and Communication Disorders. Dr. Brodsky was co-editor of the first two editions of *Pediatric Swallowing and Feeding: Assessment and Management* with Dr. Arvedson. In 2014, preliminary discussions were underway for the third edition. She's authored more than 100 scientific papers and 27 book chapters and served on the editorial boards of several medical journals. She was listed in the *Best Doctors in America* series and *Who's Who in Science and Engineering*. Dr. Brodsky was presented with the Sylvan Stool award for excellence in teaching by the Society for Ear, Nose, and Throat Advances in Children. She was a strong advocate for mentorship of young women in medicine. Her devotion to her patients and tenacity in advocating for their care was legendary. We are grateful for her contributions to prior editions that continue throughout updated chapters in this fourth edition. Dr. Brodsky continues to be missed by her family, colleagues, and patients.

Maureen A. Lefton-Greif, PhD CCC-SLP, BCS-S, is a speech-language pathologist and Professor in the Departments of Pediatrics, Otolaryngology—Head and Neck Surgery, and Physical Medicine and Rehabilitation at Johns Hopkins Medical Institutions. An expert clinician and clinical researcher in pediatric feeding and swallowing development and disorders, she has presented nationally and internationally. Her work focuses on optimizing pediatric swallowing evaluations to facilitate the prompt initiation of interventions and lessen the consequences associated with dysphagia. Dr. Lefton-Greif has received grants and support from the National Institutes of Health—National Institute on Deafness and Other Communication Disorders, the Ataxia-Telangiectasia Children's Project, and other sources. She co-edited the third edition of this book and, with Dr. Arvedson, co-authored *Pediatric Videofluoroscopic Swallowing Studies: A Professional Manual with Caregiver Guidelines*. More recently, she and Dr. Bonnie Martin-Harris developed the BaByVFSSImP© to quantify physiologic swallow impairments in bottle-fed children. She also developed the Feeding/Swallowing Impact Survey (FS-IS), the first outcome measure designed to assess how children's feeding and swallowing problems affect caregivers, and it has since been translated and culturally adapted into multiple languages. She is a Fellow of ASHA and was awarded the Honors of the Association in 2026. She is a founding member and the first vice-president of the American Board of Swallowing and Swallowing Disorders, the recipient of SENTAC's 2024 Ruben Scientific Achievement Award, and serves on the editorial boards of *Dysphagia*.

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1 Pediatric Swallowing and Feeding Disorders: Where Science and Practice Stand Today

Maureen A. Lefton-Greif, Joan C. Arvedson, and Jeannine M. Hoch

Introduction

In the three decades since the first edition of this book was published in 1993, there has been an exponential increase in basic and clinical research related to swallowing and feeding in infants and children. The complexities of interacting systems continue to challenge clinicians and parents. All involved in the care of children work to promote their health and to support appropriate growth, while ensuring that eating and drinking are pleasurable and stress-free for both children and their caregivers. Although diagnostic and treatment methods and models of providing care have progressed, the underlying physiological functions and ethical principles remain the same.

Breathing and eating are the most basic physiologic functions defining the beginning of life for newborn infants outside of the womb. Breathing is reflexive, is life sustaining, and occurs in response to the transition from the fluid environment of the womb to the postnatal air environment. Eating is partly instinctual and partly a learned response. Eating requires the ingestion of nutrients, which for a newborn infant must be provided by an outside source. Sucking and swallowing require a complex series of interrelated events and coordination of the neurologic, respiratory, and gastrointestinal (GI) systems. All of these functions are influenced by physical and emotional maturation.

