INTRODUCTION TO SPECIAL NEEDS DENTISTRY

HOW TREATMENT APPROACHES DIFFER

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UWA DMD2 Lecture

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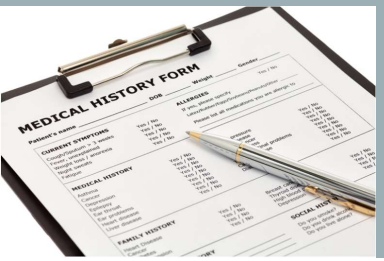
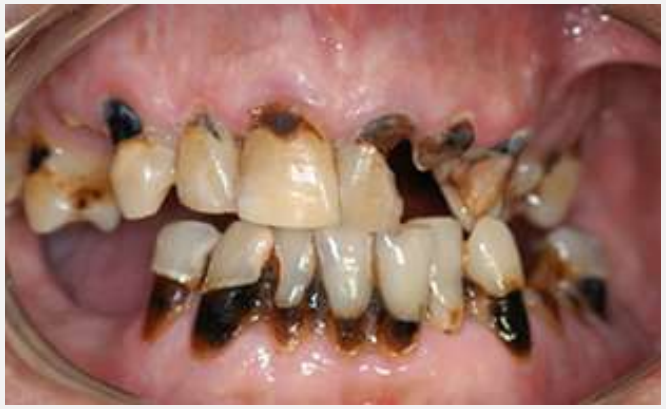


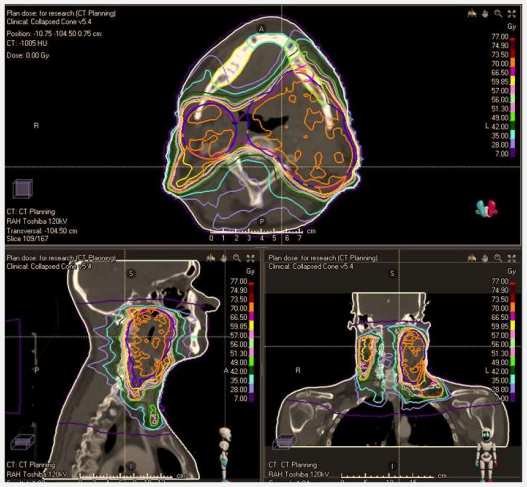

Special Needs Dentistry?

