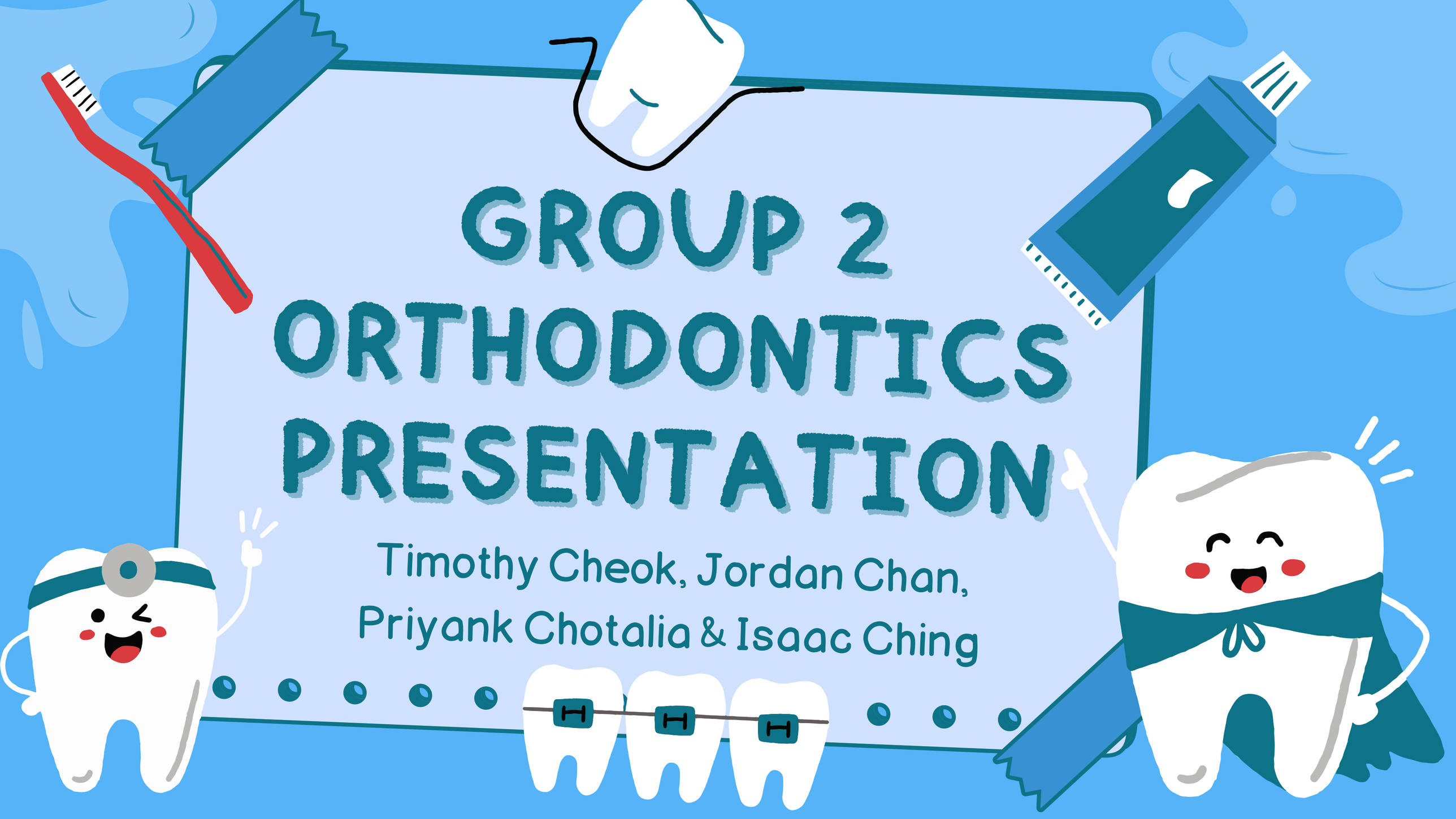
GROUP 2 ORTHODONTICS PRESENTATION

Timothy Cheok, Jordan Chan,
Priyank Chotalia & Isaac Ching



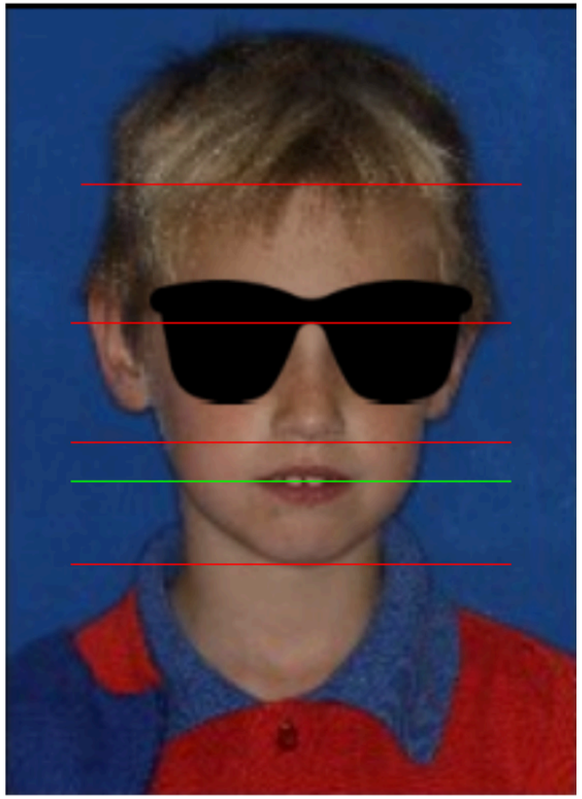