The act of feeding is a dyadic process that requires interaction between the parent/caregiver and the infant/child. From the beginning, feeding should be infant-/baby-led with emphasis on quality of feeding and not on predetermined volume goal, which may increase stress for both the infant and feeders, reduce volume of intake, and leads to feeding refusal. Eating is pleasurable not only because it satisfies hunger but also because the infant/child enjoys the food and the parent/caregiver takes satisfaction in providing it. This interactive primary relationship is the first for every neonate. It serves as a foundation for normal development, somatic growth, communication skills, and psychosocial well-being. Thus, feeding the newborn infant, young child, and rapidly growing teenager is an activity

with far-reaching consequences. When feeding is disrupted, the sequelae can include malnutrition, behavioral abnormalities, and severe distress for family and child alike. If growth and development are disrupted during critical early months or years, the effects can sometimes be irreversible (Chapter 8). Lifelong disabilities may result.

Prevalence

Accurate estimates of the global prevalence of pediatric dysphagia remain unclear due to inconsistent terminology, variable access to diagnostic tools and specialist care, and limited resources for acquiring precise population-level data (Lefton-Greif et al., 2024). In the United States, more than 116,000 newborn infants were diagnosed with feeding problems after discharge from acute care hospitals, and more than 500,000 children (3–17 years) are diagnosed with dysphagia annually (Bhattacharyya, 2015; CDC/NCHS National Hospital Discharge Survey, 2010). Globally, the number of children with swallowing and feeding disorders has increased in part because medical and technological advances have improved survival for many infants and children who previously would not have survived. The range and complexity of their problems will continue to challenge the health care, educational, and habilitation/rehabilitation systems because many of these children are now living longer, remaining healthier, and having greater expectations for leading full and productive lives.

Globally, an estimated 13.4 to 15 million infants were born preterm (less than 37 weeks' gestation) in 2020 (Ohuma et al., 2023), and approximately 40% of those infants have feeding and swallowing problems. Although global preterm birth rates have been relatively stable over the past decade, survival, care, and the burden of preterm birth vary worldwide (see World Health Organization, 2023). Children who are born prematurely with very low birth weight or neurologic impairment are commonly found to have swallowing and feeding problems. Walton and colleagues (2022) performed a systematic review and meta-analysis and reported that 34% of preterm children experienced oromotor feeding problems in late infancy and childhood, with a 2.86-fold increased likelihood of such difficulties compared with term-born peers; however, the overall evidence quality was limited. Regarding swallowing specifically, Han and colleagues (2020) found that infants born before 29 weeks' gestation had an 11.2-times higher risk of swallowing dysfunction than those born at or after 29 weeks. Compared with full-term infants, late-preterm infants (34 0/7–36 6/7 weeks' gestation) have higher rates of respiratory and neurologic complications that can cause or worsen feeding difficulties (Engle et al., 2007; Mally et al., 2010; Vizzari et al., 2023).

In addition to children born prematurely with low birth weight, those with neurologic disorders commonly experience swallowing and feeding difficulties. Other high-risk groups include children with anomalies of the aerodigestive tract and those with various genetic conditions associated with structural and neurologic impairments (Table 1–1; Chapters 3 and 12). Cardiac, pulmonary, and GI diseases often create additional difficulties in sorting out primary versus secondary causes, making diagnosis and management in these patients even more challenging. Early identification and intervention have been invaluable, despite the cognitive impairments, cerebral palsy, chronic lung disease, structural abnormalities, and neurologic impairments that many infants endure. Swallowing and

Table 1–1. Major Diagnostic Categories Associated With an Increased Risk of Feeding/Swallowing Disorders in Infants and Children

Neurologic disorders	Encephalopathies (e.g., cerebral palsy, perinatal asphyxia)
	Traumatic brain injury
	Cerebral vascular accident
	Neoplasms (tumors)
	Neuromuscular disorders (e.g., spinal muscular atrophy)
Anatomic and structural anomalies	Congenital aerodigestive anomalies (e.g., tracheoesophageal fistula and esophageal atresia, cleft palate)
	Acquired aerodigestive conditions (e.g., tracheostomy, vocal fold paralysis or paresis)
Genetic syndromes	Chromosomal (e.g., Down syndrome, Ataxia Telangiectasia)
	Syndromic (e.g., 22q11.2 deletion syndrome, CHARGE syndrome, Pierre Robin sequence)
	Inborn errors of metabolism
Underlying systemic conditions	Congenital heart disease
	Respiratory (e.g., bronchopulmonary dysplasia, chronic lung disease of prematurity)
	Gastrointestinal (e.g., gastroesophageal reflux disease, eosinophilic esophagitis, dysmotility, constipation)
Psychosocial and behavioral conditions	Oral deprivation
	Oral sensorimotor processing disorders
	Secondary to unresolved or resolved medical condition
	Iatrogenic

