Dental management of patients with physical challenges

PJ Murphy, DDS, BSc
Clinical Assistant Professor
UBC Faculty of Dentistry
pjmurphy@dentistry.ubc.ca

https://pocketdentistry.com/patient-examination-and-assessment/

https://bondistry.com/five-most-common-examples-as-to-why-teeth-are-extracted/

Patients with physical challenges

Providing dental care to individuals with physical challenges requires increased awareness and accommodation by the office, including:

- frequent consultation with other health care providers
- patient and caregiver education in prevention
- communicating with patients who have a sensory impairment
- transfer of patient from wheelchair to dental chair
- proper airway positioning and modifications to routine treatment procedures
- difficulty in sitting or reclining in a dental chair → may need to be treated in the semi upright position
- impaired gag reflexes - avoid aspiration of saliva, water spray, dental debris which could result in aspiration pneumonia
- shorter appointments
- more frequent hygiene visits
- obtaining appropriate informed consent

Patients may have motor function impairments due to:

- congenital issues
- acquired impairments – such as rheumatoid arthritis, chronic neurological disorders, etc
- trauma
- iatrogenic causes

Patients with physical challenges

Degenerative Neuromuscular Disorders

- Multiple sclerosis
- Parkinson's Disease
- Amyotrophic Lateral Sclerosis
- Muscular dystrophy
- Huntington's disease

Developmental Disorders

- Cerebral Palsy
- Cystic fibrosis

Traumatic Injuries

- Traumatic Brain Injury
- Spinal Cord Injury

Orthopedic Disorders

- Arthritis
  - Osteoarthritis
  - Rheumatoid Arthritis
  - JIA
- Amputation
- Scoliosis

Cerebrovascular Accident (CVA)

Epilepsy

Physical, Sensory + Social Challenges

Physical + Sensory Challenges:

- mobility impairments
- respiratory impairments
- visual impairments
  - patient may need guidance and verbal directions
- hearing impairments
  - the clinician needs to speak face to face so the patient can read lips
  - patients may prefer to write messages on a pad of paper or a language board or use sign language

Some of the issues that affect the daily lives of people with severe physical challenges are:

- *housing*: is there housing available that accommodates their challenges
  - is community living available?
  - is financial help available?
- *transportation*: is transportation available + convenient? is financial help available?
- *education*: is special education available? will it result in marketable job skills? funding?
- *employment*: are employers willing to hire and make necessary accommodations?
- *health care*: is medical and dental treatment accessible? is financial assistance available? transportation?

Barriers to Oral Healthcare

Some of the many barriers to oral healthcare include:

- physical
  - stairs
  - narrow corridors
  - cramped operatory
  - parking problems
- emotional barriers
- cost of treatment
- dental staff with little experience in treating patients with physical challenges
- office accommodation
- poor involvement of family/caretakers
- informed consent issues
- potential for drug interactions/side effects
- behavior management
- need for frequent medical consultation/appointments

Access design and solutions

- the approach to the office - ramps, lighting, walkways, sidewalks, parking facilities
- the entrance - ramps, handrails, hallways, elevators, door width, level threshold, position and design of door handles
- reception room design - appropriate seating, lighting, clear signage, non-slip flooring, communication aids, space for wheelchairs
- the corridors - adequate space and width to maneuver a wheelchair, no obstructions
- operatory design to allow for wheelchair transfer or in-wheelchair care
- restroom facilities - space, transfer bars, raised seat, alarm in place
- awareness training for staff

- **a mobile dental unit can allow for greater access to oral care**

Treatment

Many patients are independent - never assume they require assistance to access the dental chair, always ask

- Wheelchair users may be able to self transfer from their wheelchair into the dental chair
- For some patients being touched is a painful experience – i.e. arthritis

Patient treatment involves increased awareness and accommodation by the dentist and staff, including:

- medical consultation
- coordinating dental treatment with other care providers
- accommodating a person who is deaf or blind
- treating a person who uses a wheelchair
- proper airway positioning
- obtaining informed consent via guardian or court petition
- modifications to routine treatment procedures

Informed Consent

- All patients must be able to provide appropriate informed consent for dental treatment or have someone who can provide it for them

- Informed consent should include:
  - explanation of the oral disease issues
  - rationale for recommended dental treatment
  - available treatment alternatives
  - consequences of non-treatment
  - possible complications or side effects

Medical Consultation + Coordination of Care

The patient's physician should be consulted regarding:

- timing and sequencing of dental treatment
- patient's physical and mental challenges
- use of restraints or sedation
- use of sedation or general anesthesia
- potential drug interactions
- antibiotic prophylaxis

Dental treatment should be coordinated with other therapy received by the patient, such as:

- kidney hemodialysis
- physical therapy
- occupational therapy
- psychotherapy

Treatment Aids

- Stabilization of the patient's head can be accomplished through the use of:
  - pillows
  - rolled blankets
  - towels
- The patient's head needs to be raised slightly to avoid respiratory compromise
- During treatment - oral access/stabilization via mouth props/bite blocks
  - floss ligature to prevent patient aspiration
- For patients who have difficulty grasping, the use of a wide-handled power toothbrush is recommended with the addition of:
  - bicycle grips
  - tennis balls
  - soft plastic to toothbrush handles
  - an extender (ruler, rod or wooden spoon) taped to the handle of a toothbrush to provide assistance for patients with a limited range of motion
- Caregivers need to receive patient education on the importance of oral health, the oral/systemic link, optimal oral hygiene techniques

https://decisionsindentistry.com/article/dental-care-patients-special-needs/

Resources

- Little JW, Miller CS, Rhodus NL. In: Little JW, Miller CS, Falace DA. (2018). Little and Falace's dental management of the medically compromised patient. St. Louis, Mo: Elsevier/Mosby
- Malamed, SF. (2015). Medical emergencies in the dental office. St. Louis, Mo: Mosby Elsevier; Part One: Prevention.
- Vannelli P, Scannapieco FA, Desai S, et al, Glick M. In: Glick, M. Burket's Oral Medicine (12e). Shelton, US: PMPH-USA, Ltd, 2015, 13: 781607951889, Edition: 12th
- Robbins, S. L., Kumar, V., & Cotran, R.S. Robbins and Cotran pathologic basis of disease. 8th ed. Philadelphia, PA : Saunders/Elsevier, 2010.
- Kim EB, Susan MB, Scott B, Heddwen LB. (2016). Ganong's Review of Medical Physiology, 25e,
- Mulroney SE, Myers AK. In Mulroney, S. (2015). Netter's essential physiology. Elsevier Health Sciences.
- Carroll Ty B, Aron DC, Findling JW, Tyrrell JB. In Gardner, D. G. (2011). Greenspan's basic & clinical endocrinology, 9e. McGraw-Hill Medical.
- Lloyd-Jones DM. In, Cecil RL, Goldman L, Schafer AI. Goldman's Cecil medicine. 2016, 25e.
- Longo, D., & Harrison, T. R. (2012). *Harrison's principles of internal medicine* (18th / editors, Dennis L. Kasper. [et al.]. ed.): McGraw-Hill, Medical Pub. Division.
- The Canadian Dental Association:www.cda-adc.ca