



# Case Presentation

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**Disclaimer**

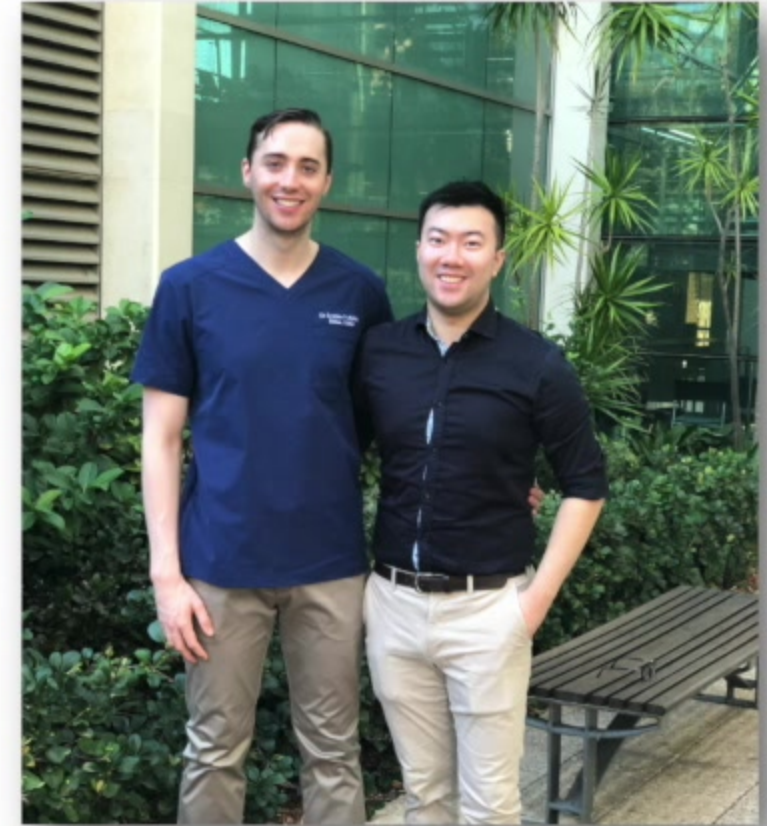


**Disclaimer**

# Case Presentation General Principles

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- Dr Lyndon P Abbott
- Graduated DMD in 2019
- Current Dental Graduate Officer at UWA



# Case Presentation General Principles

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- Why is there a case presentation examination?

The case presentation exam ensures you are safe to practice ethical, appropriate and evidenced based dentistry



# Case Presentation General Principles

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- Showcase your hard work
- Convince the examiners you can practice ethical, appropriate and evidenced based dentistry



# Case Presentation General Principles

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- Things you can't control

- Date and time
- Venue
- Projector, IT
- Questions 😞



- Things you can control

- Chosen patient
- Examination and diagnosis
- Amount of research papers you read
- Amount of tutors you talk to
- Amount of time spent preparing and rehearsing your case presentation



# Case Presentation General Principles

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## • Things you can control

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# Case Presentation General Principles

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**Start  
early.**



# Case presentation General Principles

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## Case presentation General Principles

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- ✓ PLAN
- ✓ PREPARE
- ✓ PERFORM

# Case presentation General Principles

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- A.Prof Hotinski - Examination and Treatment planning



## EXAMINATION AND TREATMENT PLANNING

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### Purpose

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The aim of this Clinical Guideline is to provide advice to OHCWA students and clinicians regarding comprehensive oral exam and treatment planning. Evidence-based clinical guidelines are intended to provide guidance, and are not a standard of care, requirement, or regulation. However, the application of clinical guidelines in publicly-provided oral health services allows for consistency to occur across large patient cohorts with a variety of oral health clinicians.

This Clinical Guideline plans to:

- Standardise the way in which all patients are assessed
- Establish a standardised sequence for a thorough comprehensive examination to reduce overlooking any area to be examined

The aim of dental treatment is to assess, restore and maintain the health, function and efficiency of dental and related tissues, and thereby improve the oral, general and psychological health of a patient. Treatment should be designed to prevent further dental disease and to restore lost tissue and function. Patients should be educated to an awareness of the importance of their dental health and how such health may be maintained.