feeding problems often exacerbate these conditions. Many of these diagnostic categories overlap with genetic disorders, and new research is making those connections clearer (Chapters 3 and 12).

Developmental Considerations

After the establishment of adequate respiration and physiologic stability, the highest priority for caregivers is to meet the nutrition needs of their newborn infants. To achieve this goal successfully, infants and children of all ages require a well-functioning oral sensorimotor and swallowing mechanism, overall adequate health (including respiratory, gastrointestinal, and neurologic function), appropriate nutrition status, central nervous system integration, and adequate musculoskeletal tone.

In addition, the emergence of communication, an often-overlooked process, is closely aligned with successful swallowing and feeding, particularly in young children (Malas et al., 2015, 2017). Normal feeding patterns are reflected in the early developmental pathways that sequentially and rapidly

emerge during the first several months and years of life. Communication is one of the most important of those pathways. The interrelationship between feeding, a basic biological function shared by all living creatures, and language-based, verbal communication, which is unique to humans, cannot be overemphasized. The comparative anatomy of the upper aerodigestive tract and its implication for the development of human communication has been established (e.g., Laitman & Reidenberg, 1993, 2013; LaMantia et al., 2016; Lieberman et al., 2001; Magriples & Laitman, 1987).

The ability to feed an infant successfully and thereby nurture an infant is imprinted early on the maternal–infant relationship. Optimally, maternal, as well as paternal, and infant bonding begins at the outset by providing nutrition with visual and auditory stimulation of loving and concerned parents. As Kalhoff and colleagues (2024) review, feeding skills develop through specific neuromotor milestones that emerge in a predictable sequence during critical early-life windows. Mealtimes are important opportunities for close caregiver–child interaction, and as children reach these milestones, they gain independence and begin to develop their own individuality. Therefore, swallowing and feeding disorders can adversely affect not only a child's physical health but also their psychosocial well-being and caregiver relationships.

Oral sensorimotor impairments can interfere with the development of feeding skills and are associated with feeding problems in school-aged children (Campos-Sanchez et al., 2023) as well as in children diagnosed with intellectual developmental deficits and autism (Elsayed et al., 2022; Engel-Yeger et al., 2016). The epidemiology of oral sensorimotor impairment is not well established because it is not clearly defined as a separate diagnosis and is often reported as part of other neurodevelopmental or neurologic disorders. It should be considered in children with autism, intellectual disabilities, neurologic disorders, and in cases where no clear diagnosis is found (Goday et al., 2019).

Team Approaches to Swallowing/ Feeding Disorders

Feeding disorders that may or may not include swallowing deficits (dysphagia) manifest in many different ways (Goday et al., 2019). Resistance to accepting foods, lack of energy for the work of oral feeding, and oral sensorimotor disabilities broadly encompass most problems (Kerzner et al., 2015). Effective management of these medically complex children depends on the expertise of many specialists working independently and as a team. Below are a few examples; however, this is not meant to be an exhaustive list, as patient care is carried out in different ways by various institutions and the professionals within them. Some teams may specialize in specific underlying etiologies or presentations; for example, Aerodigestive Teams (Boesch et al., 2018), Foregut Clinic for tracheoesophageal fistula and esophageal atresia, tracheostomy/ventilator clinics, craniofacial teams, and educational-based feeding/swallowing teams (see Chapters 12, 14, 15).