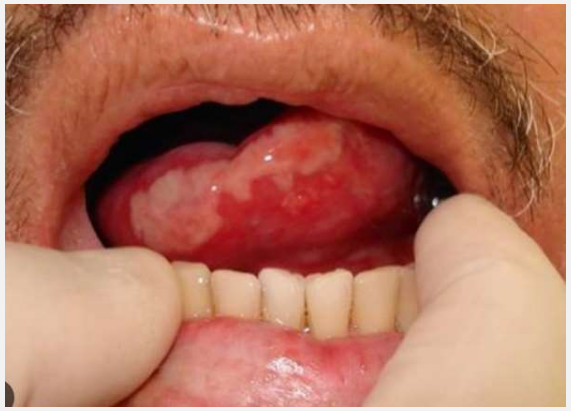
LET'S SET THE SCENE…

DISABILITY

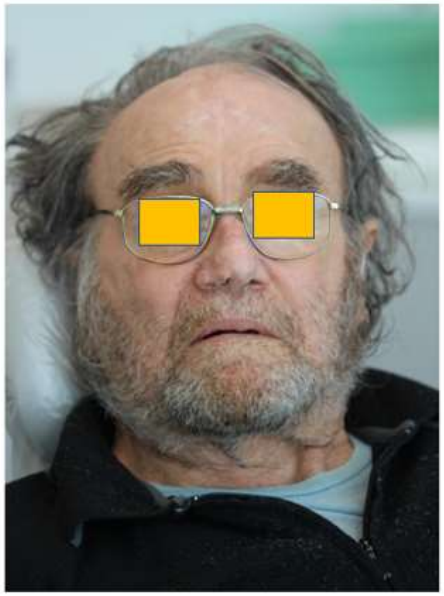
MEDICALLY COMPLEX

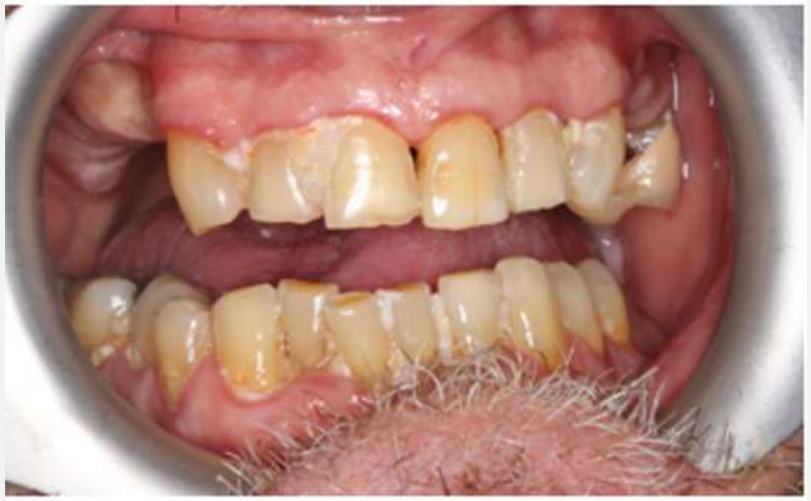


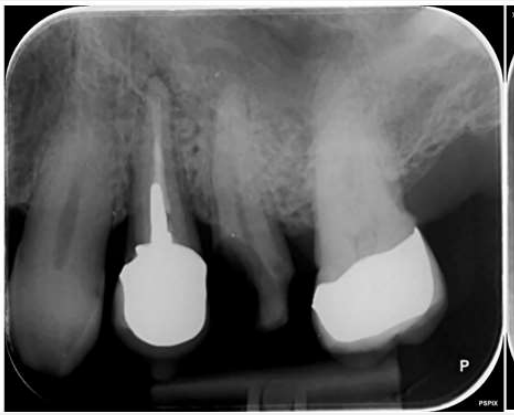


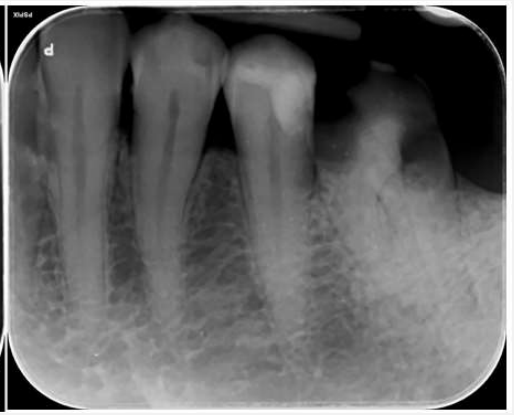


CASE EXAMPLE









Chief concerns:

- Extensive caries teeth 25 & 36
- Mobile tooth 24
- Poor oral hygiene

MEDICAL HISTORY

- Neurocognitive Disorder (Dementia)
  - Multifactorial - likely due to alcohol abuse, TBI from MVA (hit by taxi in Thailand), subdural/subarachnoid haemorrhage (falls x2 when intoxicated)
  - Neurosyphilis excluded, HIV considered
- HIV +ve
  - Biktarvy (bictegravir, emtricitabine, tenofovir, alafenamide)
- History of alcohol dependence
  - Memory impairment
  - Alcoholic steatohepatitis, currently undergoing investigations for liver cirrhosis → rosuvastatin
  - Oxazepam (control alcohol withdrawal syndrome)
- History of syphilis
- COPD
  - Smoker
  - Dyspnoea: salbutamol, glycopyrronium, budesonide/formoterol
  - Infective exacerbations requiring weaning prednisolone
- Depression
  - Desvenlafaxine
- Schizophrenia and mood disorder
  - Sodium valproate, risperidone, olanzapine

SOCIAL HISTORY

- Residence:
  - 2010-2014: Bangkok
  - 2015: Lived with sons in Adelaide, then by himself, then supported accommodation.
  - Jan-Feb 2016: homeless, prolonged hospital admission (escalating alcoholism), social crisis
  - Mar 2016: supported accommodation
  - May 2018: residential aged care facility
- ADLs: dependent on others
- Behaviour:
  - Feels angry/anxious when does not feel in control of situations.
  - Will verbally refuse care, and staff must return later to complete these tasks.
  - Reduced insight into own safety and abilities.
- Capacity:
  - Able to understand questions/information and able to communicate decisions.
  - Able to weigh up risks and benefits for simple treatment decisions
  - Questionable whether he would be able to for more complex treatment decisions

WHAT IS SPECIAL NEEDS DENTISTRY?

DEFINITION OF SPECIAL NEEDS DENTISTRY

The improvement of oral health of people who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability (or commonly a combination of these factors), who require special methods or techniques to prevent or treat oral health problems, or where such conditions necessitate special dental treatment plans.

SPECIAL NEEDS DENTISTRY

Specialists in Special Needs Dentistry provide services and care for the following patient populations:

- **Medically complex**: including head & neck cancer, solid organ and stem-cell transplant work-up, bleeding disorders, haematological and solid cancers, immunological disease, cardiac surgery work-up, severe disease of all body systems, and multiple co-morbidities.
- **Disability**: including intellectual disability and neurological / neurodegenerative disease
- **Psychiatric conditions** and severe dental phobia
- **Geriatric** and domiciliary care
- **Other vulnerable populations**, e.g. homelessness, drug addition, domestic violence.

SPECIAL NEEDS DENTISTRY

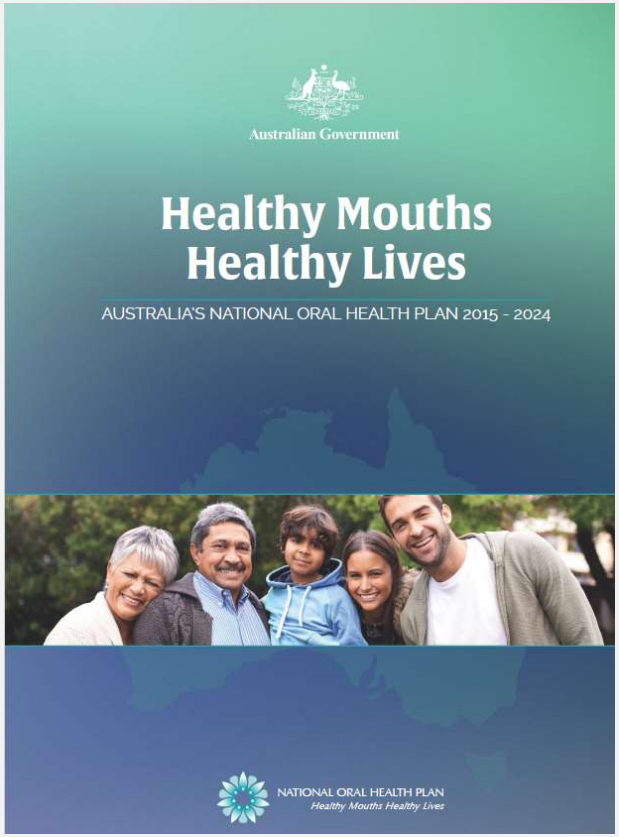
Types of care routinely provided by Specialists in Special Needs Dentistry include:

- Adults requiring complex dental treatment plans modified by their medical and social backgrounds
- Liaising with all members of an individual's care team (including dental, medical, allied health, social workers or family/friends) to achieve the most appropriate care plan and treatment through a holistic approach and integrated care pathways.
- Ensuring oral health is optimised to reduce impact on function, general health and quality of life
- In-patient hospital dentistry
- Treatment under general anaesthesia, IV sedation, nitrous oxide and oral sedation
- Management of anxiety or behavioural issues
- Understanding of legislation and ethics relevant to consent and clinical holding
- Use of specialised equipment, including wheelchair tippers/platforms and bariatric services
- Transition from specialist paediatric dentistry services
- End-of-life care

POPULATION

Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015-2024

- **Complex medical conditions**: >7 million people have at least one chronic condition in 2004-2005.
- **Disability**: 4 million people with a disability in 2009. Over half had two or more intellectual, psychiatric, sensory/speech, ABI or physical/diverse disabilities.
- **Frail older people**:
  - By 2021, only 3% of the population will have complete tooth loss (increasing older people retaining their natural teeth)
  - By 2050, >3.5 million older people will access aged care services each year.
- **Mental illness**: 45% of people estimated to experience a mental health condition in their lifetime



WORKFORCE

Dental Board Ahpra

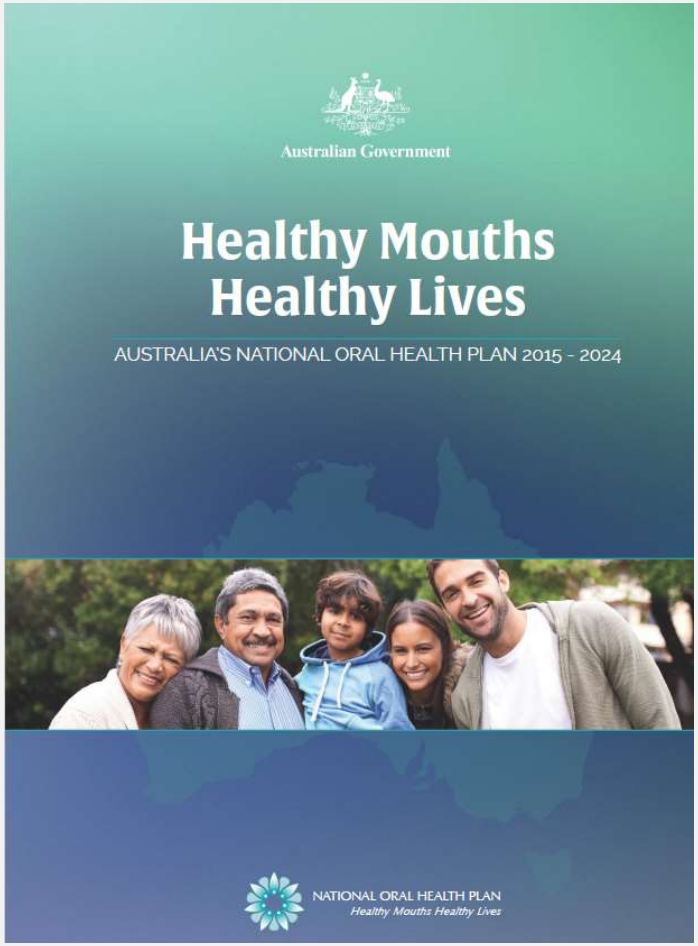
Dental specialities

Table 4.1 Dental practitioners - dental speciality by state or territory

Speciality	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	No PPP	Total
Dento-maxillofacial radiology		1		9			1	5		**16**
Endodontics	7	51		42	15	4	49	17	6	**191**
Forensic odontology	2	5	1	2	2	2	2	4		**20**
Oral and Maxillofacial Pathology		4		4	4	1	2	3	1	**19**
Oral and maxillofacial surgery	7	62	2	58	19	5	55	21	6	**235**
Oral medicine	1	10		7			14	11	2	**45**
Oral surgery		40		8		1	7	1	3	**60**
Orthodontics	16	189	2	121	54	9	155	68	20	**634**
Paediatric dentistry	2	45		27	16	1	44	22	6	**163**
Periodontics	8	67	1	54	17	5	65	32	5	**254**
Prosthodontics	4	69		43	28		56	23	8	**231**
Public health dentistry (Community dentistry)		5		1	1		8	1		**16**
Special needs dentistry		5		4	6		8	1	1	**25**
Total	**47**	**553**	**6**	**380**	**162**	**28**	**466**	**209**	**58**	**1,909**

https://www.dentalboard.gov.au/About-the-Board/Statistics.aspx

POPULATION



Priority Population 4 - People with additional and/or specialised health care needs

Goal	Improve oral health outcomes and reduce the impact of poor oral health for people with additional and/or specialised health care needs.

There are specific groups in Australia for whom poor oral health is only one among a number of other health care issues. This includes people living with mental illness, people with physical, intellectual and developmental disabilities, people with complex medical needs, and frail older people. These groups have a higher incidence of poor oral health.

Being a relatively new specialty, there were only 17 registered specialists in Special Needs Dentistry in Australia in 2014, with limited or no availability in some states and territories. A lack of dentists with adequate skills in Special Needs Dentistry was the most frequently reported problem for carers from family homes and community houses, followed by a lack of dentists willing to treat people with disabilities, resulting in long waiting lists. Carers from family homes and community houses were more likely to report problems in obtaining dental care than those at institutions.[122]

Build workforce capacity and competency in the oral health sector to effectively address the needs of people with additional and/or specialised health care needs

Consumers with very complex needs will be treated by dental specialists including specialists in Special Needs Dentistry. However, most dental care for people in these groups will have to be provided by general dental practitioners.

WHERE DO WE START?

