Module 4217 Unit 3 (Special Needs Dentistry)

Disability and Systemic Conditions in relation to their Impact on Oral health

11 Jul 2025
8-9 AM (WA Time)
G15 KJG Sutherland LT

Dr David Lim

Lecturer, Dental School, UWA

UWA
PERTH · AUSTRALIA

Learning Objective

1. *Explain the cultural, legal and social context of individuals with a disability using the International Classification of Functioning, Disability and Health (C3)*

2. *Outline the appropriate consent process and legal requirements when providing oral health care for people with communication, cognitive or sensory impairments (C2)*

3. *Outline **common** impairments, disabilities and systemic conditions in relation to their impact on oral health and oral function (C2)*

4. *Compare the medical, social and environmental factors that impact on risk assessment and treatment planning for individual patients requiring special care (C4)*

5. *Demonstrate personal and professional development (A2)*

ICF	Common Imp, Disab, Syst	Personal/Prof Dev

Definitions

IMPAIRMENT means the loss, the loss of the use, or the damage or malfunction, of any part of the body or of any bodily system or function or part of such system or function (safeworkaustralia.gov.au)

Persons are considered to have a **DISABILITY** if they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities[3]. (APSC.GOV.AU)

- Sensory
- Intellectual
- Physical
- Psychosocial
- Head injury, stroke, or other acquired brain injury
- Others

How is this definition different from other countries?

SPECIAL NEEDS DENTISTRY supports the oral health care needs of people with an intellectual disability, medical, physical or psychiatric conditions that require special methods or techniques to prevent or treat oral health problems, or where such conditions necessitate special dental treatment plans. (RACDS, 2015)

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Equality, Equity, Justice, Reality

Equality

The assumption is that **everyone benefits from the same supports.** This is equal treatment.

Equity

Everyone gets the supports they need (this is the concept of "affirmative action"), thus producing equity.

Justice

All 3 can see the game without supports or accommodations because **the cause(s) of the inequity was addressed.** The systemic barrier has been removed.

Reality

Barriers in societal systems tend to be synergistic in causing vulnerability/ marginalisation.

Image sources: Variations of these images have been created by Craig Froehle, Angus Maguire, the Center for Story-Based Strategy and the Interaction Institute for Social Change.

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ICF

1. *Explain the cultural, legal and social context of individuals with a disability using the International Classification of Functioning, Disability and Health (C3)*

The International Classification of Functioning, Disability and Health (ICF) is a framework developed by the World Health Organization (WHO) for describing and measuring health and disability. It provides a common language for health professionals to understand and communicate about functioning and disability, moving beyond a purely medical or social model to a biopsychosocial one. The ICF model views a person's level of functioning as a dynamic interaction between their health condition, environmental factors, and personal factors.

