Developing the Treatment plan.

DENT 4215- Introduction to Clinical Dental Practice

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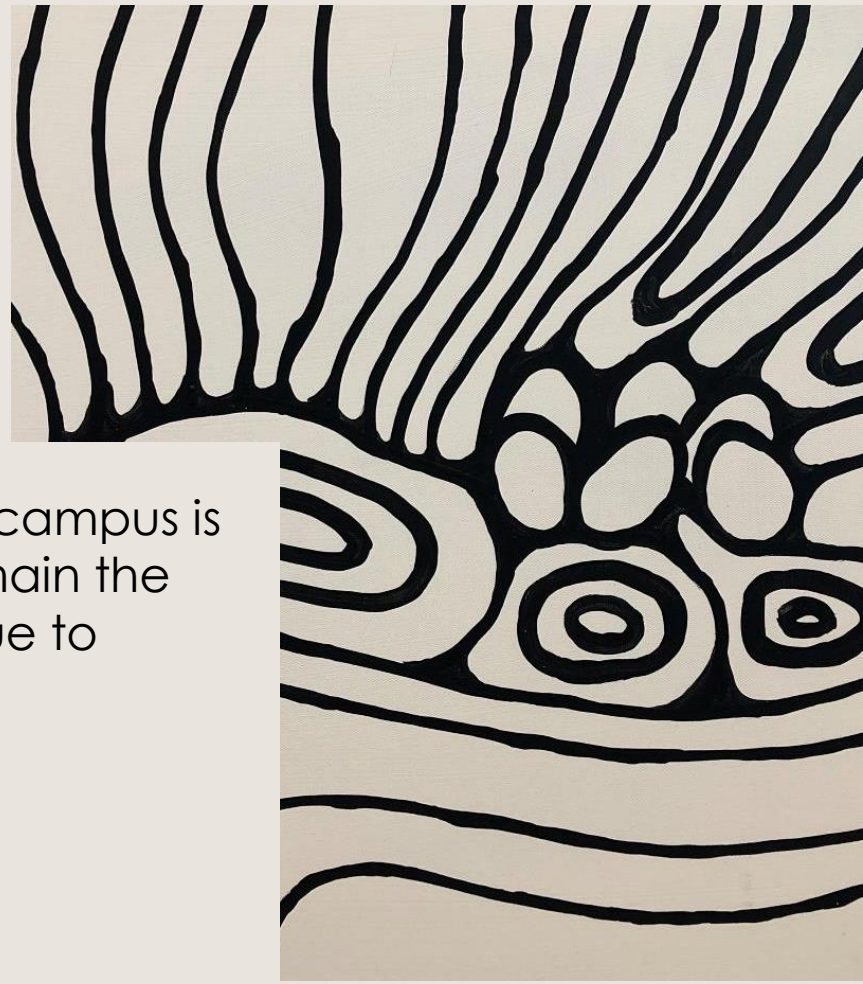
Acknowledgement
of country

The University of Western Australia acknowledges that its campus is situated on Noongar land, and that Noongar people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.