# Case presentation General Principles

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- Examination template

## Guidelines on dental records



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P/C:

- Pain/discomfort:
- Loss of function:
- Appearance:
- Expectations:

HPC:

MH: updated, see medical notes

- Adverse Drug Reactions: none declared

Consent obtained to carry out dental examination

EO: TMJ, MOM, LN, thyroid, lips – all NAD

IO: Buccal mucosa, hard palate, soft palate, glossopharyngeal, tongue, FOM – all NAD

Teeth as per odontogram

- TTP:
- TT pal:
- Mobility:

Occlusion

- OJ:
- OB:
- Molar class:
- Crossbite:
- Crowding:
- Super-eruption:

# Case presentation General Principles

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- Patient selection
- Multidisciplinary
- Select your patients early and treat all patients as possible case presentation patients



# Case presentation General Principles

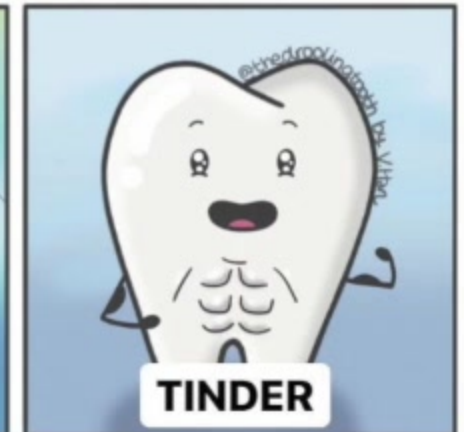
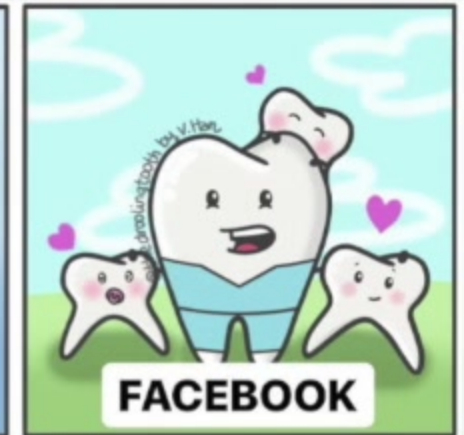
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- Take photos!!!



# Case presentation General Principles

- Patient Details
  - Importance of Social History
- Medical History
  - How does this medical history impact the overall dental management of this patient



# Case presentation General Principles

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- Clinical diagnosis/Problem list
  - Have a systematic way of presenting the patient's examination
  - Don't waste time just listing diagnoses but instead use your time to explain the critical thinking underpinning each diagnosis



# Case presentation General Principles

- Treatment Plan
  - Discuss the different options
  - Keep all the dental diagnosis and problem lists in context with the overall patient
  - Treatment alternative tables
- Delivery of Treatment

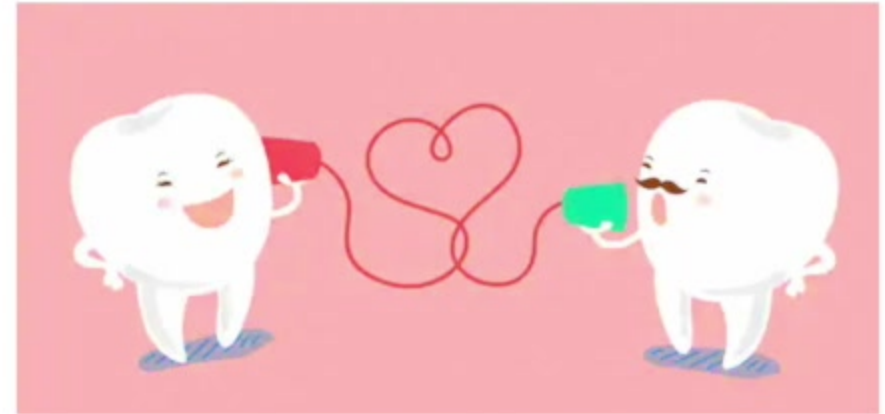
Treatment Alternatives – Oral Surgery Considerations

Problem	Treatment options	Advantages	Disadvantages	Rationale
Retained roots 27, 47 Unrestorable caries 26	No treatment	<ul style="list-style-type: none"> <li>• No cost – time or money</li> <li>• Reduced risk of post-operative complications</li> </ul>	<ul style="list-style-type: none"> <li>• Doesn't control disease</li> <li>• Fabricating a prosthesis will be less predictable, less stable and require more adjustments</li> </ul>	Removing teeth with hopeless prognoses, not only removes disease but establishes a sound base to then fabricate a dental prosthesis. This process gives further stability and predictability to the dental prosthesis and addresses the patient's primary concern in the most systematic way.
	Extract retained roots 27, 47 and unrestorable 26	<ul style="list-style-type: none"> <li>• Controls disease</li> <li>• Allows a prosthesis to be fabricated on sound tooth structure and adjacent soft tissues</li> </ul>	<p>Iatrogenic complications</p> <ul style="list-style-type: none"> <li>• Excessive haemorrhage</li> <li>• Post-operative pain, swelling, trismus</li> <li>• Fracture of roots</li> <li>• Damage to adjacent teeth</li> <li>• Infection</li> <li>• Alveolar osteitis</li> <li>• Peripheral trigeminal nerve injury</li> <li>• Oral Antrum Communication (OAC)<sup>33</sup></li> </ul> <p>After extraction bone resorption occurs which can compromise the fit of a prosthesis</p>	