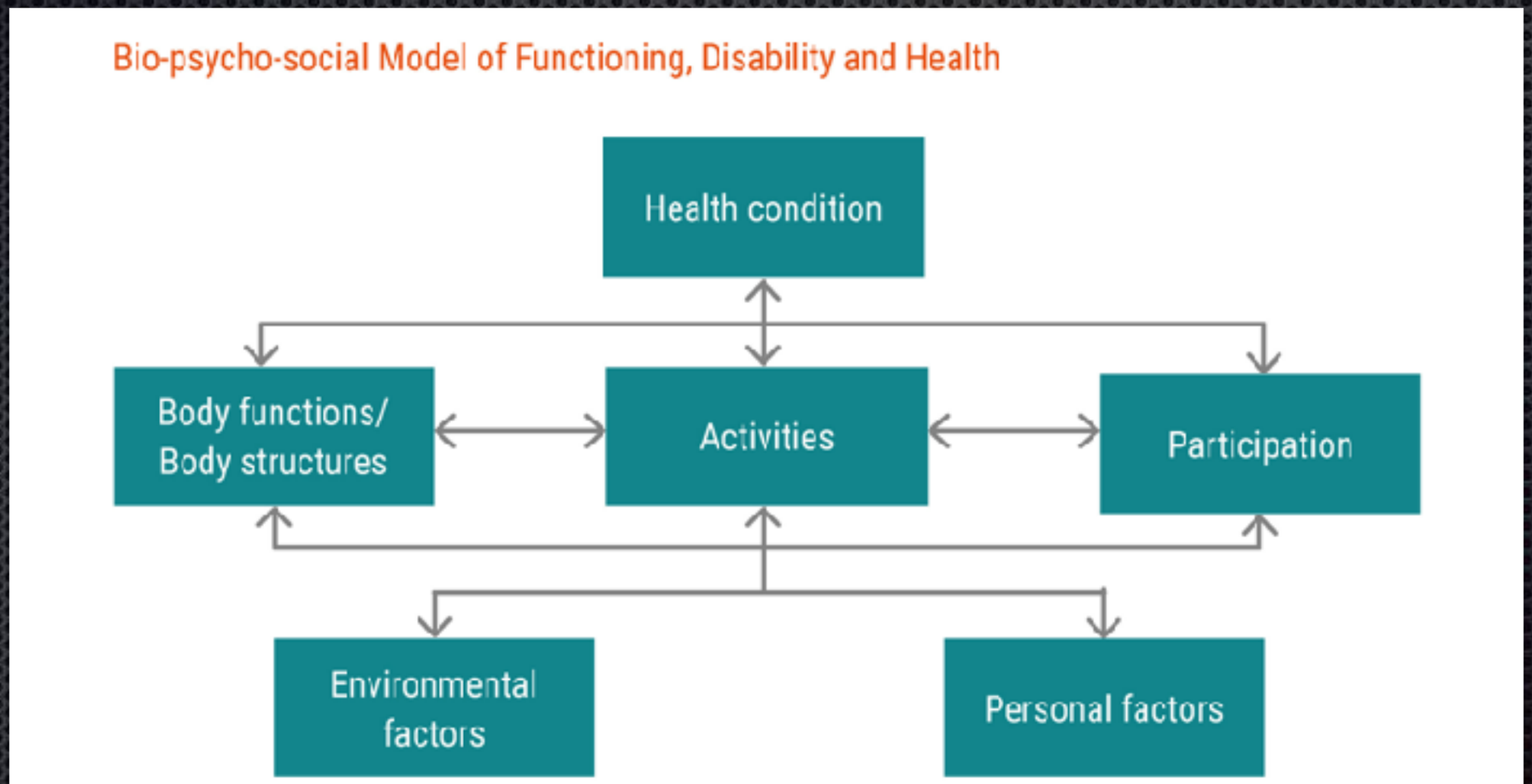
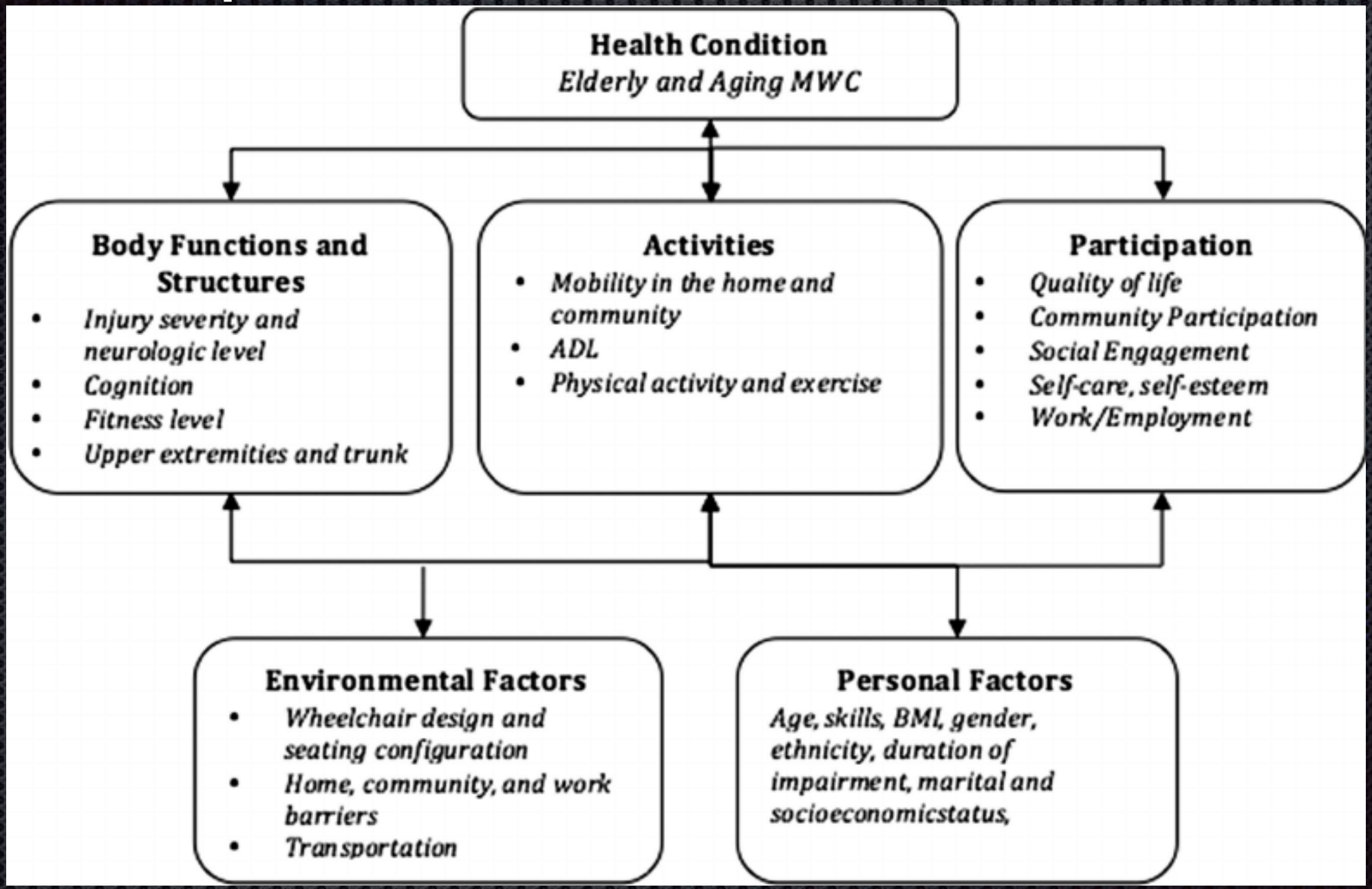
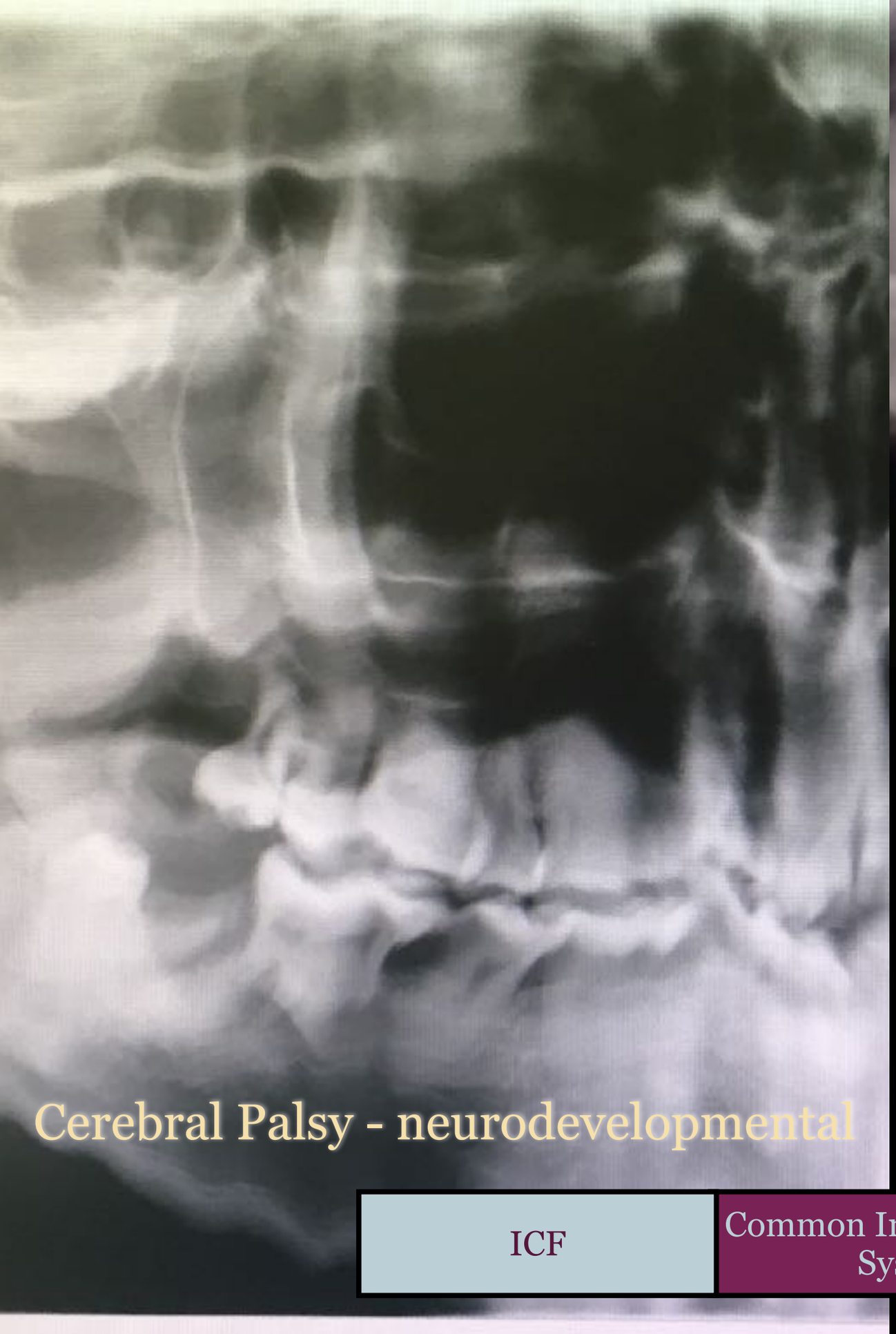


