High risk/urgent care (3 months)

People whose oral health needs to be maintained at an optimum level to avoid complex problems include those:

• with craniofacial anomalies
• with craniofacial problems that need antibiotic prophylaxis
• with bleeding disorders
• who are PEG-fed and at risk of aspiration pneumonia.

Moderate risk/ care (6 monthly)

Patients whose general health is fair/good, but oral health is poor due to:

• inability to care for themselves (physical/cognitive issues)
• carers having difficulty caring for them (behavioural issues).

Low risk/care (annually)

People whose general health and oral health are good, but need regular follow-up to maintain it.

Edentulous Once every 2 years.

Summary

Managing oral health of people with disabilities may be challenging and time consuming, but patience and willingness to provide care can bring positive results and invaluable rewards.

Acknowledgments

Dr Archana Pradhan for the preparation of this material.

Developmental disabilities are permanent cognitive and/or physical impairments that usually occur in the early years of life but can occur anytime before the age of 18 years. Until recently, oral care for people with developmental disabilities was mainly a paediatric concern. With the advances in medical care, people with developmental disabilities and acquired disabilities are now living longer and more dependently in the community than before.

What is disability?

The Australian Bureau of Statistics (ABS) 2003 Survey of Disability, Ageing and Carers defined disability as "any limitation, restriction or impairment which has lasted, or is likely to last, for at least six months and restricts everyday activities."

Prevalence of disability

In South Australia, there were over 13,300 people with disabilities registered with Disability SA in July 2008 with approximately 8,500 people having intellectual disability. The number of individuals receiving disability services from either Disability SA or nongovernment organisations funded by government has increased by more than 5,000 (33%), from 15,081 in 2003 to 20,107 in 2007. However, the most recent National Health Survey included only severe or profound disability conditions like mental health, back problems, arthritis, cardiovascular diseases and asthma, but excluded people in institutions in Australia and those with mild problems as having disability conditions in the Australian population such as Down syndrome, cerebral palsy and dementia.

Medial history

People with disabilities present with multiple challenges that have implications for oral care. A thorough medical history should be obtained with focus on the list of medications. Due to possible problems with communication, medical history forms can be posted along with the appointment cards, so they are completed by a family member or person responsible (manager) and brought at the time of the appointment. Patients with disabilities may present with one or more of the following conditions:

Dementia occurs in over 85% of older adults with Down syndrome, which results from http://www.kskgroup.com the presence of trisomy 21 (extra chromosome 21). Dementia and Alzheimer’s disease are rare among adults with Down syndrome. However, dementia-like changes are more frequently seen in the community than before.

Visual impairments

Visual impairments such as glaucoma, cataracts and macular degeneration may cause problems with the ability to perform oral hygiene procedures and the ability to detect oral health problems.

Seizures

Seizures are common in people with developmental disabilities. The mouth is always at risk during a seizure with patients chewing items or biting the tongue or cheeks. The frequency of seizures and the medications used to control them should be recorded. Any known factors that trigger the patient’s seizures should be avoided. If a seizure occurs during oral care, all instruments in the mouth should be removed. The patient should be turned to one side, and the airway monitored to reduce the risk of aspiration.

Neuromuscular problems

Neuromuscular problems can affect the mouth causing an imbalance of forces on the teeth and contribute to an open bite and therefore drooling. Drooling can cause chronic irritation of the facial skin, increase perioral infection, halitosis and dehydration due to fluid loss. Many strategies have been described in the management of drooling but none appear to be universally successful.

Other patients may have swallowing problems allowing food to stay in the mouth longer than usual, increasing the risk of caries. In addition, gagging problems can further complicate oral care.

Patients with swallowing problems should be in a more upright position and the head should be tilted slightly to one side.

For patients with a gagging problem, early morning appointments should be scheduled, before meals. The gag reflex can be minimized by placing the patient’s chin in a neutral or downward position.

References

Uncontrolled body movements

Uncontrolled body movements are common in people with cerebral palsy, Parkinson’s and Huntington’s disease. Such movements make it very difficult to complete good dental treatment. Extreme care is needed so as not to injure the patient, carer and/or dental staff. Every effort should be taken to keep patients calm and relaxed. Relaxation will not stop the uncontrolled body movements, but may reduce their frequency and intensity.

Mobility problems

Many people with disabilities have mobility problems, with some needing walking aids such as canes or walking frames. Clear pathways in the surgery should be maintained to allow movement in the surgery. While a few can be transferred to the dental chair, most need to be treated in their wheelchairs. Resin sealants will be re-lined at a level that is comfortable for the patient, and then locked for safety. More recently, fixed and mobile wheelchair platforms and lifts have become available.

Medications

People with disabilities are generally prescribed one or more medications. Medications, such as sedatives, may reduce salivary flow while some medications may lead to dry mouth. All medications will be given to minimise such oral side-effects of medications.

Oral health problems

**Dental caries**

Poor oral hygiene and a diet high in sugar can cause caries. In contrast to some studies that have reported a high prevalence of untreated dental caries among people with disabilities, a study in the Australian population aged 15 years or more found 17% of carer-recipients had untreated decay, which was lower than the untreated decay prevalence of 28% in the general Australian population aged 15 years or more.

Poor oral hygiene and a diet high in sugar can cause caries. In contrast to some studies that have reported a high prevalence of untreated dental caries among people with disabilities, a study in the Australian population aged 15 years or more found 17% of carer-recipients had untreated decay, which was lower than the untreated decay prevalence of 28% in the general Australian population aged 15 years or more.