# Case presentation General Principles

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- Communication
  - Practice makes perfect
  - Consider writing a script and having things on the slides to help jog your memory
  - Time yourself
  - Deep breaths to slow your heart rate



# Case presentation General Principles

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- Questions
  - The questions will be related to your case so prepare answers by researching relevant topics to your patient
  - See this as an opportunity to demonstrate your breath of knowledge
  - The examiners want you to do well





## Patient Information and Details

- Kym Duane Hales
- 57 years old (28/09/1962)
- Currently unemployed – bricklayer by trade
- Not married, lives alone
- Date of first dental appointment: 8/3/2018



# Medical History

- No current medications
- No known allergies
- Hypertension - 150/85
- Myocardial infarction 2007
- Smokes 20 cigarettes per day for 30 years (30 pack years)
  - interested in quitting
- Drinks 20 standard alcoholic drinks per week



- *Viridis A, Giannarelli C, Fritsch Neves M, Taddei S, Ghidoni L. Cigarette smoking and hypertension. Current pharmaceutical design. 2010 Aug 1;16(23):2518-25.*
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# Presenting complaint, Dental History

## Presenting Complaint

- Would like to replace his missing teeth
  - Trauma – 2013 years ago aluminium flashing hit front teeth
  - Longstanding dental neglect



## Dental History

- Hasn't visited the dentist in 10 years
- No current pain or discomfort from dentition
- Lack of function due to multiple missing teeth
- Socially, very self conscious and doesn't like leaving his house
- Expectations are to replace his currently missing teeth and improve function

Oral Hygiene: Brushes teeth twice per day with manual toothbrush and fluoridated toothpaste. Doesn't floss or use interdental brushes



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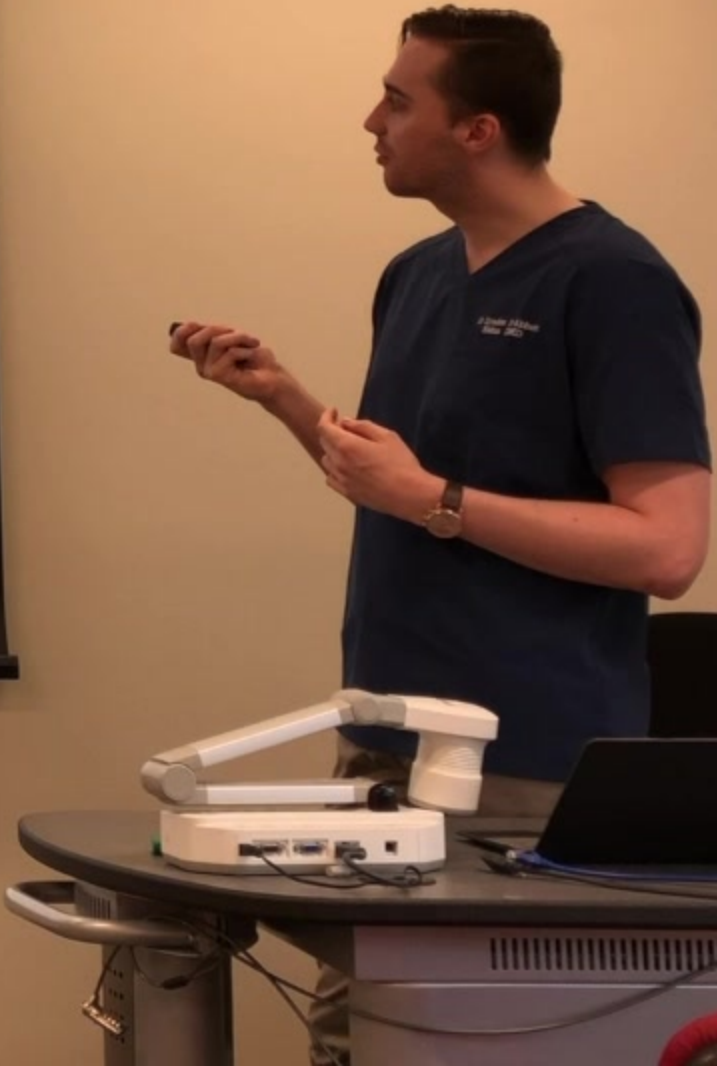
# Patient Examination and Assessment