Artist: Dr Richard Barry Walley OAM

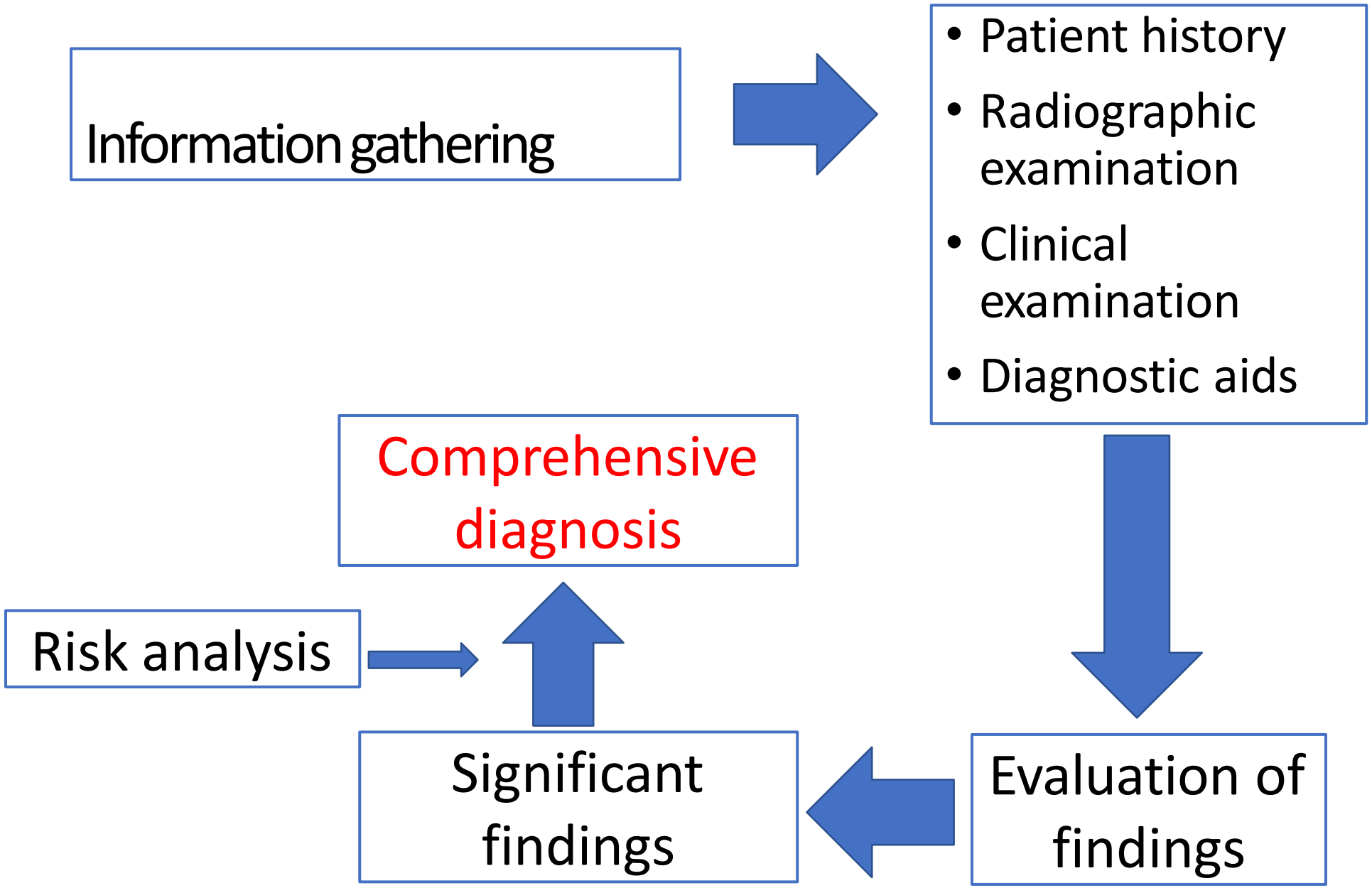
Learning outcome

3. Compose and implement initial treatment Plans to prepare patients for further dental treatment.

Learning objectives

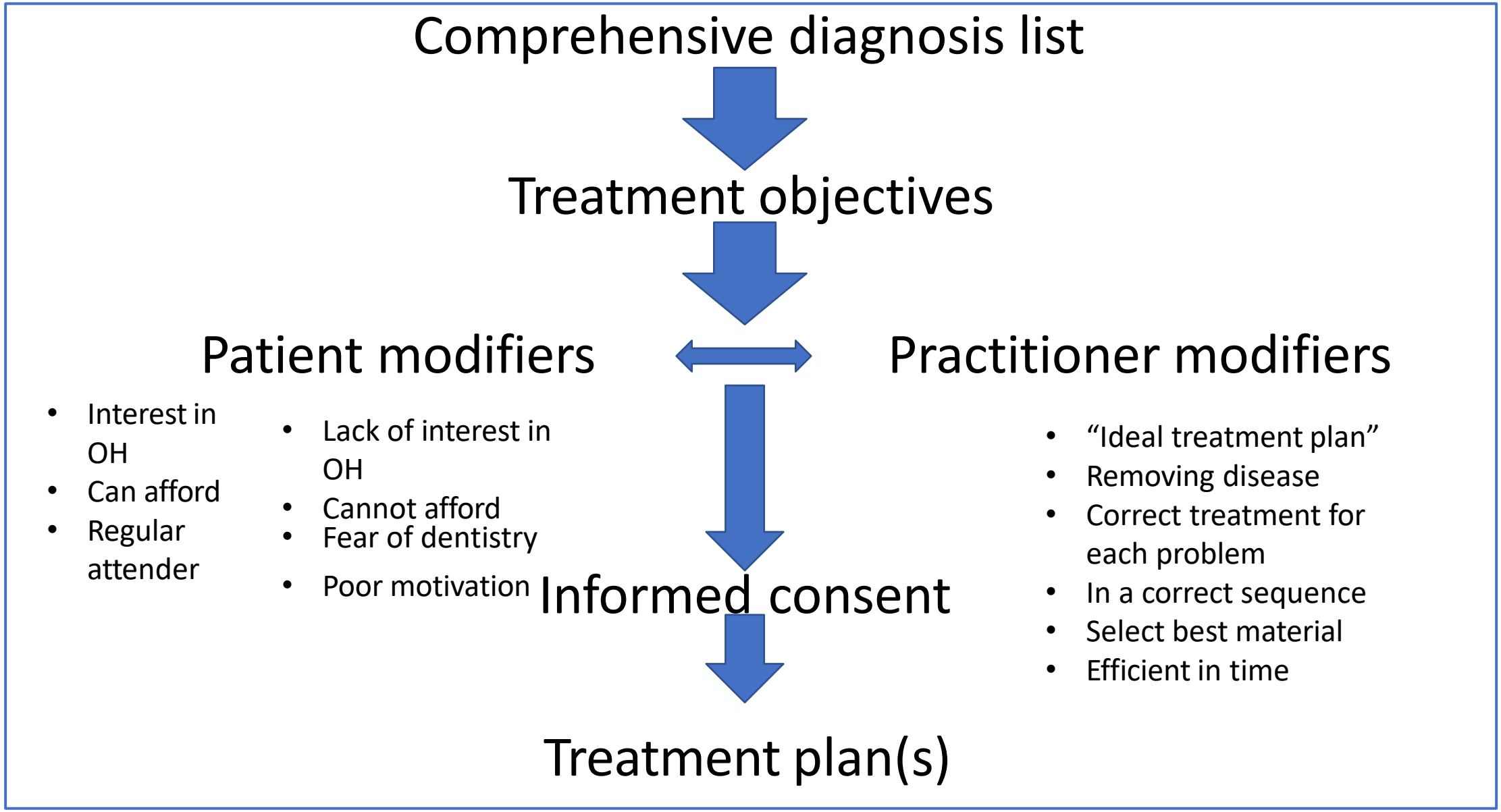
1. Develop fundamental knowledge necessary to begin creating treatment plans for patients