Team approaches also may differ depending on their location or focus and availability of resources. Changes in health care over the past several years, most notably due to the COVID-19 pandemic, have increased the use of telehealth and other virtual platforms for team-based care. It is important for teams to offer coordinated consultation and problem solving for co-occurring

etiologies and interrelated problems. The family's ability to synthesize and cope with multiple, sometimes disparate opinions must also be a top priority. Social media as a frequent source of health information for parents must be taken into consideration (Mertens et al., 2024; Pretorius et al., 2019). Additionally, teams should recognize perceptual differences in the family's role that occur with the transition from inpatient to outpatient care, with a shift in responsibility from the medical team to the family for meeting the goals for infants and very young children (Lequerica & Krch, 2014) (Table 1–2). See Chapter 15 for care delivered at home, in community programs, and in educational settings.

Whenever possible, an *interdisciplinary* team model is encouraged. This approach refers to interaction by a group of professionals who meet in person with the family, allowing for optimal and efficient communication. Regardless of the type of team, each professional brings expertise that is useful in the solution of complex medical problems. A group philosophy for both evaluation and treatment engenders respect for other team members' expertise. An organized structure with a clearly defined leader is important. Finally, a shared fund of knowledge is critical and results in creative problem solving and fruitful research. In situations where interdisciplinary teams are not possible, professionals are urged to develop strategies that promote effective communication with parents and other primary caregivers. Team member roles are similar regardless of the specific type of team, with all professionals providing services within their scope of practice and training. Most importantly, parents/caregivers are integral members of every team.

Over the past few decades, there has been increased recognition of the complex interface between feeding disorders and swallowing impairments in children. The term *pediatric feeding disorder* refers to inappropriate development of oral intake and its associated medical, nutritional, and psychosocial consequences (Goday et al., 2019). Swallowing impairments are more specific to the process of deglutition. Hence, all children with swallowing impairments have feeding disorders, but not all children with feeding disorders have swallowing impairments. Importantly, swallowing impairments can lead to the development of feeding disorders.

Different types of models and settings have emerged to accommodate assessment

Table 1–2. Common Differences Between Inpatient and Outpatient Care Settings for Infants and Very Young Children

Inpatient Settings	***Outpatient Settings***
• Physicians/medical providers order tests, prescribe medications, and administer treatments. • Contact with medical providers is frequent, predictable, and consistent. • Parent and caregiver roles vary depending on the underlying reason(s) for admission and needs of the child.	• Physicians/medical providers function in a more collaborative role. • Contact with medical providers becomes increasingly sporadic during follow-up visits. • Parents and caregivers are increasingly expected to take greater responsibility for achieving desirable outcomes.

Source: Adapted from Lequerica and Krch (2014).

and treatment of specific patient populations (e.g., craniofacial and aerodigestive teams). Some teams work with outpatients only and serve as a transition from inpatient care, whereas others operate across both inpatient and outpatient settings. Inpatient and outpatient swallowing/feeding teams may therefore differ in staffing and personnel. The core team members usually include a physician and other health care providers as dictated by the needs of the patient population. The primary oral sensorimotor swallow therapist is most likely to be a speech-language pathologist, although in some instances an occupational therapist may be primary. All teams benefit from both when underlying knowledge and experience is extensive with infants and children demonstrating swallowing and feeding disorders.

Special Considerations for School, Home, and Residential Settings

Oral sensorimotor and swallowing specialists frequently function outside of hospital settings and outpatient clinics. Assessment and treatment for children with complex feeding and other medical problems are common in a variety of community-based, educational (school-based), and residential (home-based) settings. A working knowledge of the challenges faced by infants and children with a wide variety of swallowing problems is mandatory, and there is a recognized need for expanded training opportunities, particularly in the care of infants and toddlers (Cohen & Dilfer, 2022; Raatz et al., 2023). Families may be followed through a center or home-based educational program, potentially reducing logistical barriers for caregivers of infants and children transitioning from the inpatient setting.