# Patient Examination and Assessment



# Patient Examination and Assessment



# Patient Examination and Assessment



# Patient Examination and Assessment



# Radiographic Examination



13/2/2018



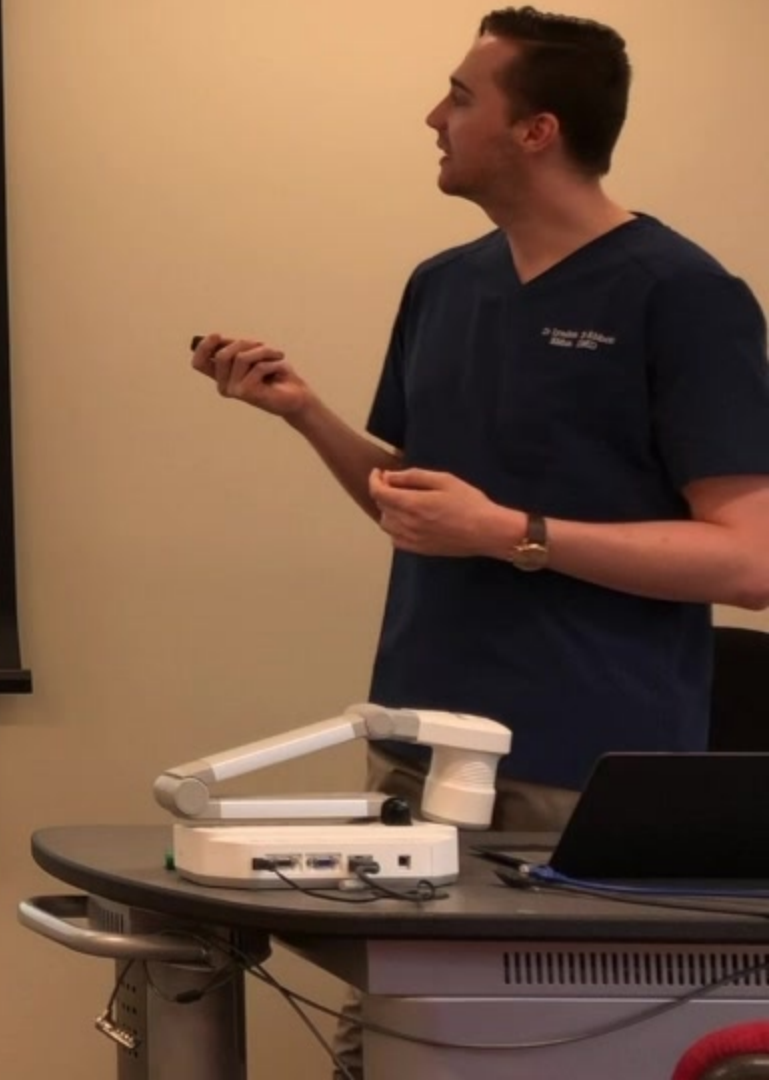
8/03/2018



8/03/2018



29/03/2018



# Radiographic Examination



13/2/2018



8/03/2018



8/03/2018



29/03/2018



# Radiographic Examination



13/2/2018



8/03/2018



8/03/2018



29/03/2018







# Patient Examination and Assessment

## Gingiva:

- Colour: Erythematous free gingival margin
- Texture: Oedematous free gingival margin
- Contour: loss of interdental papilla, blunted
- Biotype: Normal

Plaque Score 17/4/2018  
95%



Periodontal Diagnosis: Generalised periodontitis  
Stage IV, Grade C

Papapanou PK, Sanz M, et al. Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-implant Diseases and Conditions. *Journal of periodontology*. 2018 Jun;89:1173-8.