2. Documenting treatment plans

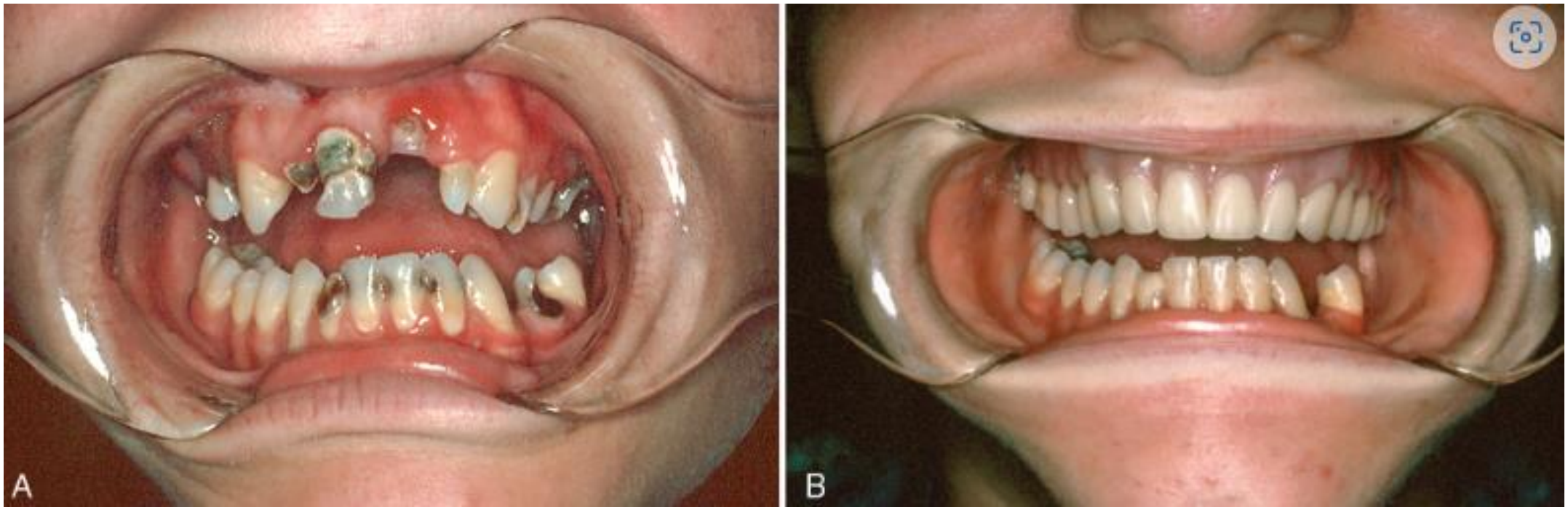

Information gathering
• Patient history
• Radiographic examination
• Clinical examination
• Diagnostic aids
Evaluation of findings
Significant findings
Risk analysis
Comprehensive diagnosis

Diagnosis

- Definitive diagnosis: When several findings point clearly to a specific disease entity
- Differential diagnosis: when the findings suggest several possible conditions, the process of distinguishing among the list of possibilities
- Tentative diagnosis: When the diagnosis is uncertain, but it is prudent to begin some type of treatment