BARRIERS TO MAINTAINING ORAL HEALTH

PATIENT ISSUES

- Medical conditions
- Medical treatment(s) / medications
- Physical/fine motor limitations
- Transport/housing
- Dietary requirements
- Intellectual/cognitive/psychiatric
- Reliance on family/carer
- Prognosis/life expectancy
- Quality of life

MEDICO-LEGAL ISSUES

- Collation of all medical and social information
- Involvement of MDT (GP, specialists, allied health)
- Communication with patient/family/carer
- Consent (patient, NOK, guardianship board)

DENTIST ISSUES

- Dentists diagnostic and treatment planning skills
- Dentists knowledge of health conditions and medical treatments
- Dentists motivation and capacity to provide 'simple dentistry' under 'complex conditions'
- Equipment available e.g. wheelchair lift, hoist, sedation, hospital access for GA facilities, portable equipment for provision of care off-site

PROVISION OF DENTAL TREATMENT – OTHER CONFOUNDING FACTORS

- When to treat and when not to
- Ideal vs achievable treatment plan
- Prognosis of dental treatment/maintenance issues
- Use of chemical restraint – LA/N2O/IV/GA
- Use of physical restraint/clinical holding

PHILOSOPHY OF CARE AND TREATMENT PLANNING

WHO INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH

In caring for patients with Special Needs, who may be adolescents, adults or elderly, it is essential that consideration is given to not only the patient's oral health but also

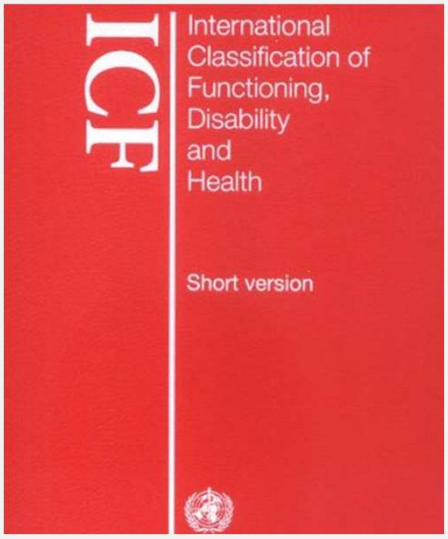
potential environmental, social, medical, physical and cognitive factors

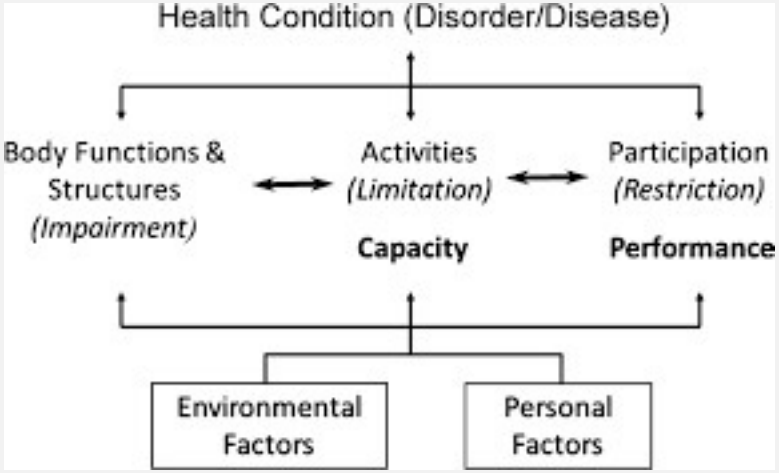
which may have an impact on their

oral health, oral function, ability to receive dental treatment

and also their

oral health related quality of life.





BREAK IT DOWN! – THE INITIAL CONSULT

MEDICAL

- Medical systems
- Medications
- For each condition: diagnosis, date diagnosed, treating physician, how often reviewed
- Attacks (seizures/asthma/angina): type, triggers, last attack, last hospital admission, stability of medication dose, how long episode lasts, rescue medication
- Surgical history
- Allergies

DENTAL

- Frequency of visits
- Home oral hygiene maintenance
- How previous dental treatment is performed
- Diet

SOCIAL

- Gender/age, Marital status, Occupation, Dependents
- Lifestyle habits: smoking/alcohol, recreational drugs
- Accompanying person
- Residence
- Carer support for ADLs
- Mobility
- Communication
- Capacity: time and procedure-specific
- Behavioural compliance
- Transport

→ Risk Assessment → Treatment Modifications

TREATMENT MODIFICATIONS – "ACCESS"

Access	**Communication**	**Consent**
• Access to clinic • Timing of treatment • Positioning • Access to mouth • Location/setting	• Interpreter • Liaison with medical team • Patient information leaflets • Communication aids	• Capacity to self-consent • Guardianship / ACDs • Consent forms • Clinical holding • Benefits vs risks of procedure • Treatment planning and expectations

TREATMENT MODIFICATIONS – "ACCESS"

Education / Prevention

- Patient and carer
- Recall intervals
- Home oral hygiene modifications
- Patient information leaflets
- Patient folder or patient report
- Oral care plan

Surgery

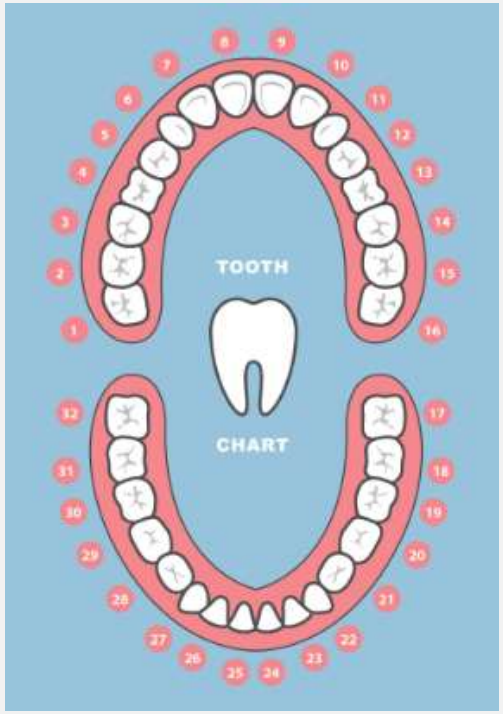
- **Pre-operative**
  - Severity: medical condition, dental treatment
  - Liaise with physician
  - Baseline tests: FBC, coag screen, INR, HbA1c/BGL, BMI, LFTs, eGFR, etc
  - Monitoring devices: SpO2, sphygmomanometer, HR
  - ASA grade
  - Emergency medications
  - Supportive care: transfusions, G-CSF, factor / blood product
- **Peri-operative**
  - Tissue management
  - Aspiration risk (dysphagia)
  - Mouth props
  - LA/CS/GA
- **Post-operative**
  - Haemostasis
  - Instructions
  - Emergency contacts
  - Drugs
  - Who discharged to
  - Prolonged monitoring / overnight stay