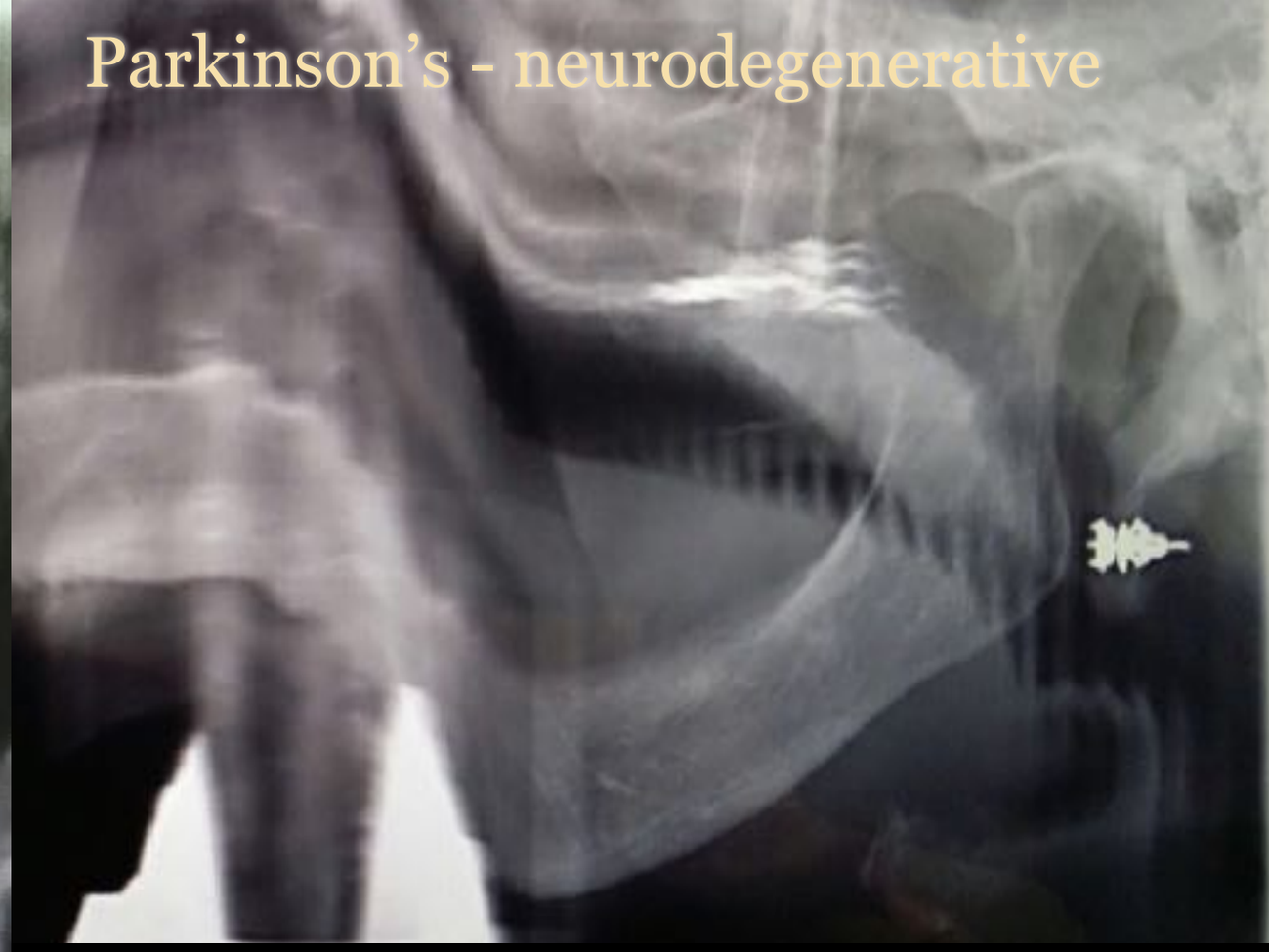
Figure 1: Bio-psycho-social model of the International Classification of Functioning, Disability and Health (ICF)

ICF	Common Imp, Disab, Syst	Personal/Prof Dev

Example of how ICF is used







NEUROLOGICAL DISORDERS PRESENT WITH ABNORMAL MOVEMENT (DYSKINESIA)

- Tremors
- Chorea
- Tics
- Other involuntary movements

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CASE EXAMPLE

Medical History

- Huntingdon's Disease (Dx 2000)
  - ✦ Moderate Chorea
- Dysphagia (Severe)
  - ✦ declined PEG
  - ✦ Speech and Language Therapist, stabilised BMI

Social History

✦ used to work + housekeep
✦ Walking stick

Dental History

✦ Moderate caries risk
✦ Food pouching
✦ Self-brushing after meals

MEDS: Tetrabenazine, Citalopram (SSRI)

Management

✓ I/O Exam with Clinical Holding/ Protective Stabilisation

✓ Shared-decision/informed consent

✓ Mild Sedation: 6mg Midazolam Orally, 20mins prior

✓ CAP 15 Distal Occlusal

✓ Water control

✓ Mouth prop

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Huntington's Disease

- is an inherited degenerative neurological condition affecting the brain and central nervous system. It progressively impairs mental and physical abilities, eventually leading to the loss of critical functions such as walking, talking, eating and reasoning. Complications arising from HD ultimately resulting in death.
- Features
  - Uncontrollable dance-like movements (chorea). Rigidity subtypes are rare
  - changes behaviour, emotion, judgement, personality, hallucinations
- Causes:
  - Mostly autosomal dominant, sometimes sporadic
  - Mutation in Huntingtin gene, causing proteins to lodge in brain
- Prognosis: no cure, progress over 2 decades
- Epidemiology: 8-10 per 100,000 of European ancestry
- Treatment:
  - Supportive: exercise, healthy diet, psychosocial support
  - Palliative concepts of treatment
  - Medication to reduce symptoms (movement, mood etc.),

https://huntingtonsaustralia.au/about/

https://www.ninds.nih.gov/health-information/disorders/huntingtons-disease

What other neuro-degenerative conditions do you know?

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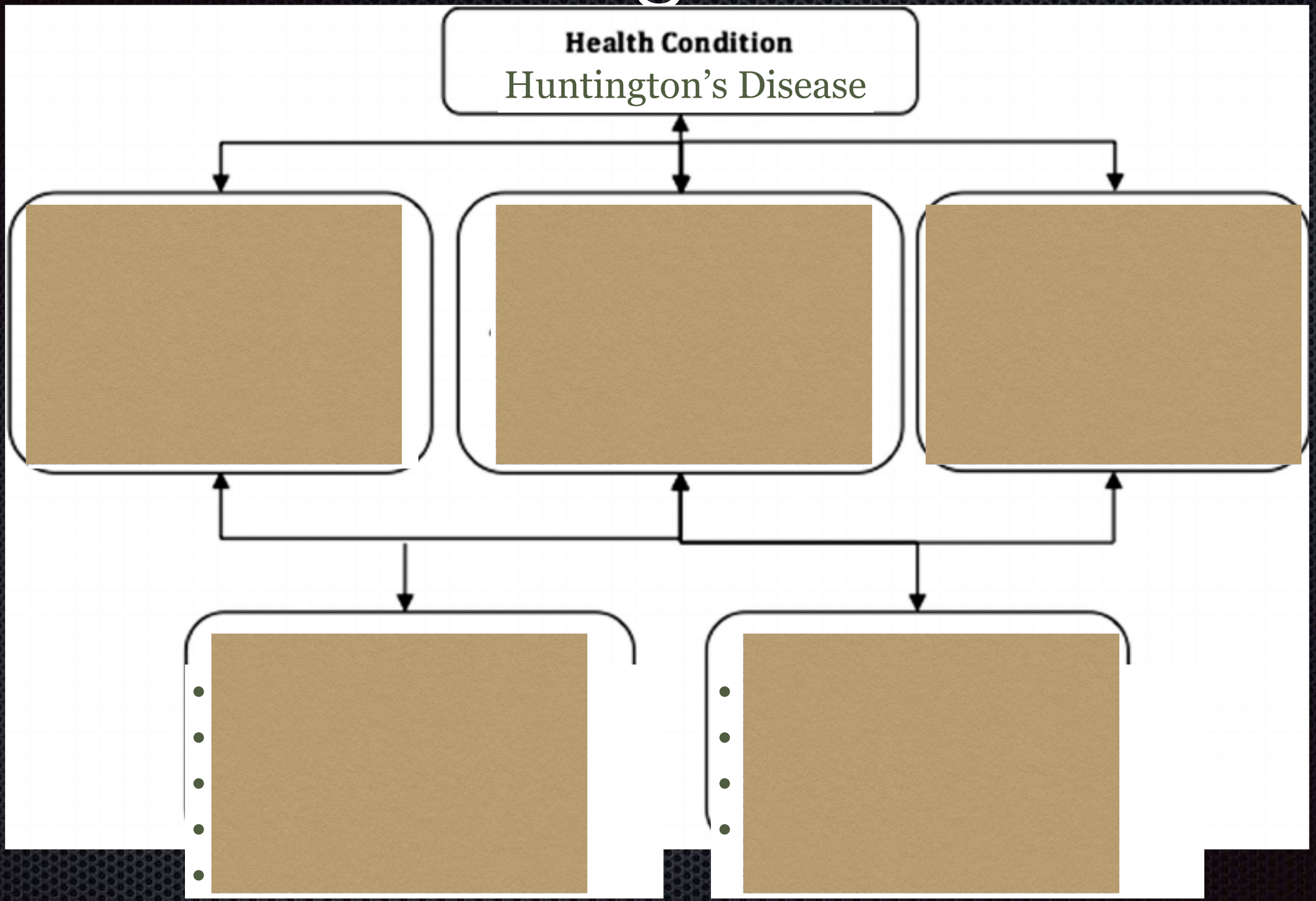
ICF for Huntington's