Comprehensive diagnosis list
Treatment objectives
Patient modifiers
Practitioner modifiers
• Interest in OH
• Can afford
• Regular attender
• Lack of interest in OH
• Cannot afford
• Fear of dentistry
• Poor motivation
• "Ideal treatment plan"
• Removing disease
• Correct treatment for each problem
• In a correct sequence
• Select best material
• Efficient in time
Informed consent
Treatment plan(s)

Treatment Objectives



Treatment plan

"…is a carefully sequenced series of services designed to eliminate or control etiological factors, repair existing damage and create a functional maintainable environment." Sturdevant 1995

- Created as a response to the problem list
- The schedule and sequence of the treatment
- Developing a course of action that encompasses the ramifications and sequalae of treatment to serve patients' needs

Treatment plan

Why do we need a treatment plan?

- Address patient's problem/s
- Sequence and prioritise
- Estimates of costs
- Informed consent
- Record keeping
- Medico-Legal requirement
- Communication with other clinicians

Developing the treatment plan(s)

1. Systemic phase
2. Acute phase
3. Disease Control phase
4. Definite phase
5. Maintenance phase

1. Systemic phase of treatment planning

1. To evaluate the severity and complexity of health issues and to assess how this may affect dental treatment

2.Recognize signs and symptoms of undiagnosed conditions and refer patient to physician for evaluation

3.To limit or modify dental treatment based on systemic findings

4. To prevent adverse outcomes

- Emergencies in the dental office
- To prevent serious postoperative complications in conjunction with dental treatment

Ex: antibiotic prophylaxis for high-risk dental procedures for specific medical conditions

Systemic phase

ASA 1	Normal healthy person
ASA 2	Well controlled DM, hypertension (HTN), asthma, mild obesity, pregnancy, smoker, extreme anxiety
ASA 3	Stable angina, post MI, poorly controlled HTN, massive obesity, respiratory disease with symptoms
ASA 4	unstable angina, liver failure, CCF, End stage renal disease

American society of Anesthesiologist (ASA) physical status classification

Systemic phase: outcomes

- Postponing or limiting treatment

-ex: uncontrolled hypertension, INR levels, antibiotics prophylaxis, unstable angina.

- Consultation with physician

-Prescribing or altering patient medication

-Managing Hypertension

-When systemic disease suspected in dental office

- Stress Management (cardiac disease, diabetes, unstable angina, adrenal disorders)
- Positioning the patient in dental chair

Risk categories for selected dental procedures

Little to no risk	Oral examination, radiographs, study models
Low risk	Local anesthesia, simple restoration, prophylaxis, asymptomatic endodontic, simple extraction, orthodontic
Medium risk	Symptomatic endodontic, multiple extraction, single implant, deep scaling and root planning
High risk	Extensive surgical, multiple implant, G/A

2. Acute phase of treatment planning

- Acute phase of care incorporates diagnostic and treatment procedures aimed at solving urgent oral problems.
- Patients who may need acute care

-Those under active treatment

-On maintenance recall

-New to dental practice

-Returning to practice after being away for some length of time

Difference between emergency problem and urgent problem

- *Emergency* problem: incapacitates the patient and has the potential to become a life-threatening condition

Ex: Swelling, systemic infection, trauma to face or jaws

- *Urgent* problem: does not require immediate attention but the dentist or the patient thinks should be attended to "now" or "soon"

Ex: Mild to moderate pain without active infection

Common acute problems and diagnoses

Complaint of pain

- pulpal or periapical origin
- associated with periodontal tissues
  - -periodontal abscess
  - -NUG
- associated with tooth eruption or pericoronitis
- associated with previous dental treatment
- Other sources of pain:

-Herpetic ulcers

-traumatic ulcers

-stomatitis

-TMJ disorders

-trigeminal neuralgia

-acute sinusitis.

-Complaint of swelling

-Aesthetic complaints

-Traumatic injury

Trauma to teeth/soft tissues

Jawbone fractures

Osteomyelitis

-Other forms of oral pathology- lesions that require biopsy, consultation or referral

Treatment planning for acute phase

- Short term therapies within your competency
- Long term implications of the short-term therapies or options
- Factors influencing treatment decisions:

-Professional factors

-Patient factors and modifiers

-Combination factors

Acquiring CONSENT for acute care

- Informed consent for an acute care treatment plan requires that the patient must be fully aware of

1. The diagnosis
2. All reasonable treatment options
3. Risks and the benefits of each option
4. Nature of the recommended treatment
5. Costs of that treatment – present & future.