# Problem List



Problem List	Aetiology	Objectives of Treatment Plan
High blood pressure, myocardial infarct 2007	Environmental and heredity factors, ischemic heart disease	Refer patient to medical practitioner. Keep dental appointments short and relaxed
Smokes 20 cigarettes per day, drinks 20 standard alcoholic drinks per week	Personal lifestyle choices	Give smoking and alcohol cessation advice, motivational interviewing
Dental neglect, poor oral hygiene, high plaque score, heavy calculus	Personal lifestyle choices	Educate and continually motivate regarding oral hygiene, debridement and periodontal reviews
Cariogenic diet	Personal lifestyle choices	Dietary advice, continual motivation
Periodontal disease	Complex interplay between bacteria found in dental plaque and both local and systemic factors from the host	Debridement of teeth and regular periodontal reviews
Retained roots 27, 47	Caries, cariogenic bacteria, susceptible tooth surface, fermentable carbohydrates and time. Periodontal disease	Inform Mr Hales about teeth with hopeless prognosis, explain all associated risks in order to gain informed consent before extraction
Caries 26 Distal	Saliva re-mineralising teeth, Formation of tertiary dentine	Monitor or restore teeth with fair prognosis
Arrested caries 46 Buccal	Bacteria in pulp and dentinal tubules triggering osteoclastic activity on root surface	Re-examine after debridement
Visible external inflammatory root resorption 31 Distal and 32 Mesial	Physical irritation of teeth coming into contact with the mucosa	Monitor mucosa after insertion of prosthesis, any persistent lesion should be urgently referred to an Oral Medicine specialist for biopsy
Frictional keratosis	Trauma, dental neglect	Replace teeth, restore aesthetics and function
Missing teeth, partially dentate	Psychosocial implications of multiple missing teeth	Fabricate a dental prosthesis that will restore dental aesthetics
Very self-conscious about teeth	Lack of space, impaction, severe rotation, trauma	Monitor for any symptoms
Unerupted 28	Occurs when melanocytes grow in a cluster. Sun exposure can make this appear darker	Continual monitoring for any changes
Mole bottom lip RHS	Poor patient positioning during Panoramic Radiograph	Retake Panoramic Radiograph
Panoramic radiograph doesn't capture condyles, TMJ and nasal cavity, mandibular teeth not in the focal trough	Prognathic mandible	Create a prosthesis which attempts to compensate for this skeletal relationship
Skeletal Class III	Genetic, occlusal forces on the mandible	Relieve dental prosthesis around the frenal attachments and ton to try and prevent denture sore spots
High frenal attachments, bilateral mandibular tori	Missing maxillary incisors	Create a dental prosthesis that allows Mr Hales to place his tongue against maxillary incisors. Refer to speech pathologist if problem continues
Lisp while pronouncing "N" sounds		Provide a treatment plan that is appropriate to Mr Hale's financial situation
Unemployed - financial considerations		



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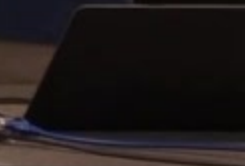




# Individual Tooth Assessment – Samet Jotkowitz 2009

Tooth	Periodontal	Restorability	Endodontic Condition	Occlusal	Anatomic Irregularities	Iatrogenic Factors	Overall Prognosis
23	Questionable	Good	Good	Fair	No	No	Fair
24	Questionable	Good	Good	Fair	No	No	Fair
25	Compromised	Good	Good	Fair	No	No	Fair
26	Hopeless	Hopeless	Hopeless	Fair	No	No	Hopeless
27	Compromised	Hopeless	Hopeless	Fair	No	No	Hopeless
33	Questionable	Good	Good	Fair	No	No	Fair
32	Questionable	Good	Good	Fair	No	No	Fair
31	Questionable	Good	Good	Fair	No	No	Fair
41	Questionable	Good	Good	Fair	No	No	Fair
42	Questionable	Good	Good	Fair	No	No	Fair
43	Questionable	Good	Good	Fair	No	No	Fair
45	Questionable	Good	Good	Fair	No	No	Fair
46	Compromised	Good	Good	Fair	No	No	Questionable
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32	Questionable	Good	Good	Fair	No	No	Fair
31	Questionable	Good	Good	Fair	No	No	Fair
40	Questionable	Good	Good	Fair	No	No	Fair
42	Questionable	Good	Good	Fair	No	No	Fair
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# Treatment Alternatives

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## Periodontal Considerations

- Diagnosis: Generalised Periodontitis Stage IV, Grade C
- Options:
  - No treatment
    - Advantages
    - Disadvantages
  - Periodontal Debridement of teeth
    - Advantages
    - Disadvantages
- Rationale

*Lotheef P, Sirajuddin S, et al. Suppl 1: M7: Iatrogenic Damage to the Periodontium Caused by Periodontal Treatment Procedures. The open dentistry journal. 2015;9:203.*



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# Treatment Alternatives

## Oral Surgery Considerations

- Problem: retained roots 27, 47, unrestorable 26
  - Options:
    - No treatment
      - Advantages
      - Disadvantages
    - Extraction of 26, 27 and 46
      - Advantages
      - Disadvantages
  - Rationale
- Problem: retained unerupted 28
  - Options:
    - No treatment
      - Advantages
      - Disadvantages
    - Extraction of 28
      - Advantages
      - Disadvantages
  - Rationale

Steed MB. The indications for third-molar extractions. *The Journal of the American Dental Association*. 2014 Jun 1;145(6):570-3.