Spread of Infection

- Vertical (within self): antibiotic prophylaxis
- Horizontal: standard, contact or transmission-based precautions

TREATMENT INTENT/GOALS

WHAT IS THE IDEAL DENTITION?



RATIONAL DENTAL CARE

SPECIAL CARE IN DENTISTRY

Full Access

Geriatric dental curriculum and the needs of the elderly

RONALD L. ETTINGER DDS, MDS, JAMES D. BECK PhD

First published: September 1984 |
https://doi-org.proxy.library.adelaide.edu.au/10.1111/j.1754-4505.1984.tb00189.x | Citations: 55

Volume 4, Issue 5
September 1984
Pages 207-213

Related Information

Clinical Decision Making in the Dental Treatment of the Elderly[1]

Ronald L. Ettinger D.D.S., M.S.D.

Article first published online: 28 JUL 2006
DOI: 10.1111/j.1741-2358.1984.tb00367.x

Issue

Gerodontology
Volume 3, Issue 2, pages 157–165, July 1984

Clinical PRACTICE

Rational Dental Care: Part 1.
Has the Concept Changed in 20 Years?

Ronald L. Ettinger, BDS, MDS, DDSc, DABSCD

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ABSTRACT

The concept of "rational dental care" was developed 20 years ago when it became clear that idealized treatment plans for frail and functionally dependent older adults were often inappropriate. This first in a series of 2 articles reviews the reasons for developing the concept.

MeSH Key Words: decision making; dental care for aged; geriatric assessment; patient care planning

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This article has been peer reviewed.

Oral health has been defined as "a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment, and which contributes to general well being."[1] Oral health problems are among the most prevalent chronic problems that elderly people have to deal with.

In clinical geriatric dentistry, decision-making and problem-solving are essential components of clinical diagnosis and treatment planning.[2-4] The fundamental questions that the clinicians must answer are:

- What is the patient's dental problem? What is his or her primary complaint?
- How and why did it occur?
- What other modifying factors influence the problem? (Box 1)
- Can I, as the clinician, help to solve this problem or do I need help from other health care professionals?
- Can I predict the outcome of the treatment that I think may help the patient?

In young people, factors that affect decision-making are whether the clinician has the skill and resources required to treat the patient; whether the patient has the time and desire to accept the treatment plan; and whether the patient has the financial ability to pay for the treatment.

In older adults, the problem is much more complex. The dental needs of older people are more extensive and the patient may have a medical history that modifies or limits treatment. He or she may be taking medications to treat chronic diseases, and these may affect the oral cavity directly or require modification of treatment. The patient's physical frailty may limit travel or time of treatment. The patient may be cognitively impaired and, therefore, unable to understand a treatment plan or have the neuromuscular skills to clean his or her teeth or to wear dentures.

In 1984, Jim Beck and I published a paper[5] in which we defined our concept of geriatric dentistry and the treatment that some older, frail and dependent patients need; we called it

© J Can Dent Assoc 2006; 72(5):441–5

The concept of "rational dental care" was developed 30 years ago by Ronald Ettinger when it became clear that idealised treatment plans for frail and functionally dependent older adults were often inappropriate.

DETERMINING LEVEL OF CARE

Berkey et al (1996)