Referral/Deferral

- The problem or the offending tooth cannot be identified.
- The patient has a compromising systemic condition that precludes treatment at this time.
- The patient has an active infection
- Patient is unwilling or unable to provide consent to treatment
- In some situations, it is not only prudent but also preferable to prescribe medications rather than initiate treatment

3. Disease control phase of treatment planning

- Eradicate active disease and infection
- Arrest occlusal, functional, and esthetic deterioration
- Address, control or eliminate causes and risk factors for future disease.

-The disease control phase is indicated in a patient with high risk factors for that particular disease.

Disease control phase

- Also called Stabilisation phase
- Not necessary when

-oral disease is **controlled**

-oral disease will be **eliminated** during definitive treatment.

- Includes plans for

-Management of active disease or infection

-Stabilization of disease/teeth status prior to definitive reconstruction

-Modify/Eliminate risk factors that predispose the patient to the development of recurrent oral disease.

Disease control phase

- ***Address the patient's chief complain as early in the plan as possible***
- ***Sequence by priority—preferably treating the most severe and urgent needs first***

=provisional /protective restorations

- ***Sequence by quadrant/sextant***
- ***Integrate periodontal therapy into the disease control phase plan***
- ***Keep definitive phase options open with minimalist treatment in the disease control phase.***

=Generally, however, only those procedures necessary to arrest the deterioration and prevent further infection should be undertaken in the disease control phase.

Disease Control Phase – Structure

1.Education

-Aetiology, prevention and home treatment for dental conditions

-Patients roles and responsibilities

-Oral hygiene product education/advice (Type,tech, freq)

-Smoking cessation (ask, assess, assist)

-Chemotherapeutics

2.NSPT

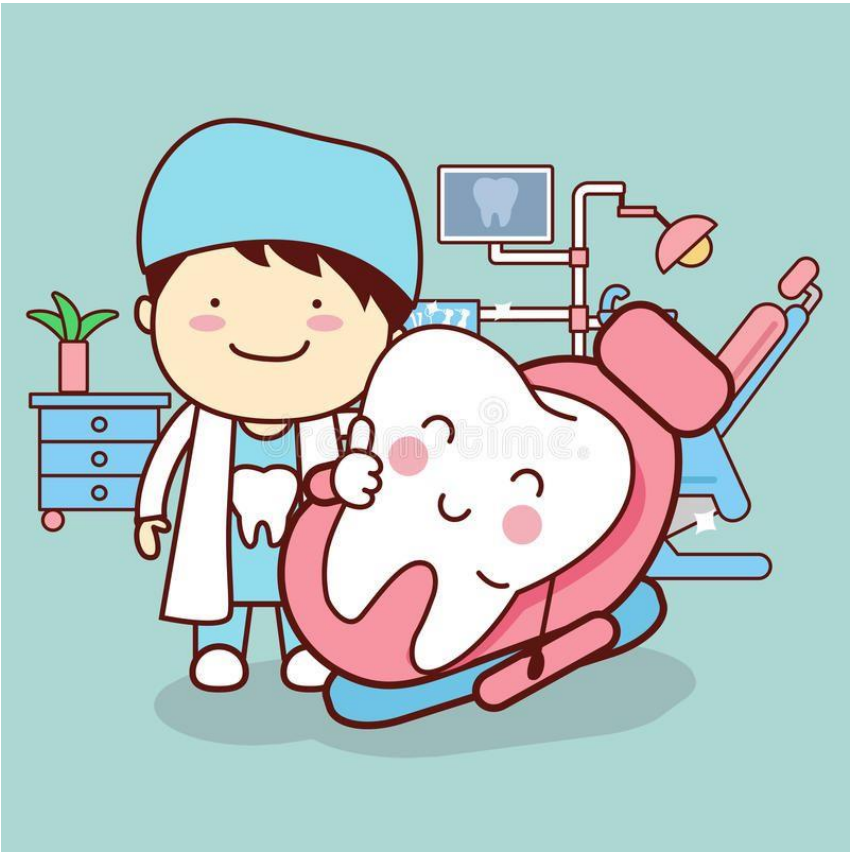
- Plaque control
- Debridement, prophy
- Manage risk factors
- Review, referral to periodontist if required

3.Caries management

4.Remineralisation therapy

5.Defective restorations

6.Extraction/referral



Disease control – Caries Management System

- Basic caries control protocol
  - -Caries activity tests, diagnosis and risk assessment
  - -Oral prophylaxis
  - -Oral self care instructions/coaching
  - -Saliva substitutes/stimulation
  - -Remineralisation (in clinic and home care)
  - -Chemotherapeutics
  - -Diet/nutrition analysis
    - -Food diary – look at freq & duration (acids and sucrose)
  - -Restore carious lesions
  - -Sealants on susceptible pits and fissures.
  - -Reassessment

Oral disease risk status

- Caries risk – CAMBRA
- Periodontal risk -http://www.perio-tools.com/PRA/en/index.asp
- Oral cancer risk - Oral Mucosal Malignancies, Contemporary Oral Medicine. 2018:1249–1436.
- Tooth wear risk -BEWE

http://www.erosivetoothwear.co.uk/page/knowledge_base

Re-Evaluation phase (Holding phase)

- the **time between the control and definitive phases that allows for resolution of inflammation and time for healing**.
- Home care habits are reinforced, motivation for further treatment is assessed, and initial treatment and pulpal responses are re-evaluated before definitive care is begun.