# Treatment Alternatives

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# Treatment Alternatives

## Prosthodontic Considerations

- Problem: Missing teeth, partially dentate
- Options:
  - No treatment
  - Partial acrylic maxillary and mandibular dentures
  - Full maxillary acrylic denture and partial acrylic mandibular denture
  - Partial Co/Cr maxillary and mandibular denture
  - Implant supported removable or fixed prosthesis
- Advantages
- Disadvantages
- Rationale

"Whatever treatment mode is selected should minimize the long-term biological and soft tissue costs to the patient"  
-McCord, Smales 2012

- Suwal P, Singh RK, Ayer A, Roy DK, Roy RK. Cast Partial Denture versus Acrylic Partial Denture for Replacement of Missing Teeth in Partially Edentulous Patients. *Journal of Dental Materials and Techniques*. 2017 Mar 1;6(1):27-34.
- McCord F, Smales R. Oral diagnosis and treatment planning: part 7. Treatment planning for missing teeth. *British dental journal*. 2012 Oct;213(7):341.
- Petridis H, Hempton TJ. Periodontal considerations in removable partial denture treatment: a review of the literature. *The international journal of prosthodontics*. 2001;14(2):164-72.



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# Treatment Alternatives

## Prosthodontic Considerations

- Problem: Missing teeth, partially dentate
- Options:
  - No treatment
  - Partial acrylic maxillary and mandibular dentures
  - Full maxillary acrylic denture and partial acrylic mandibular denture
  - Partial Co/Cr maxillary and mandibular denture
  - Implant supported removable or fixed prosthesis
- Advantages
- Disadvantages
- Rationale

"Whatever treatment mode is selected should minimize the long-term biological and soft tissue costs to the patient"  
-McCord, Smales 2012

- Suwal P, Singh RK, Ayer A, Roy DK, Roy RK. Cast Partial Denture versus Acrylic Partial Denture for Replacement of Missing Teeth in Partially Edentulous Patients. *Journal of Dental Materials and Techniques*. 2017 Mar 1;6(1):27-34.
- McCord F, Smales R. Oral diagnosis and treatment planning. part 7. Treatment planning for missing teeth. *British dental journal*. 2012 Oct;213(7):341.
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# Delivery of Treatment

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- 8/3/2018
  - Referral to medical practitioner
- 10/4/2018
  - Informed consent to carry out treatment plan
  - Extraction 26, 27 and 47
- 17/4/2018
  - Review of extraction sockets
  - Periodontal Debridement
- 30/4/2018
  - PA: 25 distal arrested caries
- 8/5/2018
  - Dietary advice
  - Oral Hygiene instruction
  - Fluoride application
  - Motivational interviewing for smoking and alcohol cessation



30/4/2018



17/4/2018



# Delivery of Treatment



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- 23/5/2018
  - Periodontal review
  - PA: 41 31 for possible external inflammatory resorption
  - Plaque score: 50%
  - Oral hygiene instruction
  - Periodontal debridement
- 13/7/2018
  - Diagnostic base and rim
- 26/7/18
  - 46 BUC composite
  - Pulp testing to reassess abutment teeth
- 31/7/18
  - Panoramic Radiograph



23/5/2018



13/7/2018



31/7/2018



# Delivery of Treatment



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Holding Stage Review



31/7/2018



# Delivery of Treatment

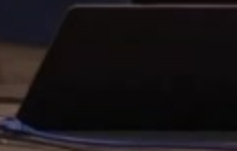
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Holding Stage Review



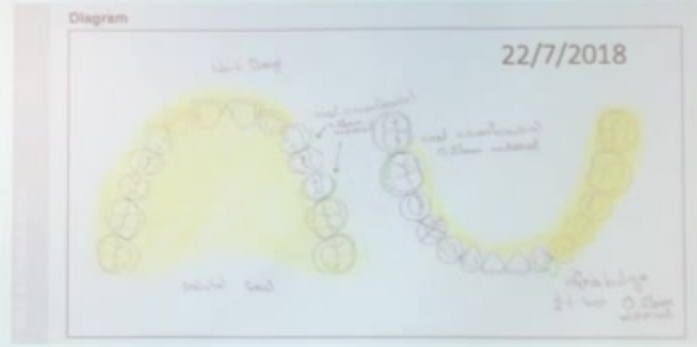
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# Delivery of Treatment

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- 22/7/2018
  - Denture design sign off
- 31/7/2018
  - Secondary impressions
  - Face-bow
- 15/8/2018
  - MMR
- 5/9/2018
  - Anterior tooth set up
- 14/9/2018
  - Posterior tooth set up
- 3/10/2018
  - Insertion of P/P acrylic denture



31/7/2018



15/8/2018

Davenport JC, Basker RM, et al. *Prosthetics: A system of design*. British dental journal. 2000 Dec;189(11):586.