Case 2 (“Russel”) – Extra and intraoral photographs



Frontal Facial Profile – Symmetry and Vertical proportions



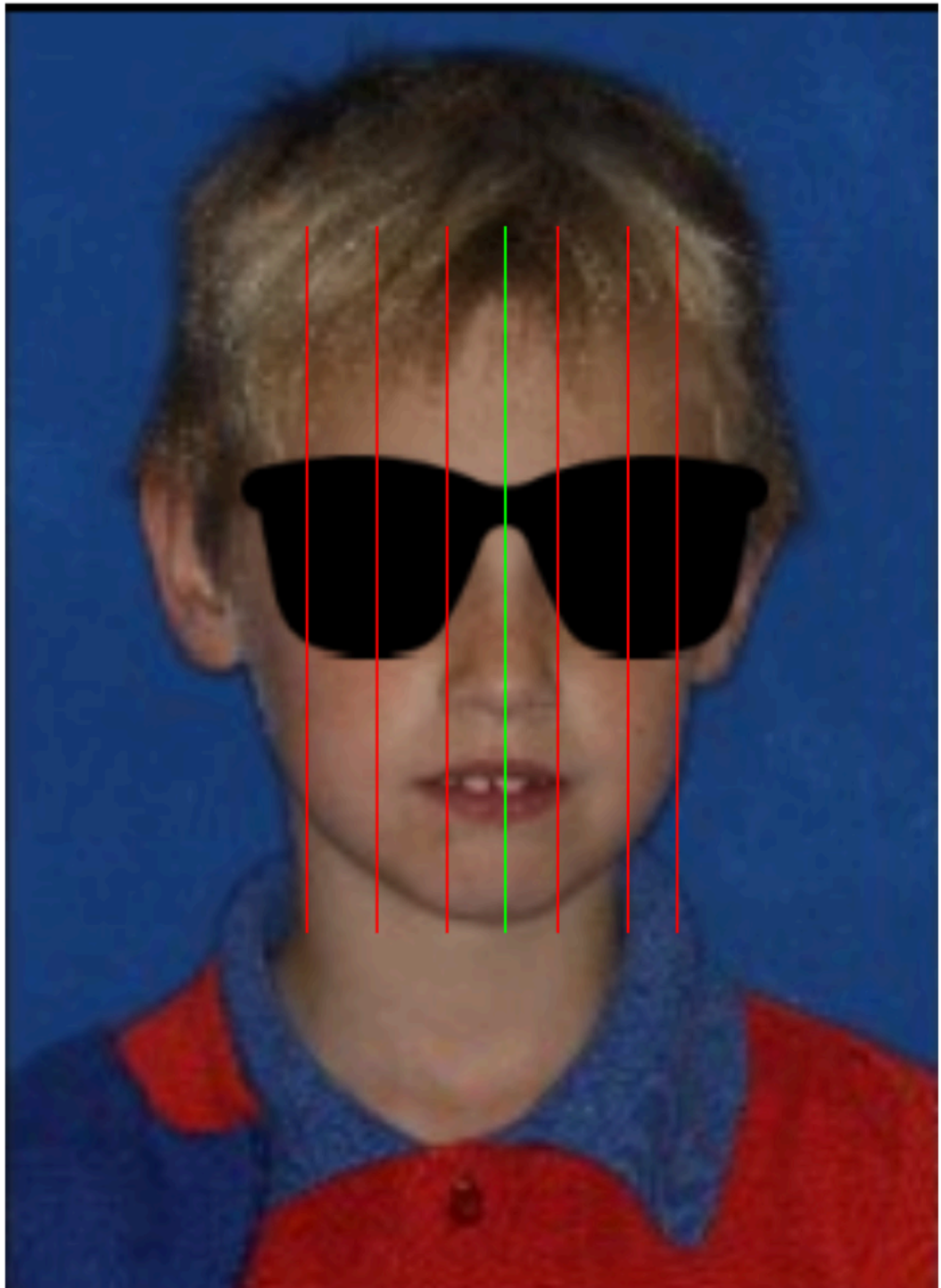
Noticeable asymmetry between left and right side of the lower face



