Many children lack a centre point from where coordinated, comprehensive and ongoing oral health care is provided. Often adolescents with SHCN can “fall through the net” when their care is transferred from the paediatric dentist or clinic to that of the general dentist.

**Oral health status**

Although the overall oral health of the general population is improving, disparities still exist in oral health needs among certain special needs groups. Individuals with mental retardation (MR), for example, have worse oral health than their peers in the general population.1-3 Dental problems are among the top 10 limiting secondary conditions among adults, according to data that Traci et al.4 found the estimated prevalence rate of oral hygiene problems was 45.1 per 1,000 individuals with developmental disabilities.

Novak5 also examined the dental health of 3,622 disabled individuals aged 0-16+ years living in the community, and their average DMFT score of 6.44 was found among individuals with Down syndrome and an average DMFT score of 6.73 among individuals with other aetiologies and of MR compared with an average DMFT score of 6.68 among individuals in the general population. They found, however, that the proportion of missing teeth to filled teeth was much higher among individuals with MR compared with the general population, suggesting extraction, rather than tooth restoration, is the primary treatment of dental problems among those with MR. Dental caries, or tooth decay, may be linked to frequent vomiting or gastro-oesophageal reflux, decreased saliva production, medications containing sugar or special diets that require prolonged bottle feeding or snacking.

**Periodontal health**

Similar findings also have been reported with respect to gingivitis, periodontal disease, bruxism and lack of masticatory ability. Periodontal disease can occur in children with impaired immune systems or connective tissue disorders and inadequate oral hygiene.

The prevalence of gingivitis is estimated to be 1.2 to 1.9 times higher than that of the general population.2 Periodontal disease also has been shown to be more prevalent among individuals with MR compared with the general population.6 Sturme and Hinds found 53 percent of those examined with MR had attrition and 20 percent lacked satisfactory tooth wear that required treatment compared with 1.2 percent in the general population.

**Oral development**

Tooth eruption may be delayed, accelerated or inconsistent in children with growth disturbances. The gingivae may appear red or bluish-purple before erupting teeth break through into the mouth. Eruption depends on genetics, growth of the jaw, muscular action and other factors. Children with Down syndrome may show delays of up to two years.8

Malocclusion and crowding of the teeth occur frequently in children with atypical development. More than 80 craniofacial syndromes have been reported that can affect oral development with 25 percent associated with mental impairment.9 Muscle dysfunction contributes to malocclusion, particularly in people with cerebral palsy. Teeth that are crowded or out of alignment are more difficult to keep clean, contributing to periodontal disease and dental decay.

Tooth anomalies are variations in the number, size and shape of teeth. Morphological patterns in SHCN children also can be disturbed. For example, children receiving chemotherapy for childhood cancer can result in a higher prevalence of various malformations in teeth.10 Children treated in the early years of their lives displayed the most severe dental defects, suggesting that immature teeth are at a greater risk of developmental disturbances than fully developed teeth.11 People with Down syndrome, oral clefts, ectodermal dysplasia or other conditions may experience congenitally missing, extra or malformed teeth.

**Risk factors**

**Oral hygiene** A number of factors may predispose an individual with SHCN to oral pathologies. The oral hygiene among individuals with MR has been shown to be considerably poor compared with individuals in the general population.12 Those with MR often have impaired physical coordination and cognitive sequencing skills that limit independence in task completion.13 Medication Other factors include a lack of saliva as a side effect to multiple medication use14 or the high sugar content of some medicines. Systemic factors The very nature of the child’s disability may also predispose to oral health problems, such as individuals with Down syndrome who may be more susceptible to gingivitis and other periodontal diseases because they are thought to have underlying abnormal immuno-logic responses.

**Oral trauma** Trauma to the face and mouth occur more frequently in people who have mental retardation, seizures, abnormal protective reflexes or muscle incoordination. Self-mutilation in children with MR may involve the oral and orofacial tissues where the lips or tongue may be chewed.

**Strategies for oral health care**

A number of strategies that can be implemented by the general dentist and his team have been recently suggested by the National Maternal and Child Oral Health Resource Centre.15 These include:

- Work with parents and care givers to promote self care, healthy diet and access to regular dental care.
- Educate the whole dental team in assessment, prevention and early intervention methods such as oral hygiene advice, dietary advice, regular screenings and topical application of fluoride varnish or calcium enriched gel where needed.
- Be willing to coordinate care with specialists or other health care professionals.
- A range of practical help and recommendations to aid in oral hygiene maintenance such as the use of power toothbrushes and other appropriate oral hygiene aids, mouthwashes and toothpastes.

Providing oral care to patients with developmental disabilities, however, may simply require adaptation of the skills we use every day. In fact, most people with mild or moderate developmental disabilities can be treated successfully in the general practice setting. Keeping our knowledge base up to date will enable us to provide appropriate care for the special health-care needs child.

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