CHAPTER 1

Pediatric Oral Health and Pediatric Dentistry: The Perspectives

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Children are special

Pediatric dentistry is defined as "the practice, and teaching of and research in comprehensive preventative and therapeutic oral health care of children from birth through adolescence" [1]. The central element in this definition—and that which distinguish it from other clinical fields in dentistry—is *children*, further qualified as individuals *from birth through adolescence.*

In this book, we adopt the United Nations (UN) Convention definition of a child as "every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier" [2]. That children are different from adults has not always been recognized. Previously, children were depicted as "small adults" (Figure 1.1), but recent research reflect that health services for children need to consider that children are growing and developing individuals who are dependent on an adult caregiver. This requires oral health professionals with special competencies, so-called *child competency* (Box 1.1).

Today, a satisfactory definition of health needs to include somatic as well as non-somatic dimensions. Consequently, oral health should include not only sound teeth and surrounding oral structures, but also absence of dental fear and anxiety as a prerequisite for good oral health during later periods of life. This is consistent with recent concepts of oral health as a determinant factor for quality of life [3].

Community responsibility: the population perspective

By the end of the nineteenth century, a number of large epidemiologic studies on caries in children carried out in the Nordic countries showed that more than 80% of the children had carious teeth and that only a few per thousand had received any dental treatment. These studies were the major reason why children's dental health was conceived as a problem, requiring public intervention in terms of organized public dental health services for children.

It is interesting to note that the arguments for better oral services for children in the Nordic countries were based on epidemiologic data. Using epidemiologic information to document a health problem is to adopt a population approach rather than an individual clinical approach. This illustrates that in the Nordic countries, organized child dental care has for more than a century been considered a collective responsibility rather than the responsibility of the individual on their own. Formal legislation and regulations concerning child dental care were passed by the parliaments of all Nordic countries several decades ago and dental services, including outreach preventive services, have been developed to serve the whole child population. The epidemiologic starting point of child dental care in the Nordic countries also explains why the child dental services in these countries have collected valuable epidemiologic information to continually monitor the level of disease in the target groups.

The clinical perspective

Pediatric dentistry encompasses all aspects of oral health care for children and adolescents. It is based on basic knowledge from various odontological, medical, and behavioral sciences that are applied to the unique situation of the developing child and young person. Prevention is still the cornerstone of pediatric dentistry. Starting prevention in early childhood makes it possible to maintain sound erupting teeth and keep oral structures healthy. Pediatric dentistry also implies early diagnosis and treatment of the multitude of oral diseases and conditions found in the child's and the adolescent's oral cavity, including caries, periodontal diseases, mineralization disturbances, dental erosion, disturbances in tooth development and tooth eruption, and traumatic injuries in otherwise healthy individuals as well as oral health care of sick and disabled children. The realm of pediatric dentistry is constantly expanding, and now includes such areas as early identification of children suspected to suffer from syndromes, and of children suspected to suffer from child maltreatment. Ethical considerations superimpose all these areas.

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Figure 1.1 Until the eighteenth century, children were considered to be small adults (sort of "miniature grown-ups") as shown in this painting from a medieval church. Note the similarity of the facial features of the adults and the children. Source: Epitaph in Norra Sandsjö parish church, Sweden, of Johan Printzensköld and Anna Hård af Segerstad and their five children.

Box 1.1 Professionals should recognize that children are not "small adults" and that special competency (child competency) is needed, when meeting children

Children are different from adults in a number of ways:

- children are individuals in growth and development
  - physical
  - psychological
  - social
  - cognitive
  - emotional
- oral health, including attitudes and behavior relating to oral health, is formed during childhood and adolescence
- children's situation is different from the situation of adults:
  - they are in the care of and dependent on adults
  - they are not able to foresee consequences of their own decisions and behavior.

Child competency is:

- a specific insight into the dental and oral health for the child and adolescent
- an ability to communicate effectively with children, adolescents, and their parents
- a positive professional attitude towards children, adolescents, and their parents.

The quest for evidence-based interventions—preventive, diagnostic or rehabilitative—is urgent in pediatric dentistry as well as in all other fields of dentistry, and recent research has identified the need for more high-quality research in a number of the domains comprising pediatric dentistry [4]. It is important that diagnosis, risk assessment, prevention, treatment, and follow-up of children are based on scientific evidence, when available. Translation of evidence into clinical guidelines will thus help to secure quality of dental care for all children. The burden of dental disease is not equally distributed and it is a goal to diminish the inequality. Health technology assessment (HTA) bodies in many countries have provided useful guidelines about important topics in pediatric dentistry. In Scandinavia, the Swedish Council on Health Technology Assessment (SBU) has produced relevant guidelines for pediatric dentistry.

Education in pediatric dentistry: the perspectives

The undergraduate education and training in pediatric dentistry in the Nordic countries today is well balanced and aims to give the student sufficient knowledge and competence to deliver basic dental care to preschool children, school children, and adolescents. During the last decades the undergraduate curriculum has increased the emphasis on prevention and behavioral and social sciences.

The need for postgraduate courses and training was recognized early. To provide dental care to complicated cases, often with special needs and in a multidisciplinary team, requires specialized knowledge and child competence as obtained in a specialist education in pediatric dentistry. The European Academy of Paediatric Dentistry presented guidelines for a specialist education in pediatric dentistry in 1995 [5]. The education is a 3-year full-time course given at universities and institutes preceded by at least 2 years' practice as a general practitioner. This program has been adopted by most educational centers in Europe during the last decades.

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