4. Definitive phase of treatment

- Core of treatment plan.

-Before engaging in definitive phase treatment, the practitioner should affirm that:

-Disease controlled.

-All reasonable definitive phase treatment options and costs evaluated and discussed with the patient.

-Informed consent with the patient.

Common definitive phase treatment

1. Periodontal therapy -surgical /other
2. Orthodontic treatment
3. Restorative Dentistry
   - multi surface restorations / Indirect restorations
   - occlusal assessment and treatment
   - esthetical procedures
4. Endodontic procedures –elective
5. Extractions (3rd Molar) and pre-prosthetic procedures
6. Prosthodontics assessment and treatment
   - -Replacement of missing teeth
   - -Indication for the need of a crown, bridge, implant, dentures
   - -Denture assessment and treatment
7. Specialist care

Restoring individual teeth

- Involve patient/parent in decision making
- Clinicians' role to determine reasonable and feasible treatment options
- Professional considerations

-Diagnosis

-Prognosis (*Is a prediction, estimation of the likelihood of a favorable outcome for a disease; could be: Excellent, Good, Favorable, Unfavorable, Poor)*

-Likelihood of remineralisation

-Caries risk status

-Disease control phases

-Cost, patient expectations

-Materials, outcomes, implications

Orthodontic treatment

- Dentist role to identify if referral for orthodontic assessment is required.

- Usually, elective treatment
- Aesthetic or function
- Malocclusions
- Impacted teeth
- Anterior open bite
- Skeletal abnormalities
- Referral for orthodontic assessment by an orthodontist.

Other referrals

- Periodontist: Dentists should be able to identify if referral to a periodontist is required
- Prosthodontist: Fixed prosthodontics, removable prosthodontics, Implants
- Paedodontist: Dentists should be able to identify if referral to a paedodontist is required
- Special care dentist: Dentists should be able to identify if referral to a specialist is required
- Other specialists

5. Maintenance phase

- The long-term success or failure of the plan depends on it.
- Prevention of future problems is the guiding principle of the maintenance phase, and it is the responsibility of the entire dental team.
- Made on an individual basis
- Is made at the conclusion of the disease control phase of treatment and definitive phases
- Can be modified

Rationale for including a maintenance phase in the treatment plan

- Purpose of maintenance phase:
  - -Ensure long term oral health
  - -Optimum function
  - -Favorable esthetics for the patient.
  - -Maintain stable clinical attachment levels (Lang & Tonetti, 2003)
- Benefits of maintenance phase
  - -Address issues that remain unresolved after the definitive phase of treatment

Elements for post treatment assessment

Patient concerns/expectations met	
Patient response to treatment	
Medical and Medication History update	
Clinical examination, re-evaluation, diagnosis	Check notes from last exam
Update radiographs	Based on need or protocol
Periodontal condition	
Occlusal /functional status	
Caries/restorative condition of teeth	
Disease risk	*Status and severity*
Risk factors	*Predisposing and modifying*
Preventive recommendations, motivation	*In clinic and at home remin, smoking cessagtion, OHE*
Remaining or new treatment required	*May include retreating*
Re-establish recall interval	based on risk and need

Treatment (Plan) outcomes

Patient + clinician = disease is controlled, dentition is functional, stable and of acceptable aesthetics