Medical Health

Physical Health

Oral Health & **general well being**

Mental Health

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High blood pressure

Cardiovascular disease

Lung infections

Diabetes

ORAL DISEASES affects

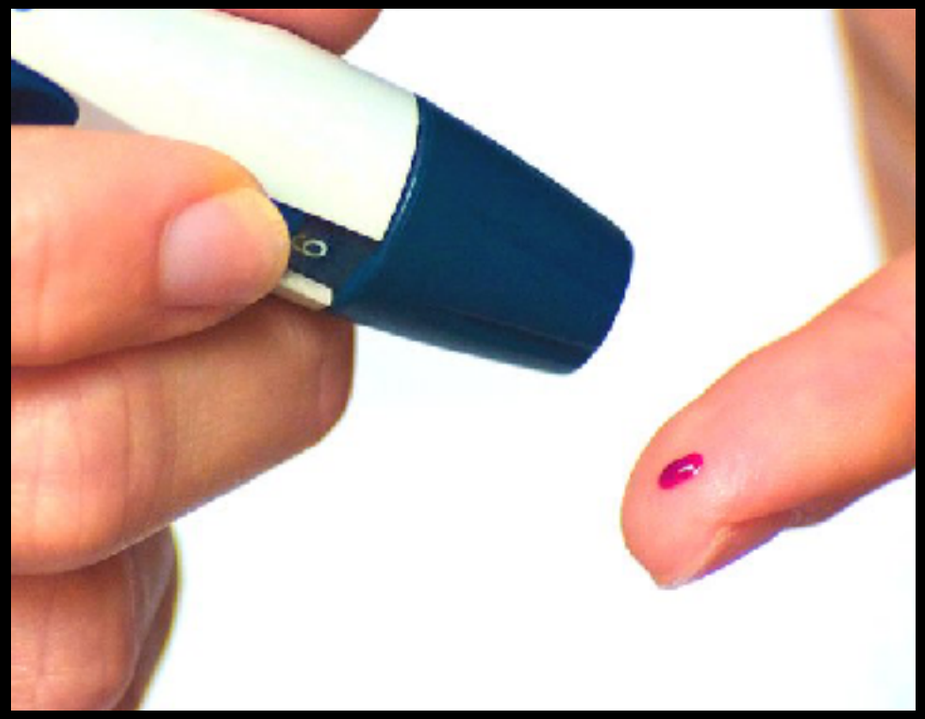
Sleep apnea

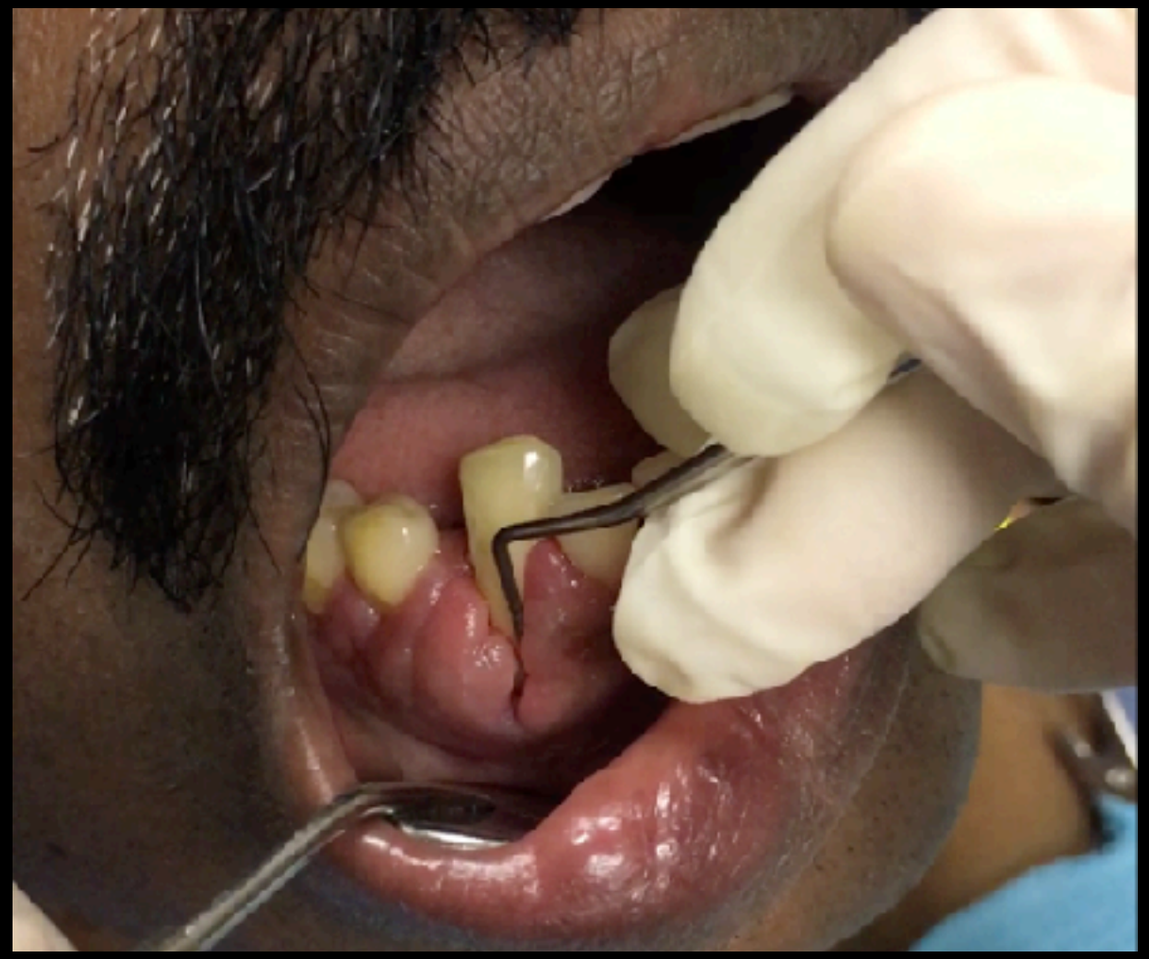
Stroke

Dementia

Medical and cancer therapies

Diabetes Mellitus





- Diabetes and Gum health share **bi-directional** effect
- When gum health is restored, **HbA1c levels improve** 3-4mmol/L (0.3-0.4%).