# Delivery of Treatment

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Insertion of Acrylic P/P



3/10/2018



# Delivery of Treatment

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Insertion of Acrylic P/P



3/10/2018



# Delivery of Treatment

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- 10/10/2018
  - Denture review
- 19/10/2018
  - Denture review 2
- 21/1/2019
  - Periodic oral examination
  - Plaque score 30%
  - CPITN
    - 2 2
    - 2 -
  - Debridement
  - Fluoride application
- 6/6/2019
  - Periodic oral examination
  - Full periodontal chart
  - Debridement
  - Refer to oral surgery
- 5/7/2019
  - Oral hygiene review
  - Removal of calculus subsequent visit
  - Fluoride application
- 13/11/2019
  - Periodic oral examination
  - Full periodontal chart
- 19/11/2019
  - Debridement
  - Motivation for oral and denture hygiene



# Delivery of Treatment

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## Review appointment

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Denture in situ



# Delivery of Treatment

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## Review appointment

6/6/2019

Denture in situ



# Delivery of Treatment



Periodontitis	Stage I	Stage II	Stage III	Stage IV
<b>Severity</b>	Low	Low to Moderate	Moderate to High	High
<b>Extent and Distribution</b>	Localized	Generalized	Generalized	Generalized
<b>Primary Etiology</b>	Plaque-induced	Plaque-induced	Plaque-induced	Plaque-induced
<b>Secondary Etiology</b>	None	None	None	None
<b>Stability</b>	Stable	Stable	Stable	Stable
<b>Prognosis</b>	Good	Good	Good	Good

Periodontal Diagnosis: Generalised periodontitis Stage IV, Grade C

Parapanov PN, Sanz M, et al. Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *Journal of periodontology*. 2018 Jun;89:5173-82



# Complications/Issues arising from treatment

- After the 26 was extracted arrested caries was detected on 25 Distal
  - PA
  - Fluoride
  - Monitor
- Secondary impressions
  - Overfilled the maxillary special tray with PVS
- Oral Hygiene
  - Continual motivation
- Maxillary midline during anterior tooth set up
- Partially erupted 28

8/5/2018



• Evans RW, Pakdaman A, Dennison PJ, Howe EL. The Caries Management System: an evidence-based preventive strategy for dental practitioners. Application for adults. *Australian dental journal*. 2008 Mar;53(1):83-92



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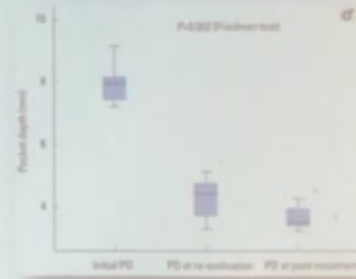


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# Prognosis - Periodontal

- Dependent of the ability of the patient to maintain their oral environment
- Buchmann, Nunn 2002
  - 95% success rate after five years
- Bouziane, Benrachadi 2014
  - Baseline 7.94mm
  - Re-evaluation 4.33mm
  - Post-treatment 3.54mm
  - Inflammation was resolved and angular bone defects were repaired in all cases



Bouziane et al. 2014

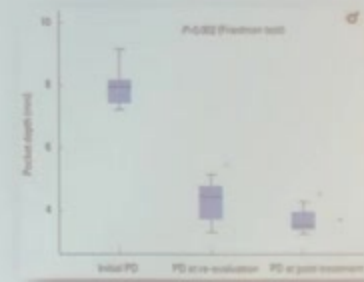
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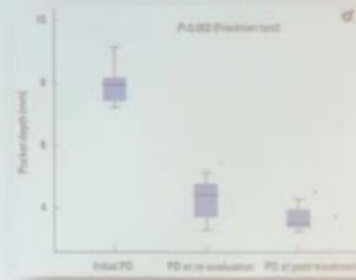
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## Partial maxillary and mandibular acrylic denture

- Survival after five years 86.3 – 100% - *Canadian Agency for Drugs and Technologies in Health 2015*
- Survival after ten years 33.3 – 100% - *Canadian Agency for Drugs and Technologies in Health 2015*
- Survival after ten years 50% - *McCord, Smales 2012*

### *Carlsson et al. 1962*

RPDs can increase occurrence of:

- Caries
- Damage to the periodontium
- Increase the amount of trauma on natural teeth