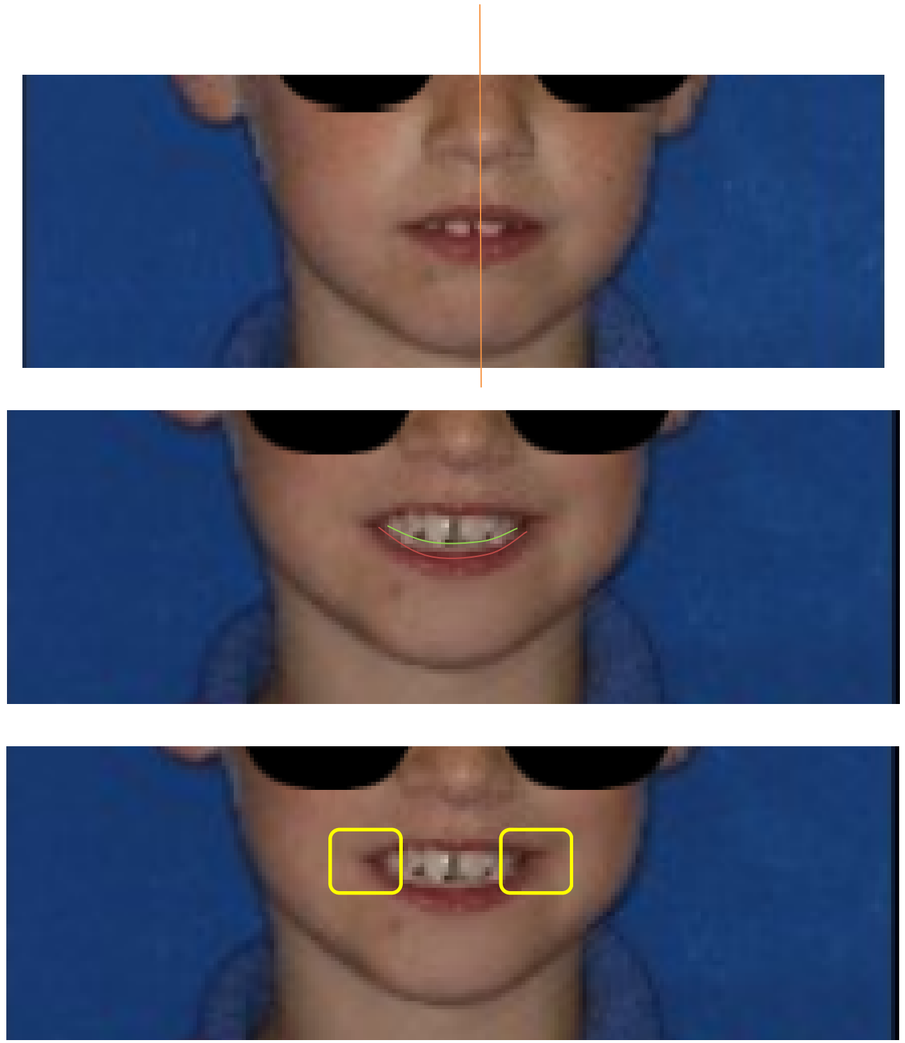
Frontal facial height is equally divided between upper, middle, and lower thirds.