Borgnakke & Poudel, 2021

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SCAN ME

Dysphagia, poor oral hygiene & pneumonia

- Weekly high quality oral care reduced mean annual pneumonia from **1.24 to 0.48**
- reduce mortality
- reduce hospitalisation

The effect of oral care intervention on pneumonia hospitalization, Staphylococcus aureus distribution, and salivary bacterial concentration in Taiwan nursing home residents: a pilot study
Chiang et al., 2020

SCAN ME

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Challenges for PwIDD

- Medications cause overgrown gums
- Hyper-sensitive mouth
- Hypo-sensitive mouth
- Poor manual dexterity
- Communication
- Self-inflicted injuries*

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Common impairment/disability/ systemic conditions

Outline common impairments, disabilities and systemic conditions in relation to their impact on oral health and oral function (C2)

	Down's Synd
Access	Escort/accompanying person. Mild mobility issues. Sensory issues
Communication	Communication can vary. Appropriate language, repeated and scaffolded. Possible sensory impairments (presbycusis, cataract)
Consent	PwDS have intellectual disability, and at risk of early-onset dementia, psychiatric conditions. Consider Legal Capacity principles in consent taking
Education	Consider brushing techniques (Modified Bass vs scrub etc), and assistive devices Assisted oral hygiene. Additional effort for effective self-care. Control diabetes
Surgery	GA concerns - atlanto-axial joint instability, restricted airways, anaemia Cardiac, haematological, endocrine (hypothyroid, diabetes, osteoporosis) concerns Epilepsy, risk of sleep apnea, gastric reflux
Spread	DS does not spread. Might be immunocompromised (neutropenia, leukaemia, etc)
Oral Finding	

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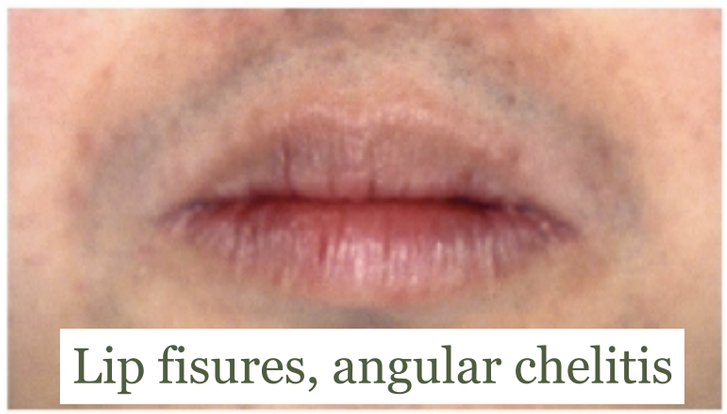
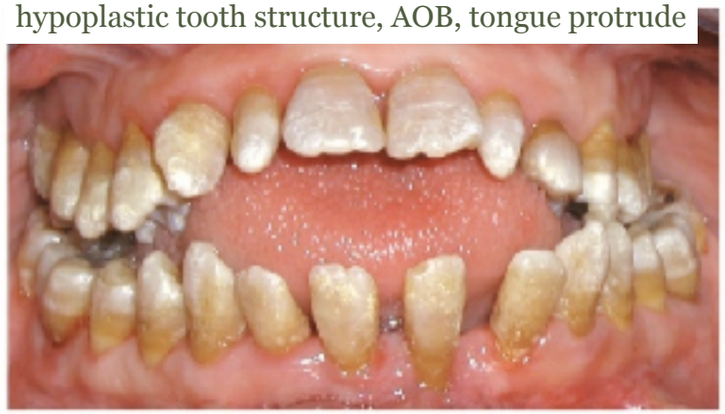
Some possible Oral Findings for DS (not all PwDS will have them)

A



Lip fisures, angular chelitis

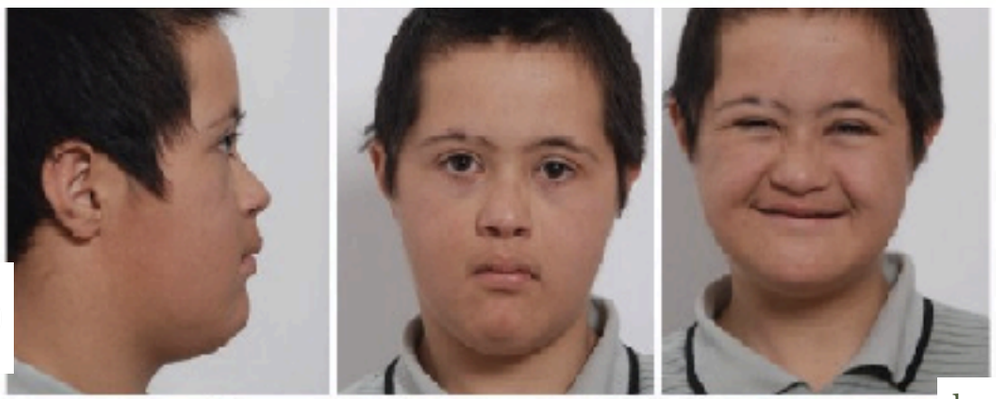
B hypoplastic tooth structure, AOB, tongue protrude