**Oro-facial anomalies**

Oro-facial anomalies affect many people with developmental disabilities. A good understanding of the patient’s dental status is required. A radiograph and/or functional level is needed to provide appropriate behavioural support and communication techniques and determine the “cooperative window” for management in the dental surgery. This can include the period of time for which the particular patient may be expected to cooperate, as well as the scope of procedures tolerated. Patient is necessary for effective communication at the level that a patient can understand.

**Trauma and injury**

Protruding anterior teeth are more likely to be displaced, fractured, or avulsed from falls or accidents among people with developmental disabilities, especially those with seizures. Some oral trauma could be self-inflicted. Carers should be informed that trauma require immediate professional attention for better chance of success. Any suspected case of abuse and neglect of people with disabilities can be reported to the National Disability Abuse and Neglect Hotline on 1800 880 052 or email disabilityhotline@wed.org.au

**Tooth wear**

Tooth wear (attrition and erosion) is also common among people with developmental disabilities.

**Attrition**

Attrition is present mainly from grinding teeth, which can sometimes be heard in the sitting room. It may be also caused by chewing hard non-food items.

**Erosion**

Erosion occurs either from frequent intake of soft drinks or QDQR (dextrose-epoxide Reflux Disease), which sometimes affects people with developmental disabilities such as cerebral palsy. Such teeth may be sensitive and therefore either regular toothpaste should be replaced with high fluoride concentration toothpaste or application of fluoride gel to teeth every night.

**Communication**

Communication skills and levels should be confirmed with carers, which may vary from ineffective, effective non-verbal to effective verbal communication. A South Australian study noted that oral health problems were about seven times as frequent in people with developmental disabilities compared to the general population.

**Malocclusion**

Malocclusion is common in people with developmental disabilities and may be associated with intraoral and perioral muscular abnormalities, delayed tooth eruption, underdevelopment of the maxilla, and oral habits such as bruxism and tongue thrusting. Malocclusion can make chewing and speaking difficult and increase the risk of periodontal disease, dental caries, and oral trauma. Scott et al. (1998) noted that malocclusion in people with developmental disabilities was about twice as high as compared to the general population.

**Oral hygiene**

Oral hygiene is important to maintain good oral health. Patients who have good oral hygiene will have fewer oral problems. It is important to maintain good oral hygiene for people with disabilities.

**Periodontal disease**

Contributing factors for periodontal disease include poor oral hygiene, and damage to the supporting tissues of the teeth by periodontal pathogens caused by medications such as some anticonvulsants, antipsychotics, and immunosuppressants also increases the risk of periodontal disease. Such teeth may be sensitive and therefore either regular toothpaste should be replaced with high fluoride concentration toothpaste or application of fluoride gel to teeth every night.

**Oral sedation**

Oral sedation can be a useful method to sedate the child. It involves giving the patient a medication orally either commercial or home made. The medication may be the same as used for general anaesthesia but usually at a lower dose. Oral sedation is commonly used for children who are not able to cooperate or are extremely anxious.

**Preventive measures**

Oral diseases are much easier to prevent than to treat. Adequate daily oral hygiene, well balanced diet and regular visits to the dentist can prevent many oral diseases. At each dental visit, home preventive measures can be given. Patients with disabilities may not be able to take allhome preventive measures. In such cases, caregivers should be given written instructions or soft friendly reminder cards.

**Oral examination**

Many patients with disabilities have difficulty in chewing and swallowing. Their diets are often limited to liquids and soft foods which tend to adhere to teeth and may promote oral infections. Self-help with the development of feeding skills is necessary. Some people with disabilities may have oral ulcers, which may be caused by infections or other causes. Oral ulcers can be painful and may prevent people from eating. Proper nutrition is important for people with disabilities.

**Oral hygiene**

Oral hygiene is important to maintain good oral health. Patients who have good oral hygiene will have fewer oral problems. It is important to maintain good oral hygiene for people with disabilities.

**Oral sedation**

Oral sedation can be a useful method to sedate the child. It involves giving the patient a medication orally either commercial or home made. The medication may be the same as used for general anaesthesia but usually at a lower dose. Oral sedation is commonly used for children who are not able to cooperate or are extremely anxious.

**Preventive measures**

Oral diseases are much easier to prevent than to treat. Adequate daily oral hygiene, well balanced diet and regular visits to the dentist can prevent many oral diseases. At each dental visit, home preventive measures can be given. Patients with disabilities may not be able to take all home preventive measures. In such cases, caregivers should be given written instructions or soft friendly reminder cards.

**Oral examination**

Many patients with disabilities have difficulty in chewing and swallowing. Their diets are often limited to liquids and soft foods which tend to adhere to teeth and may promote oral infections. Self-help with the development of feeding skills is necessary. Some people with disabilities may have oral ulcers, which may be caused by infections or other causes. Oral ulcers can be painful and may prevent people from eating. Proper nutrition is important for people with disabilities.

**Oral hygiene**

Oral hygiene is important to maintain good oral health. Patients who have good oral hygiene will have fewer oral problems. It is important to maintain good oral hygiene for people with disabilities.

**Oral sedation**

Oral sedation can be a useful method to sedate the child. It involves giving the patient a medication orally either commercial or home made. The medication may be the same as used for general anaesthesia but usually at a lower dose. Oral sedation is commonly used for children who are not able to cooperate or are extremely anxious.

**Preventive measures**

Oral diseases are much easier to prevent than to treat. Adequate daily oral hygiene, well balanced diet and regular visits to the dentist can prevent many oral diseases. At each dental visit, home preventive measures can be given. Patients with disabilities may not be able to take all home preventive measures. In such cases, caregivers should be given written instructions or soft friendly reminder cards.