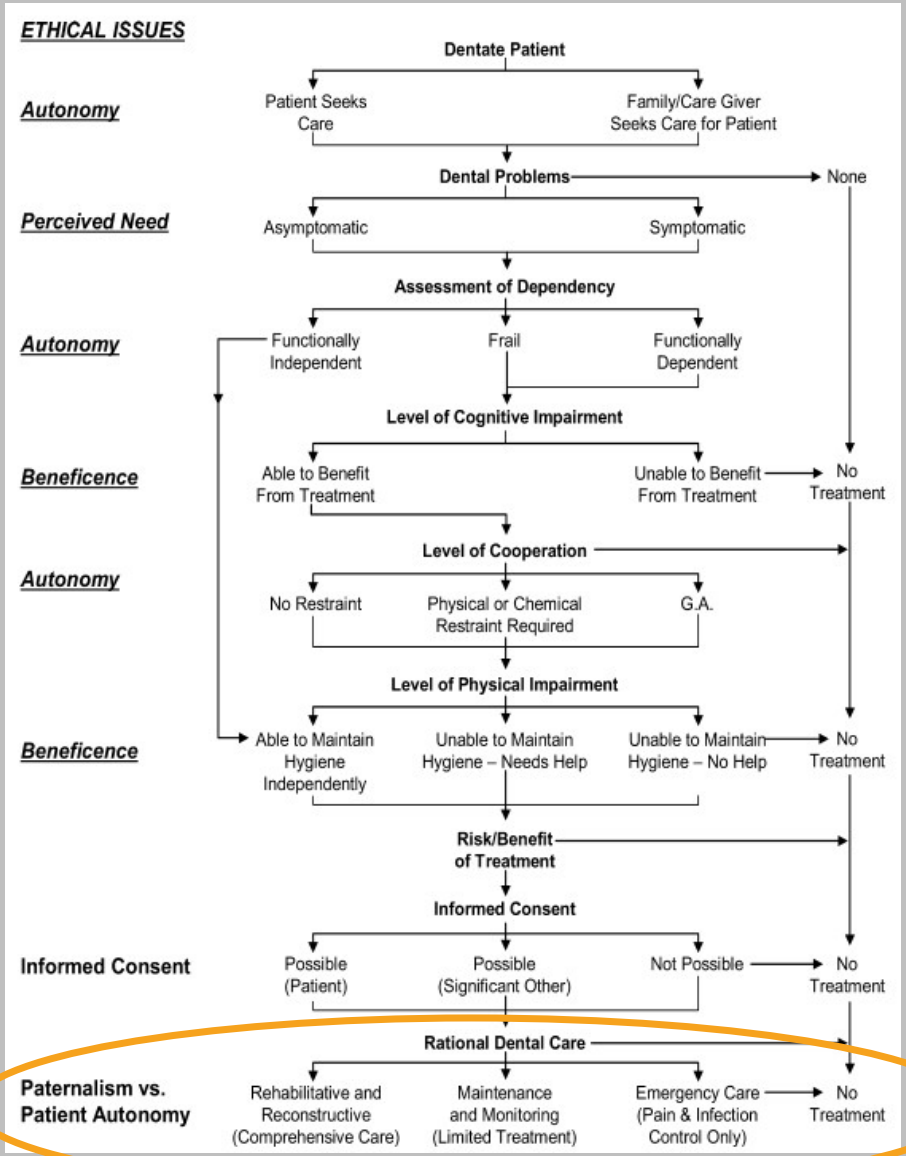
DETERMINING LEVEL OF CARE

Decision Tree: Treatment intent

(1) Preventive, (2) Curative,

(3) Reconstructive, or (4) Palliative.

Ettinger 2006, 2015



BACK TO THE CASE…

CASE 1

MEDICAL HISTORY

- Neurocognitive Disorder (Dementia)
  - Multifactorial - likely due to alcohol abuse, TBI from MVA (hit by taxi in Thailand), subdural/subarachnoid haemorrhage (falls x2 when intoxicated)
  - Neurosyphilis excluded, HIV considered
- HIV +ve
  - Biktarvy (bictegravir, emtricitabine, tenofovir, alafenamide)
- History of alcohol dependence
  - Memory impairment
  - Alcoholic steatohepatitis, currently undergoing investigations for liver cirrhosis → rosuvastatin
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- History of syphilis
- COPD
  - Smoker
  - Dyspnoea: salbutamol, glycopyrronium, budesonide/formoterol
  - Infective exacerbations requiring weaning prednisolone
- Depression
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- Schizophrenia and mood disorder
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- Behaviour:
  - Feels angry/anxious when does not feel in control of situations.
  - Will verbally refuse care, and staff must return later to complete these tasks.
  - Reduced insight into own safety and abilities.
- Capacity:
  - Able to understand questions/information and able to communicate decisions.
  - Able to weigh up risks and benefits for simple treatment decisions
  - Questionable whether he would be able to for more complex treatment decisions
- Family

DENTAL HISTORY

History

- Irregular dental attender
- Deterioration in ADLs, loss of dexterity, pain in hands with gripping action.
- Requires assistance for care, but often refuses this

Diet

- Sugar exposure: unknown (pt usually brought in by someone not involved in his regular care, pt is unreliable historian, RACF staff difficult to contact)
- Acid exposure: hx of alcoholism (quantity unknown)

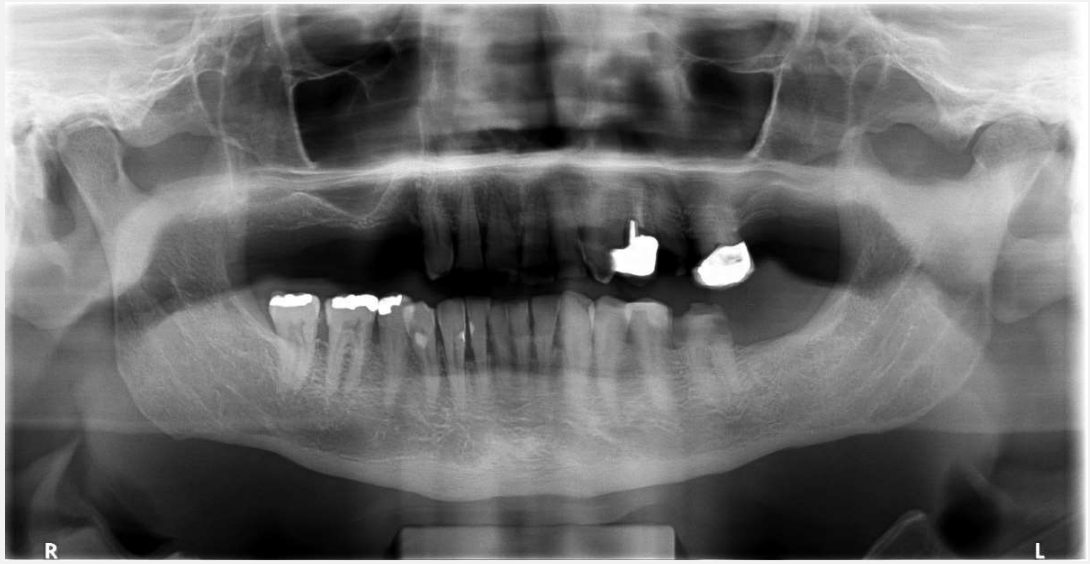
Fluoride

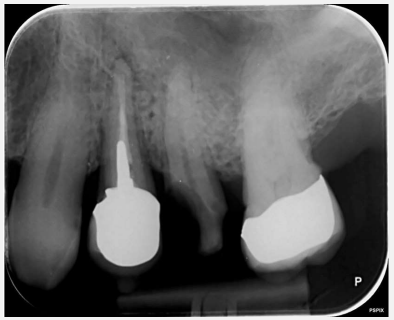
- Brushes teeth with non-fluoridated toothpaste (CHX-based)
- Drinks tap water, but minimal quantities