Specific tangible results of treatment

Closely linked to: -risk assessment and prognosis determination

Summary

I. Systemic treatment

A. Consultation with patient's healthcare provider

B. Premedication

C. Stress and fear management

D. Special positioning of the patient

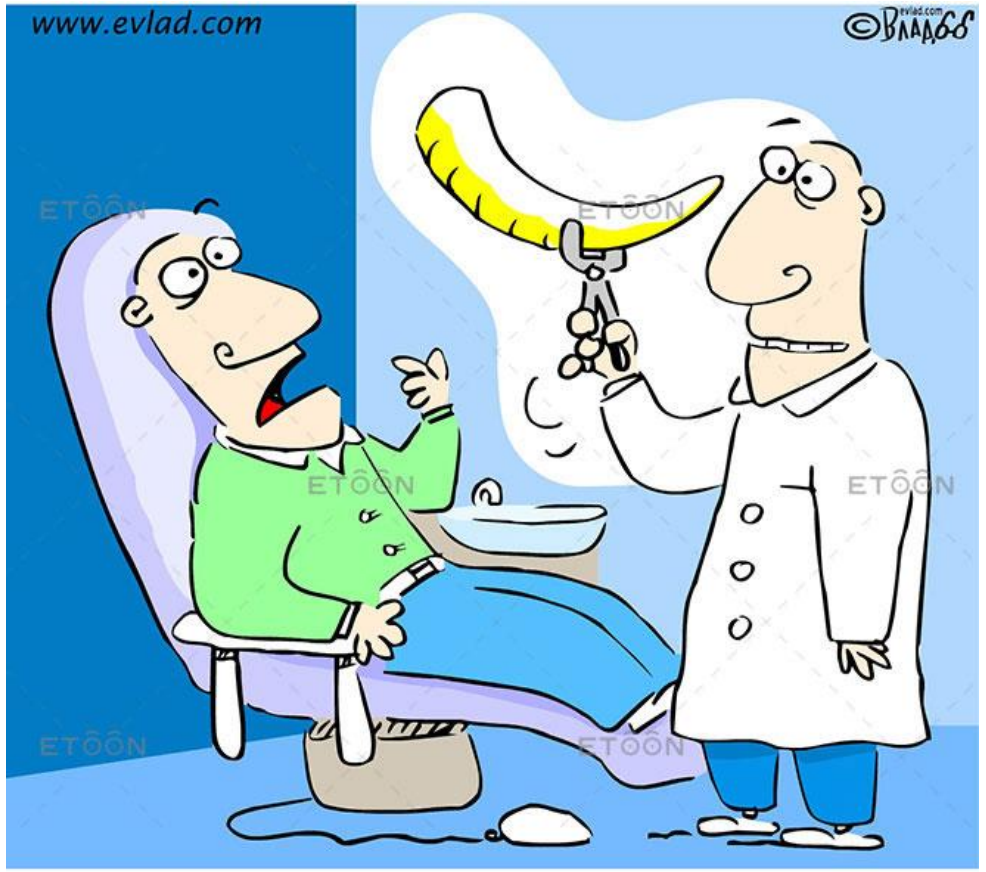
E. Any necessary treatment considerations for systemic disease

Summary

II. Acute treatment

A. Emergency treatment for pain or infection

B. Treatment of the urgent chief complaint when possible



That came as a shock to everyone...

Summary

III. Disease control

A. Caries removal to determine restorability of questionable teeth
B. Extraction of hopeless or problematic teeth
  1. Possible provisional replacement of teeth
C. Periodontal disease control
  1. Oral hygiene instruction
  2. Initial therapy
    a. Scaling and root planning, prophylaxis
    b. Controlling other contributing factors
      (1) Replace defective restorations, remove caries
      (2) Reduce or eliminate parafunctional habits, smoking
D. Caries control
  1. Caries risk assessment
  2. Provisional (temporary) restorations
  3. Definitive restorations (i.e., amalgam, composite, glass ionomers)
E. Replace or repair defective restorations
F. Endodontic therapy for pathologic pulpal or periapical conditions
G. Stabilization of teeth with provisional or foundation restorations
H. Posttreatment assessment

Summary

IV. Definitive treatment

A. Advanced periodontal therapy

B. Stabilize occlusion (vertical dimension of occlusion, anterior guidance, and plane of occlusion)

C. Orthodontic and/or orthognathic surgical treatment

D. Occlusal adjustment

E. Esthetic dentistry (i.e., tooth whitening, esthetic restorations)

F. Definitive restoration of individual teeth (direct/indirect)

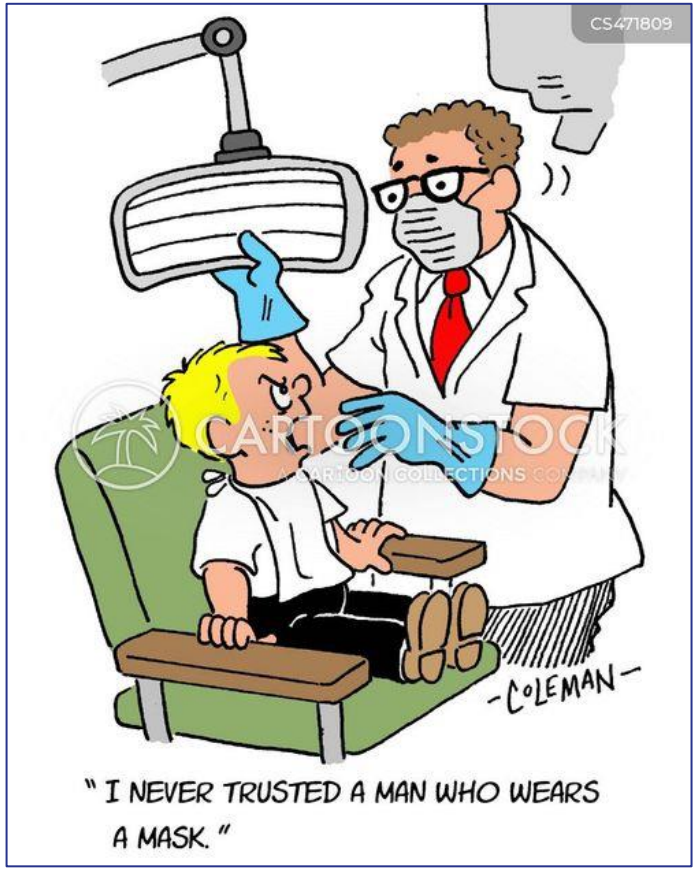
1. For endodontically treated teeth
2. For key teeth
3. Other teeth