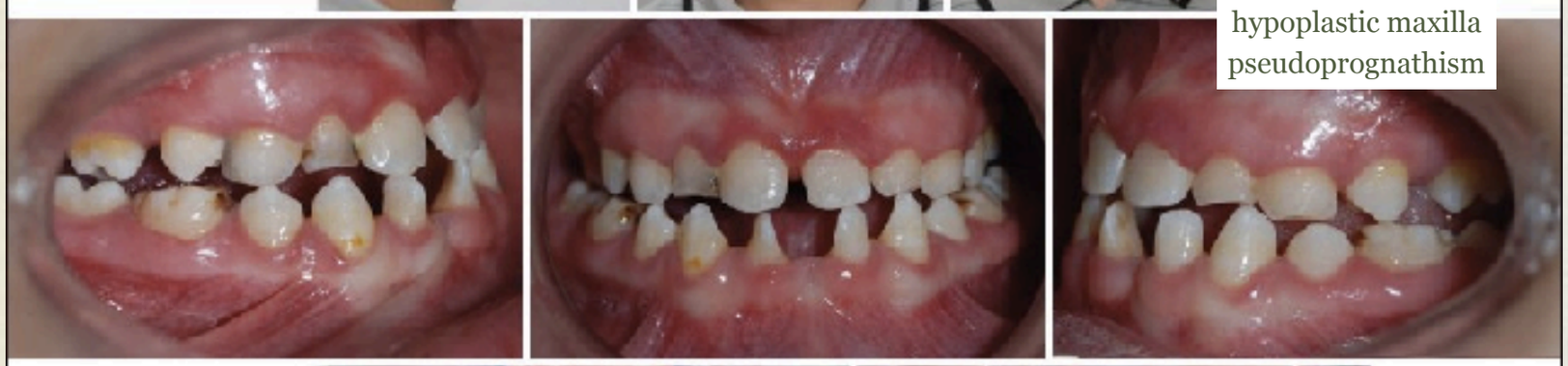
C

Bifid uvula, enlarged tonsils

D



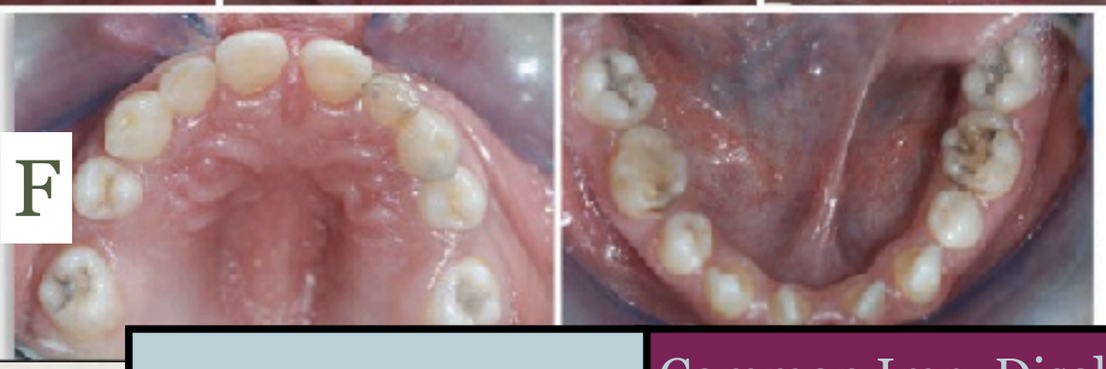
hypoplastic maxilla
pseudoprognathism



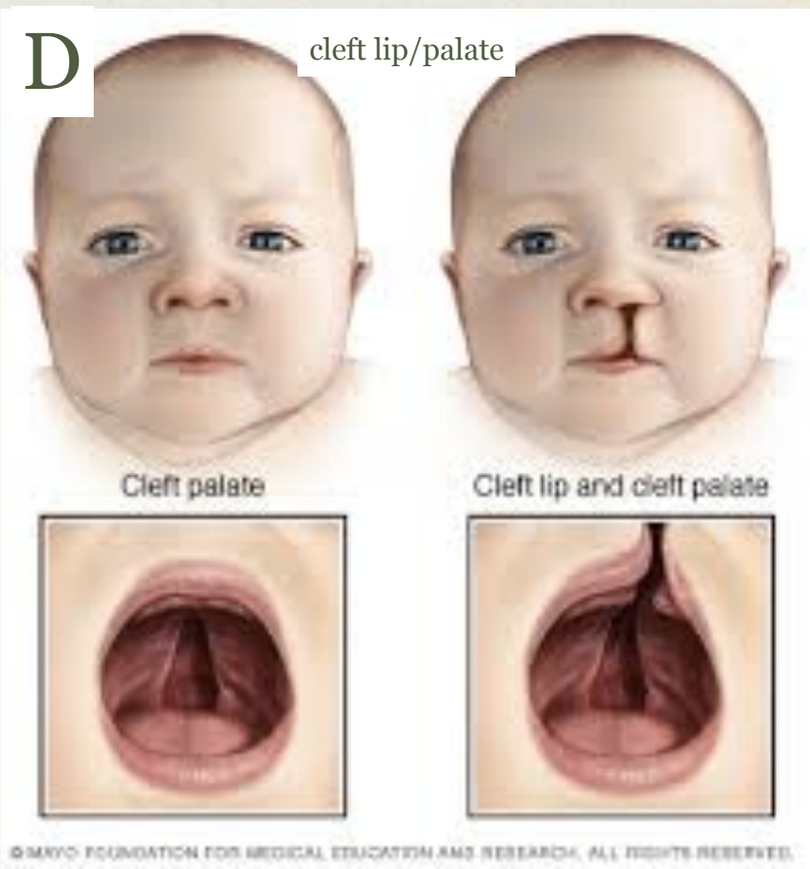
E

conical shaped teeth, tooth wear, caries risk, missing teeth

F



D cleft lip/palate



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Improving tools for toothbrushing

Modified Brush-head

Collis Curve

Surround Brush

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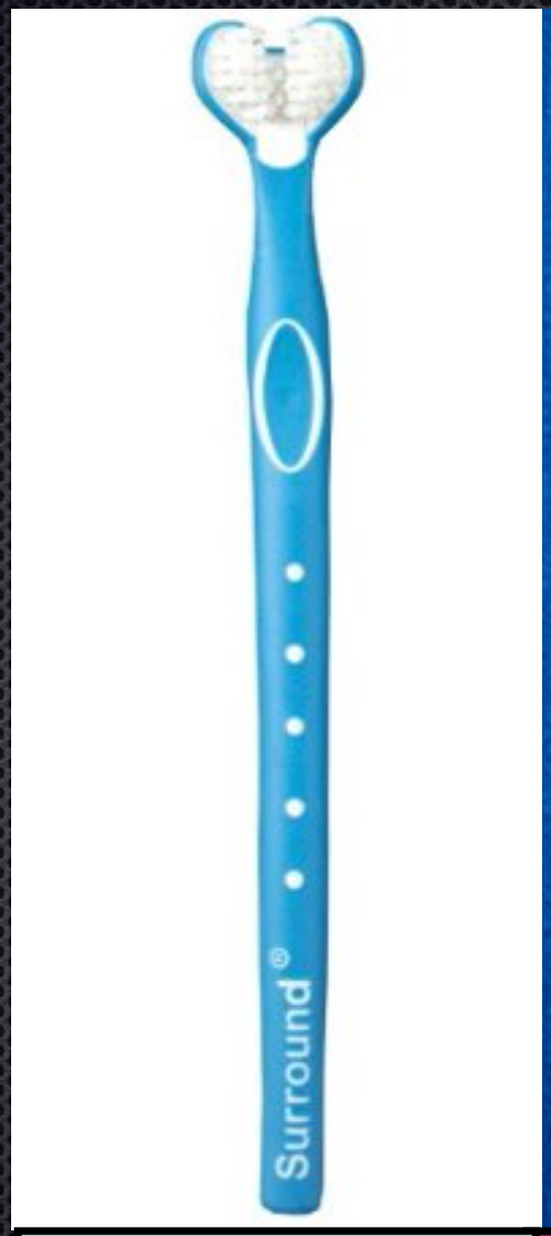
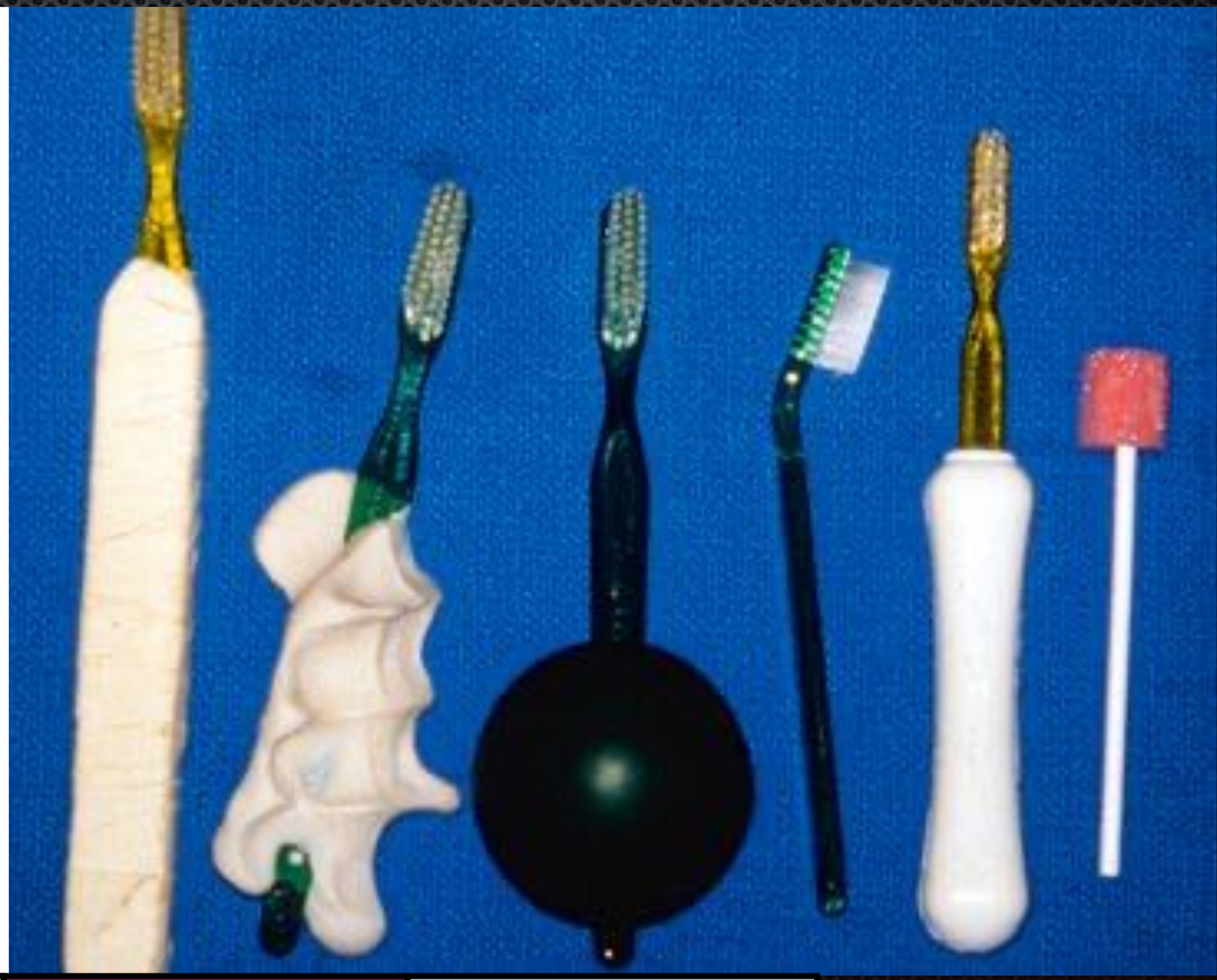
Improving tools for toothbrushing