Frontal Facial Profile – Horizontal proportions

- Ideal proportions are equally divided into 1/5ths.
- LHS last segment appears to be < 1/5
- Middle segment appears to be > 1/5
  - Width of the mouth is more than than interpupillary distance
  - Width of the nose appears smaller than the interpupillary distance and the width the of the mouth

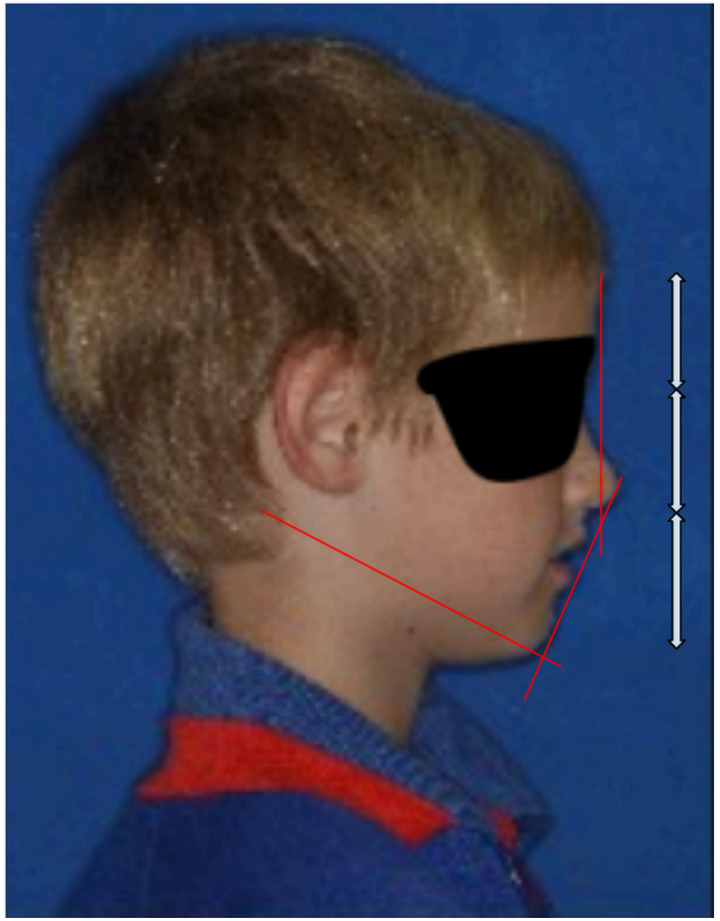


Frontal Facial Profile – Lower face



- Occlusal cant is not apparent from this picture
- Tooth display:
  - Display of maxillary incisor appears greater than usual at rest because of lip incompetence
  - At least 75% of Maxillary incisors can be seen in spontaneous smile, which is adequate
  - No posterior teeth apparent = Absent Buccal Corridor
- Smile arch appears parallel and adequate
- Upper dental midline is noticeable shifted to the patient’s right