These services have been mandated in the United States by federal legislation that guarantees a free and appropriate educational program for children with disabilities. The Individuals with Disabilities Education Act (IDEA; Public Law No. 101-476) was established to guarantee that all students with disabilities are provided with the same access to public education as students without disabilities. IDEA is composed of four parts, the main two being Part A and Part B. Part A covers the general provisions of the law; Part B covers assistance for education of all children with disabilities; Part C covers infants and toddlers with disabilities, including children from birth to age three years; and Part D is the national support programs administered at the federal level (Chapter 15).

Challenges in Caring for Children With Swallowing/ Feeding Disorders

A comprehensive approach to children with swallowing and oral sensorimotor function problems can be hampered by the lack of a shared fund of knowledge. A clearly defined set of terms related to this rapidly expanding field is necessary. Several terms will be defined here, with others being defined as they are encountered throughout the book. *Deglutition*[1] is the act of swallowing and is just one process in the broader context of feeding. Swallowing refers to the entire act of deglutition from placement of food and liquid into the mouth until they enter the upper esophagus. Sucking, chewing, and swallowing are three physiologically dis-

[1]The terms *swallowing* and *deglutition* have been used interchangeably. The term *swallowing* will be used throughout the text.

tinct processes occurring during deglutition (Kennedy & Kent, 1985). Estimates of the frequency of swallowing have ranged from 600 to 1,000 times per day (Lear et al., 1965). The highest frequency is during food intake, and the lowest is during sleep. Aside from providing nourishment and hydration, swallowing accomplishes other purposes, such as the removal of saliva and mucous secretions from the oral, nasal, and pharyngeal cavities. A decrease in swallowing frequency may be coupled with oral sensorimotor dysfunction and thereby may result in severe drooling (Chapter 13).

Feeding is a broad term to encompass the process for getting food/liquid into the mouth. After food or liquid enters the mouth, deglutition begins with formation of a bolus, involving sucking and chewing as needed based on the item's consistency, which then moves the material through the mouth into the pharynx to initiate swallowing. *Dysphagia* is a swallowing deficit that may be "affecting any part of the swallowing tract from the mouth to the stomach" (Donner, 1986, p. 1). *Oral sensorimotor function* refers to all aspects of sensory and motor functions involving the structures in the oral cavity and pharynx related to swallowing from the lips until the onset (or initiation) of the pharyngeal swallow (Chapter 2). Finally, *nutrition* is the process by which all living organisms obtain the food and nourishment necessary to sustain life and support growth (Chapter 7).

Caring for children with swallowing and feeding disorders requires a broad knowledge base coupled with thoughtful and often creative problem solving. This approach applies to the diagnosis and treatment of any medical condition and is especially important in the care of medically complex children. Interdisciplinary and multidisciplinary team-based care is most effective when parents and caregivers are actively engaged as integral members of the team and when children are comprehensively evaluated to identify appropriate management strategies (Table 1–3).

Ethical and Legal Challenges Underlying Care for Children With Swallowing/ Feeding Disorders

In addition to making evidence-based decisions, all team members must adhere to the moral and ethical principles within the framework of their professions as well as their scopes of practice (Arvedson & Lefton-Greif, 2007; Horner et al., 2016). Ethics is a discipline that uses a systematic approach to examine morality with the intent of promoting the overall welfare of the community (Lefton-Greif & Arvedson, 1997). The four primary principles of ethical decision making—respect for autonomy, beneficence, nonmaleficence, and justice—are reviewed in detail in Beauchamp and Childress (1994) and Purtilo (1988). Adherence to these four commitments is critical to decision making that goes beyond the

Table 1–3. Steps in the Diagnosis and Management of Pediatric Feeding and Swallowing Disorders

- Define feeding and swallowing problems
- Identify potential etiology(ies)
- Determine appropriate diagnostic tests
- Assess or review diagnostic test results to determine next steps
- Educate caregivers about the problem and implement facilitative intervention strategies
- Monitor progress
- Evaluate progress (focused on outcomes)