Modified Handles





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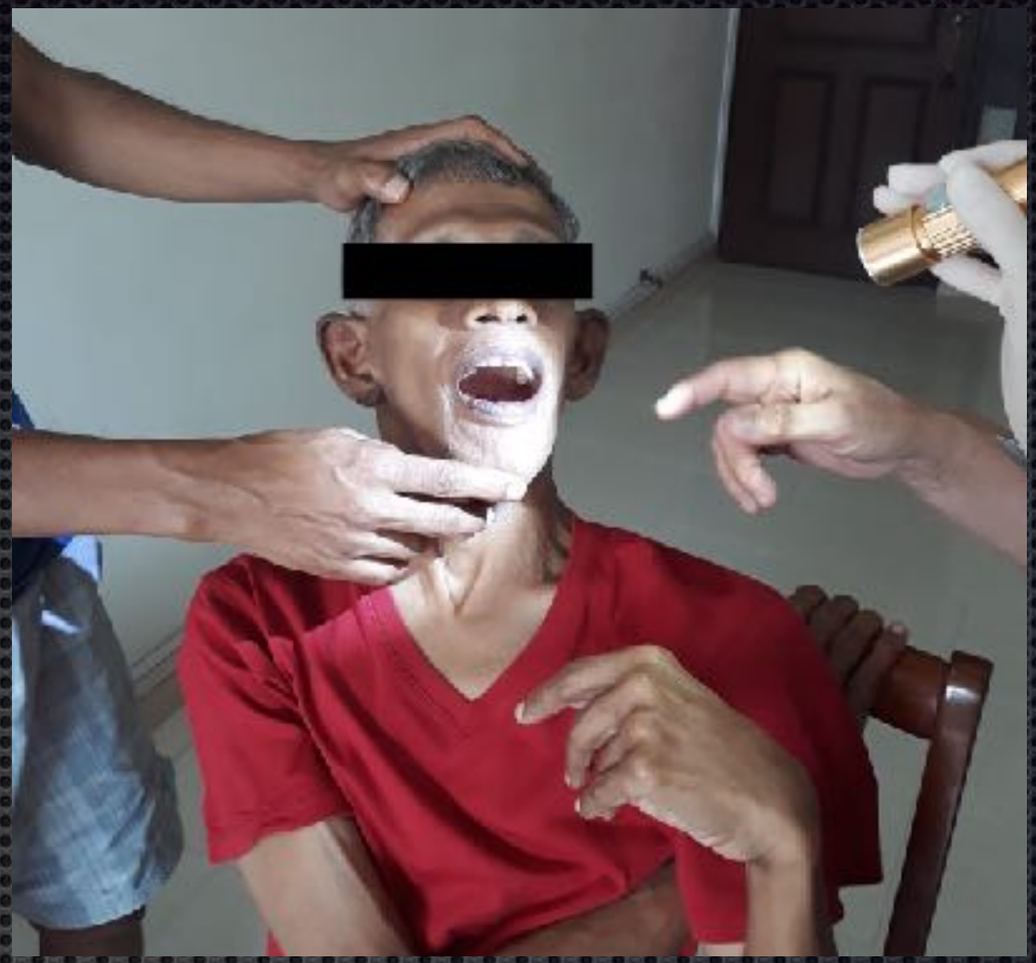
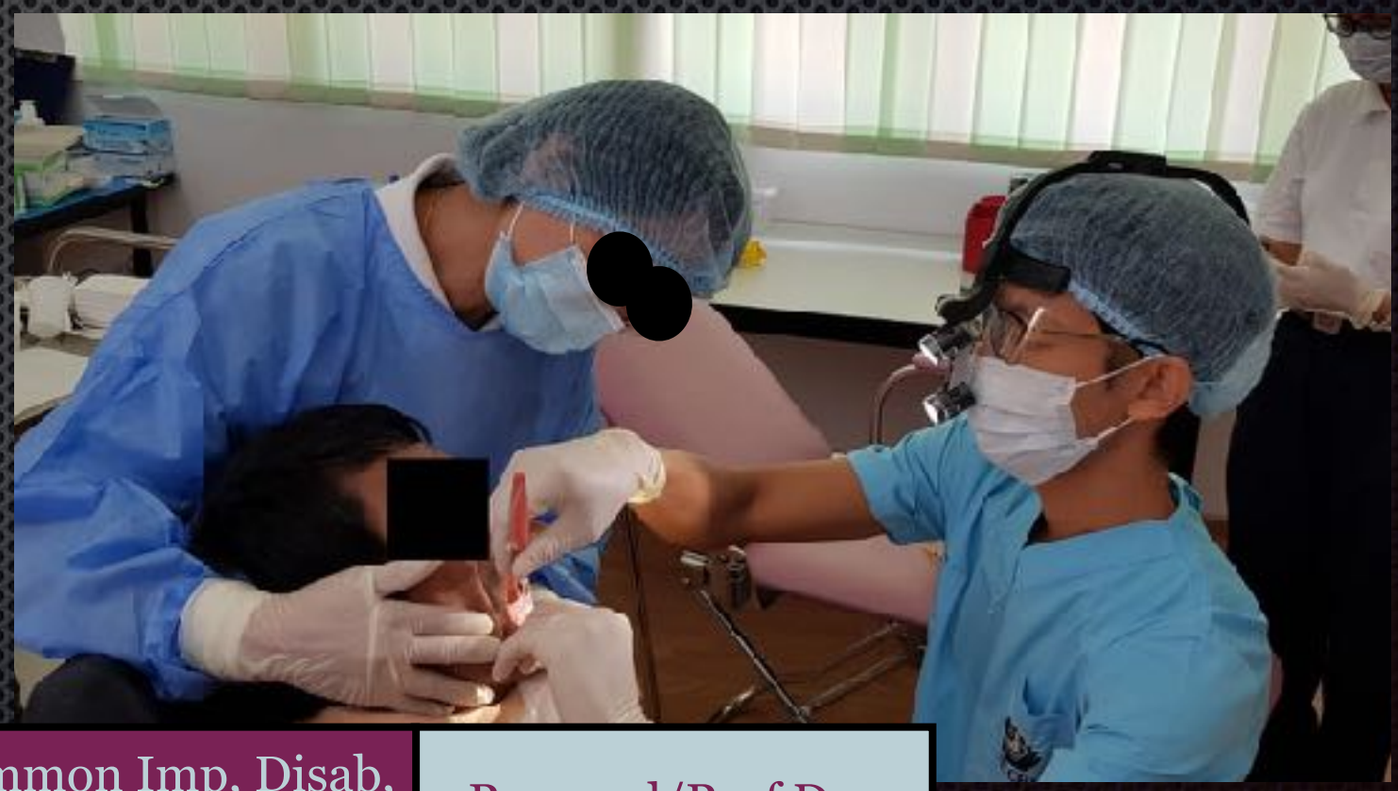
Caregiver's Assisted Brushing Positioning





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Caregiver's Assisted Brushing Positioning

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Common impairment/disability/ systemic conditions

Outline common impairments, disabilities and systemic conditions in relation to their impact on oral health and oral function (C2)

	Cancer treatment	Frail seniors (>65 in WA)
Access		
Communication		
Consent		
Education		
Surgery		
Spread		
Oral Findings		

A S S C I D
australian society of special care in dentistry

ASSCID was established in August 1997 and has continued to grow, now including members representing every state and territory in the country.