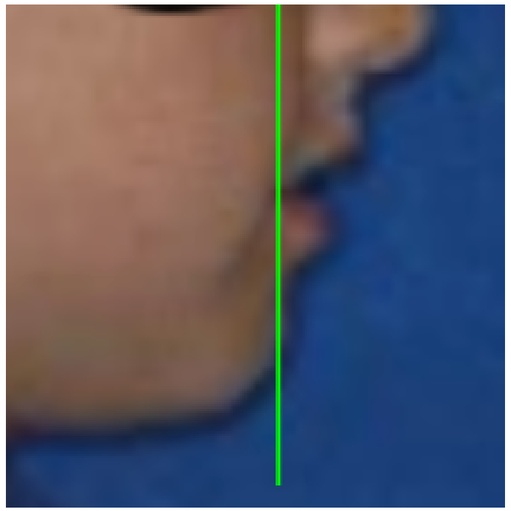
Lateral Facial Profile – Skeletal relationship



- Convex profile suggests Class II skeletal relation
  - Due to deficient mandibular growth or protrusive maxillary growth
- Almost equal proportions of upper, middle, and lower anterior face
- Mandibular plan angle does not appear too steep, indicating a normal lower face height.

Lateral Facial Profile – Tooth/Lip relations





Lip Position relative to incisor:

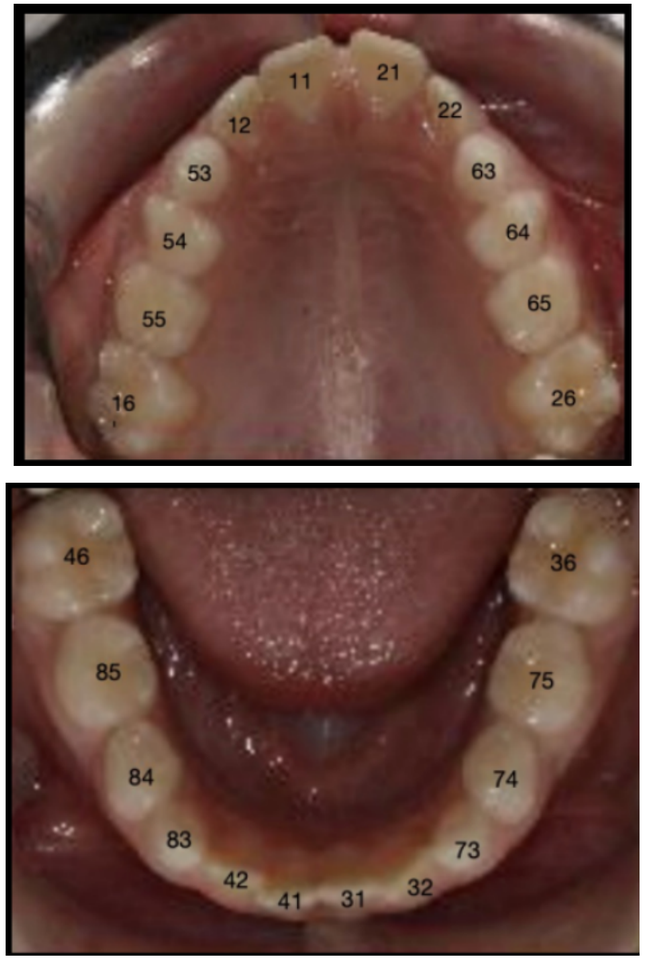
- Maxillary: Upper lip is slightly anterior to true vertical through soft tissue A = within normal limits.
- Mandible: Lower lip appears > 3mm anterior to true vertical through soft tissue B = Protrusive lower lip.
- Lips are prominent and incompetent at rest (3 – 4mm separation).