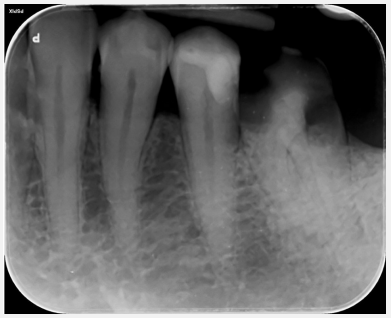
Saliva

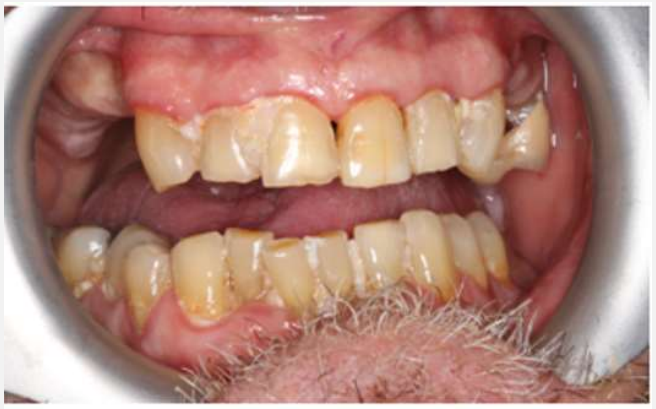
- Polypharmacy & medications associated with dry mouth (COPD inhalers, desvenlafaxine, olanzapine, risperidone, cetirizine)
- Dehydrated appearance to oral mucosa

EXAMINATION









Tooth 24: Previous RCF, grade II mobile, likely chronic apical periodontitis
Tooth 25: carious retained root, chronic apical periodontitis
Tooth 34: buccal caries
Tooth 36: carious retained root
Gingival tissues: generalised moderate biofilm-induced gingivitis
Periodontal tissues: stage I-II generalised grade A periodontitis

ACTIVITY

- **Risk Assessment**
  - Medical
  - Dental
  - Social
- **Treatment Modifications**
  - Access
  - Consent
  - Communication
  - Education/Prevention
  - Surgical
  - Spread of infection

RISK ASSESSMENT

MEDICAL

- Oxygenation: dyspnoea upon mild exertion
- Positioning: dyspnoea, chronic pain
- Bleeding: unknown whilst undergoing liver investigations
- Drug metabolism: unknown whilst undergoing liver investigations
- Aspiration pneumonia: significant plaque accumulation on background of COPD & immunocompromise
- HIV control: liability to infection and impaired healing

DENTAL

- Dry mouth: medications, reduced fluid intake, inhalers, mouth breathing
- Low fluoride exposure
- Poor oral hygiene and motivation for self-care
- Low dexterity
- Liability to oral thrush: inhalers, poor oral hygiene, HIV positive
- Smoking
- Hx of alcoholism

SOCIAL

- Impaired mobility and falls risk
- Capacity to consent
- Poor short-term memory
- Reliance on 3rd party for ADLs and to attend appointments
- Refuses personal care provided by RACF staff

TREATMENT PLAN

Treatment approach: "Maintenance and monitoring"

Control Phase

1) Tooth 34 buccal RMGIC
2) Periodontal debridement and oral hygiene instruction
3) Extraction of teeth 24, 25 and 36

Restorative Phase

1) Will not proceed with upper denture fabrication since aesthetics are not a concern, patient is already struggling with oral hygiene, denture will add to the plaque accumulation risk, and add complexity to his daily oral hygiene.

Maintenance Phase

1) Recalls 3-4 monthly initially
2) Periodontal maintenance and reinforce oral hygiene instruction

TREATMENT MODIFICATIONS

Consent:

- Find out consent arrangements
  - no appointed guardian for health and welfare decisions
  - RACF informed able to self-consent
  - Involved NOK in supported decision-making process.

- Confirm with patient he is happy for discussion of sensitive topics in front of NOK

- Discuss limitation of dental care and treatment approach
  - If declines treatment → increased risks/difficulty in future as health deteriorates

- Short-term memory loss
  - record of written consent to act as reminder for patient
  - trusted NOK involved in discussion

- Mood changes: if patient refuses care, re-discuss at another appointment

TREATMENT MODIFICATIONS

Access to Care:

- Appointments: suitable days for both RACF and NOK
- Mobility: wheelchair availability for long corridors due to fatigue, dyspnoea. Supervise when transferring from wheelchair to dental chair
- Positioning: Treat upright or only slightly reclined. Frequent breaks.
- Location: Dental clinic facilitates best standard of care. May need to plan for access to domiciliary care in future as health declines.

Communication:

- Maintain patient's dignity.
- Address patient primarily (rather than NOK)
- Speak slowly and clearly in non-complex language
- Oral care assessments and oral care plan included into patient's Personal Care Plan

TREATMENT MODIFICATIONS

Education/Prevention:

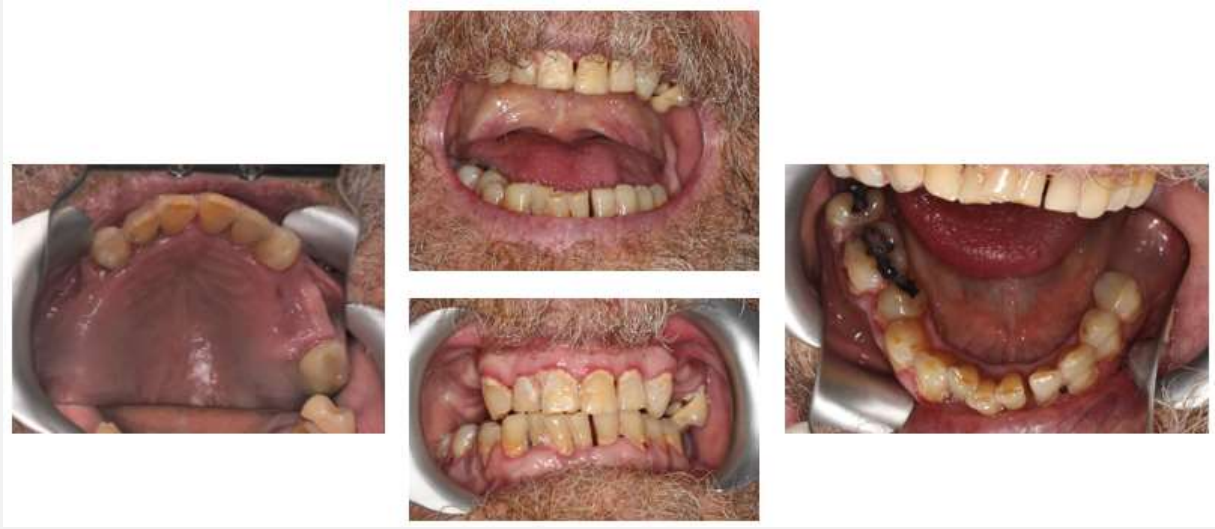
- High concentration fluoride toothpaste (e.g. Neutrafluor 5000), tooth mousse
- Rinsing mouth with water after inhaler use
- Bicarbonate of soda mouth rinses
- Increase water intake
- Oral hygiene product modification (e.g. electric toothbrush, large toothbrush handle to aid grip)

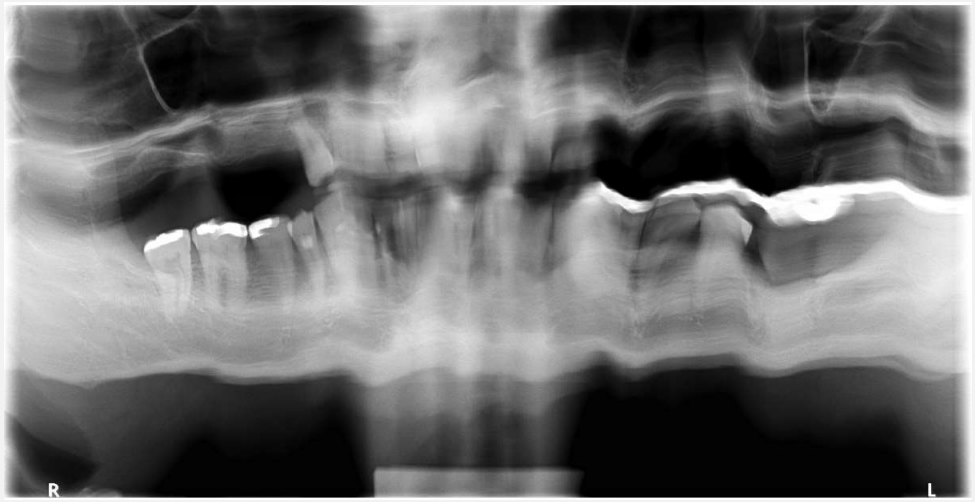
TREATMENT MODIFICATIONS

Surgical:

- Check baseline tests: complete blood examination, CD4 count / viral load, coagulation screen, biochemistry serology (indicators for HIV control, liver and renal function)
- Salbutamol and oxygen easily accessible prior to treatment in case of emergency
- Drug doses
- Bleeding: Local haemostasis techniques (LA with vasoconstrictor, atraumatic procedure, haemostatic agent, suture, if required TXA 5% MW).

RECALL EXAMINATION





Significant health deterioration → **Treatment approach: "Emergency care only"**

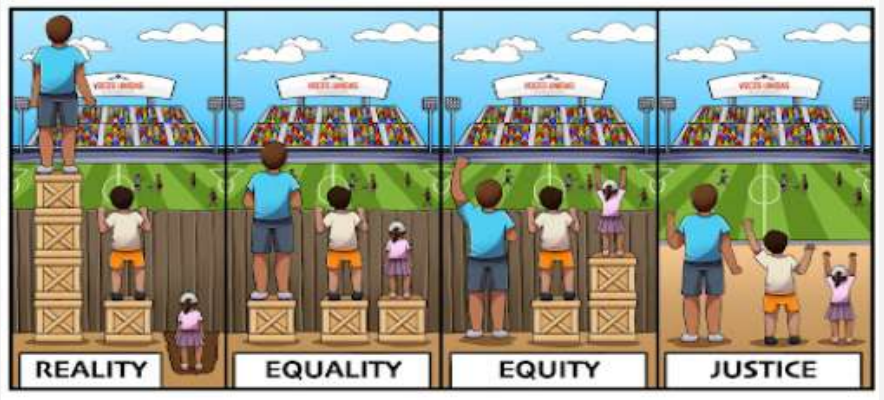
TAKE HOME MESSAGES

SUMMARY – KEY STEPS AT INITIAL CONSULT

- History
  - Medical history, medication list (including liaising with GP/specialist)
  - Dental history
  - Social history
- Examination, investigations → diagnoses
- *Risk assessment:
  - Medical, dental, social factors
- *Establish the **treatment goal/intent**
  - May require a conservative or aggressive treatment planning approach
- Treatment plan
- *Treatment modifications (ACCESS): access, consent, communication, education/prevention, surgery (pre- peri- post-op), spread of infection

ATTRIBUTES REQUIRED

- Big ears, big heart, big brain
  - Willingness to grow to know our patients as people
  - Care and compassion
  - Complex treatment planning
    - Extensive knowledge of evidence-based medical and dental guidelines
    - Appreciation of multiple overlying medical/social factors in a compromised oral environment
    - Good understanding of material science and strong clinical expertise
    - Holistic and rational philosophy of care



THANK YOU!

Any questions?

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