The aims of ASSCID are:

- To take an active role in educating the dental profession and other health care workers in the oral health needs of people with special needs
- To be a resource centre for oral health professionals seeking information in the management of patients with special needs
- To lobby for oral health services for people with special needs
- To support oral health promotion that targets people with special needs
- To be a fraternity of oral health professionals interested in the care of people with disabilities

Committed to improving the oral health of people with special needs

Members enjoy many benefits including professional networking opportunities, member newsletters, professional advice, discounts on events and up-to-date information on industry news.

In addition,

Generous discounts on attending our professional develoment events
Free membership of the International Association of Disability and Oral Health (IADH), which would normally cost over US$100
Free access to the IADH journal.

Level	Price
Full	**$165.00** now. Membership expires after 1 Year.
Student	**$55.00** now. Membership expires after 1 Year.
Student - Recurring Annual Payment	**$55.00 per Year.**
Full - Recurring Annual Payment	**$165.00 per Year.**

Australia New Zealand Academy of Special Needs Dentistry

Our aims and objectives

The aims and objectives of the Academy are:

- To advocate for the oral and general health of persons with special needs.
- To encourage and support the development of the art of practice of special needs dentistry.
- To establish and advance the scientific evidence base on which clinical practices should be based.
- To popularise and disseminate this information.

Demonstrate personal and professional development (A2)

Societies offering support for SND after your DMD

ICF	Common Imp, Disab, Syst	**Personal/Prof Dev**

CPD POINTS WILL BE AWARDED

2025 MySCD CARE CONFERENCE

OPTIMISING CARE: PRACTICAL APPROACHES TO SPECIAL CARE DENTISTRY

Malaysian Association for Disability and Oral Health (MADOH)

REGISTER NOW

25 - 26 SEPTEMBER 2025

Dorsett Hotel Putrajaya

Calling for abstracts!

Meet our experts

DR SITI ZALEHA HAMZAH
CONSULTANT IN SPECIAL CARE DENTISTRY (MOH)

PROF. DATUK DR KALAIARASU M. PEARIASAMY
CONSULTANT IN PEDIATRIC DENTISTRY & FORMER DIRECTOR OF NIH

PROF. DR MOHD YUSMIAIDIL PUTERA
CONSULTANT IN FORENSIC ODONTOLOGY & OMF RADIOLOGY (UiTM)

DR LIM BOON CHUAN
CONSULTANT IN DEVELOPMENTAL PAEDIATRICS (MOH)

DR DAVID LIM
SPECIAL CARE DENTI (SINGAPORE)

DR DARLINA MOHD DHARI
CONSULTANT IN ANAESTHESIOLOGY (MOH)

ASSOC. PROF. DR FARHA ARIFFIN
SPECIALIST/LECTURER IN PERIODONTOLOGY (UiTM)

DR SITI FAUZZA AHMAD
SPECIALIST/LECTURER IN PROSTHODONTIC (UM)

MR. ABDUL MU'AZ MUSTAPHA
OCCUPATIONAL THERAPIST (MOH)

FOR MORE INFORMATION
https://www.kkevents.org

Sep 25-26, 2025,
Kuala Lumpur

EVENT SCHEDULE — 25 SEPTEMBER 2025 (THURSDAY)

TIME	MAIN HALL	BREAKOUT ROOM
8.00 am – 9.00 am	REGISTRATION - MAIN HALL/CONCOURSE	
9.00 am – 9.45 am	PLENARY 1 - MAIN HALL Shaping the Future of Special Care Dentistry - Integrating Policy, Education and Technology DR SITI ZALEHA HAMZAH	
10.00 am – 11.00 am	OPENING CEREMONY - MAIN HALL VIP: DEPUTY DIRECTOR GENERAL (ORAL HEALTH PROGRAMME, MINISTRY OF HEALTH)	
11.00 am - 11.15 am	TEA BREAK	
11.15 am - 12.00 pm	Conducting Ethical Research with Individuals with Disabilities PROFESSOR DATUK DR KALAIARASU M. PEARIASAMY	Periodontal Disease and Management in People With Special Health Care Needs ASSOCIATE PROFESSOR DR FARHA ARIFFIN
12.00 pm - 12.30 pm	FORUM : It takes a Village to Care for People with Autism 1. DR MOHD HAKIMIN MOHAMED ASHRI 2. MR ABDUL MU'AZ BIN MUSTAPHA 3. DR LIM BOON CHUAN	Prosthodontic Management in People With Special Health Care Needs - Ideal versus Reality DR SITI FAUZZA AHMAD
12.30 pm - 1.00 pm		Oral Medicine and Pathology Related Lesions and Management in People With Special Health Care Needs ASSOCIATE PROFESSOR DR NIK MAZUAN MOHD ROSDI
1.00 pm - 2.30 pm	LUNCH SYMPOSIUM MAIN HALL/CONCOURSE	
2.30 pm - 3.30 pm	Special Considerations in Oral Health Management for People with Physical Disabilities DR NORJOHAN YAHAYA	ORAL PRESENTATION
3.30 pm - 4.30 pm	Rehabilitation Medicine and Special Care Dentistry DR WAN SYASLIZA MOHAMED THANI	

EVENT SCHEDULE — 26 SEPTEMBER 2025 (FRIDAY)

TIME	MAIN HALL	BREAKOUT ROOM
8.30 am – 9.15 am	PLENARY 2 - MAIN HALL Artificial Intelligence and Its Application to The Management for People with Special Healthcare Needs PROFESSOR DR MOHD YUSMIAIDIL PUTERA	
9.15 am - 10.00 am	Domiciliary Oral Health Care Service DR DAVID LIM	POSTER PRESENTATION
10.00 am – 10.45 am	Transition Clinic Initiative - Is It Necessary? ASSOCIATE PROFESSOR DR ILHAM WAN MOKHTAR	
10.45 am - 11.15 am	TEA BREAK	
11.15 am - 12.30 pm	Frailty and Sarcopenia in Elderly Population - What Dentists Should Know? DR UNGKU AHMAD AMEEN UNGKU MOHD ZAM	Dementia/Alzheimer's Disease - It's Impacts in The Oral Health Management DR JESSICA A/P FRANCIS
12.30pm - 2.30 pm	LUNCH BREAK AND FRIDAY PRAYERS	
2.30 pm - 3.30 pm	The Challenges in General Anaesthesia for People with Special Health Care Needs DR DARLINA MOHD DHARI	Liaison Officer Programme in Sabah DR EILEEN YAP AI LING
3.30 pm - 4.30 pm	FORUM : Aligning the Special Care Dentistry Curriculum 1. ASSOCIATE PROFESSOR DR MAS SURYALIS AHMAD 2. ASSOCIATE PROFESSOR DR MARYANI MOHAMED ROHANI 3. ASSISTANT PROFESSOR DR FARAH NATASHAH MOHD	Conscious Sedation versus General Anesthesia DR MUHAMMAD SYAFIQ ASYRAF ROSLI
4.30 pm - 5.00 pm	CLOSING CEREMONY PRIZE GIVING CEREMONY TO WINNERS OF ORAL AND POSTER COMPETITION	

INTERNATIONAL ASSOCIATION FOR DISABILITY & ORAL HEALTH
iADH 2026
19-22 AUGUST 2026
DUBLIN IRELAND

ICF	Common Imp, Disab, Syst	**Personal/Prof Dev**

thank you

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11 Jul 2025
8-9 AM (WA Time)
G15 KJG Sutherland LT

Dr David Lim

Lecturer, Dental School, UWA

UWA
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