### *Hussain et al. 2015*

- RPDs can increase dental plaque retention:
  - periodontitis
  - gingival recession
  - root caries
  - Increased mobility

"Removable partial dentures requires regular patient recall and high maintenance"  
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- *Longevity of Removable Prosthodontics: A Review of the Clinical Evidence [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2015 Apr 10. SUMMARY OF EVIDENCE. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK304786/>*
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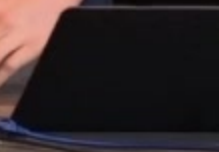
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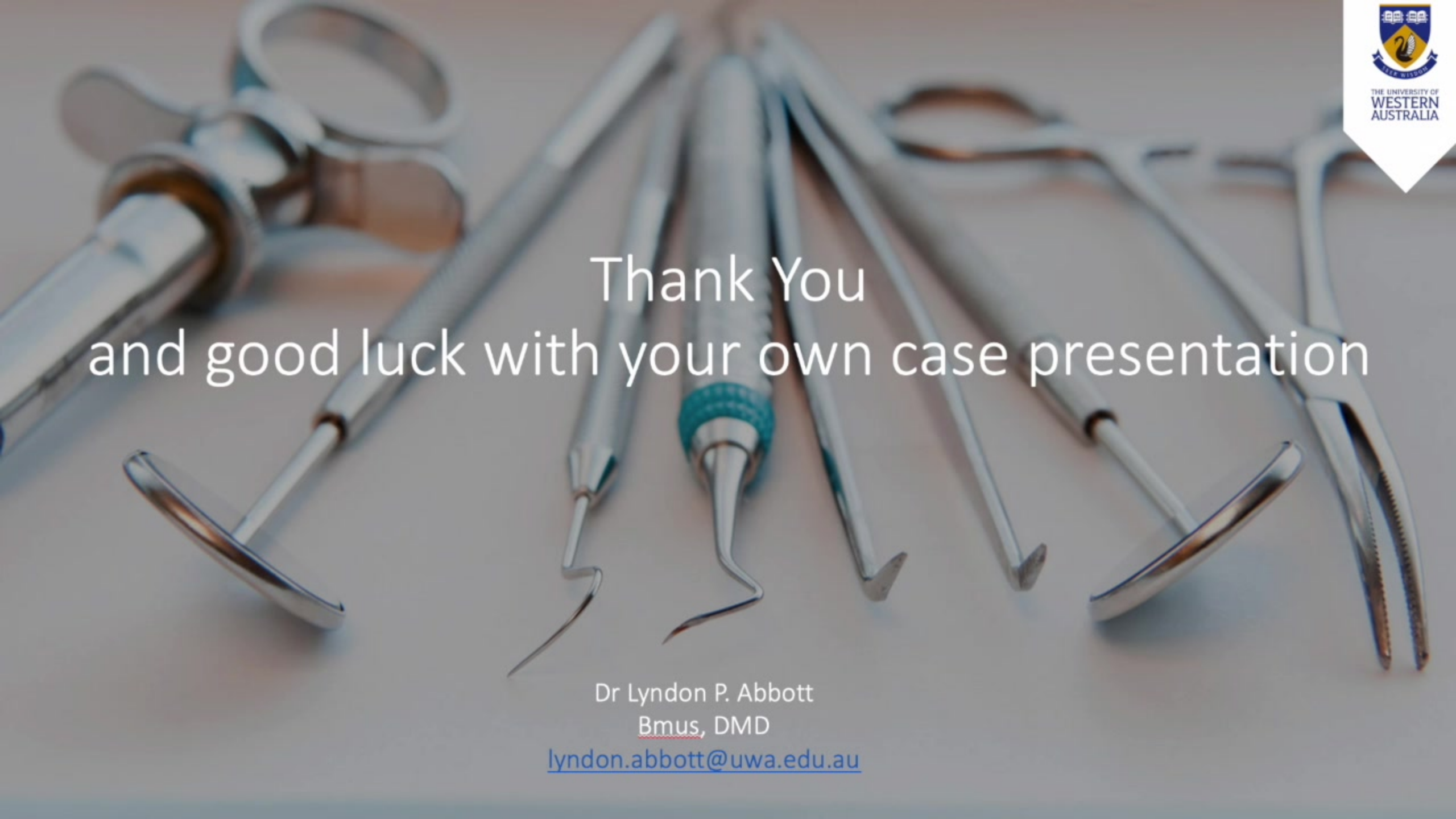
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Thank You





Thank You  
and good luck with your own case presentation

Dr Lyndon P. Abbott

Bmus, DMD

[lyndon.abbott@uwa.edu.au](mailto:lyndon.abbott@uwa.edu.au)