G. Elective extraction of asymptomatic teeth

H. Replacement of missing teeth

1. Fixed partial dentures, implants
2. Removable partial dentures
3. Complete dentures

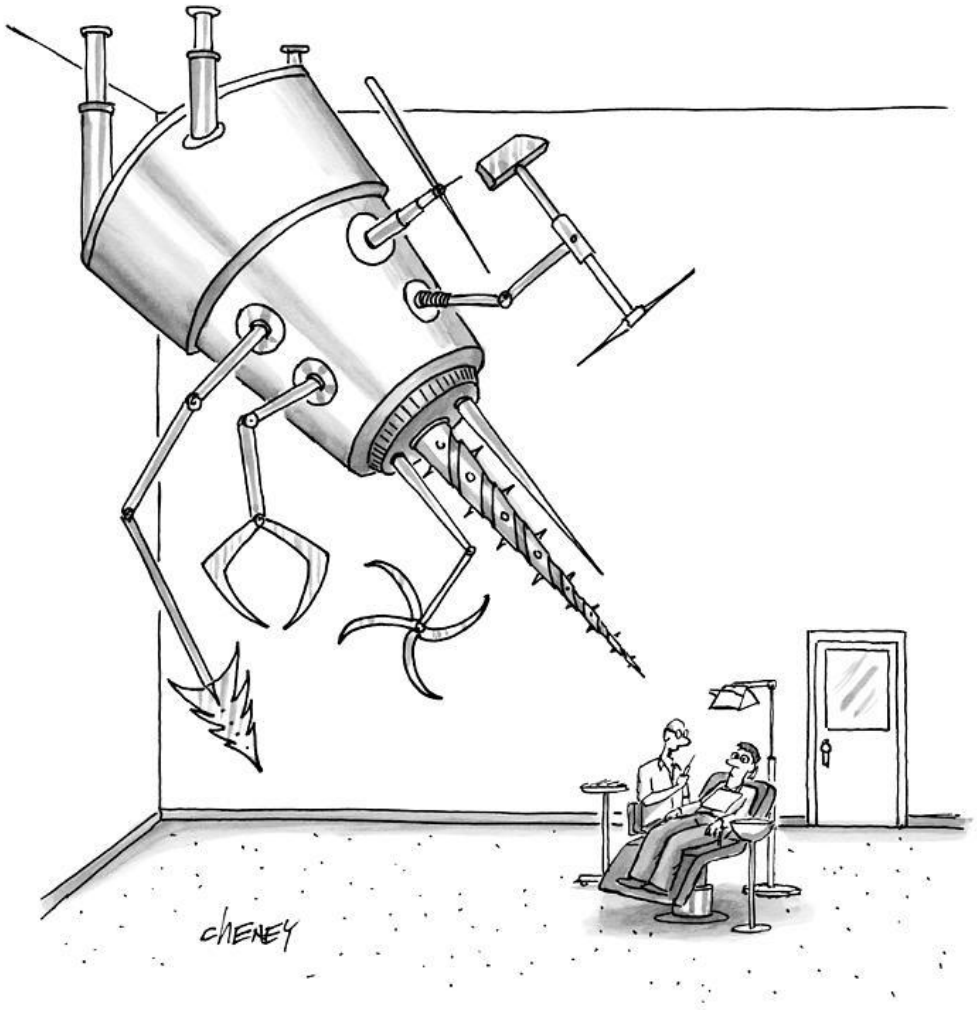
I. Posttreatment assessment



Summary

V. Maintenance therapy

A. Periodic visits



"First, let's get you nice and numb for this procedure."

No dental care and treatment even when provided by a clinically competent dentist, however excellent in a technical sense, has any real value unless it serves the best interest of the

patient..

Reference

- Stefanac, S. & Nesbit, S. (2024). *Diagnosis and Treatment Planning in Dentistry* (4th Ed.). Mosby Elsevier