Intraoral – Frontal view

- Anterior open open (negative overbite)
- Maxillary central diastema
- Alignment in both arches without spacing
- Gingiva:
  - Kotlow Frenum Class 2
  - Gingival tissues appear healthy



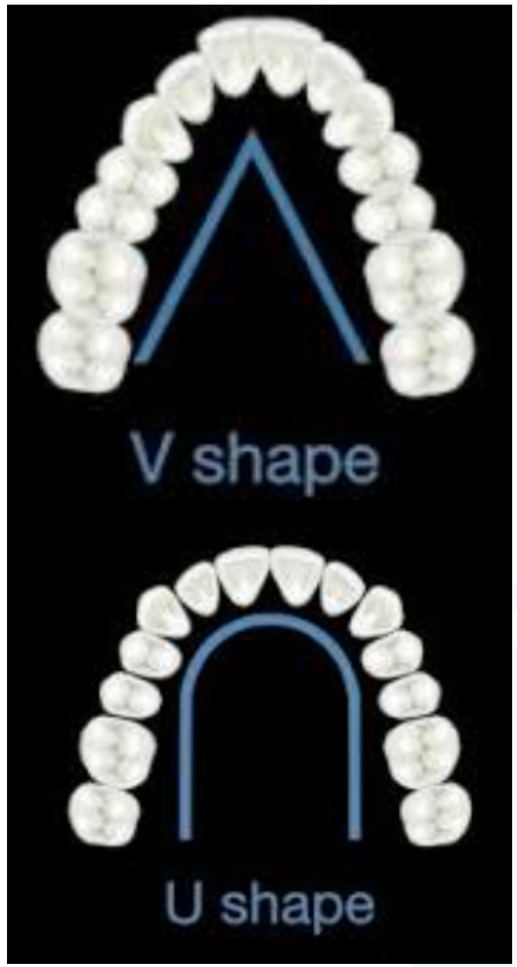
Intraoral – Occlusal views



Mixed dentition:

- Permanent 1st molars
- Permanent incisors

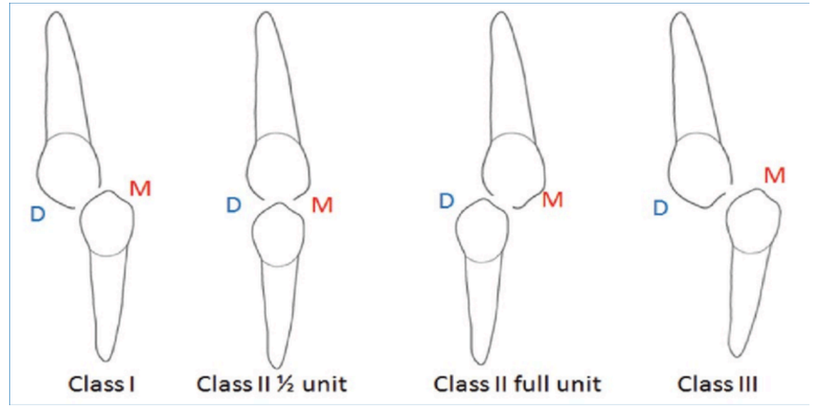
Dental age: 8 – 9 yrs

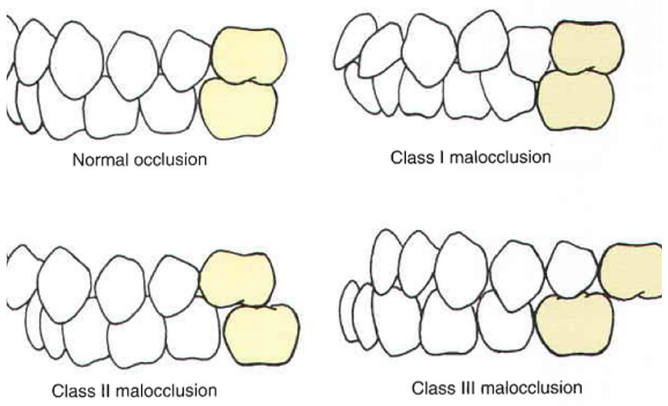


Intraoral – Lateral view

- Molar relationship:
  - Bilateral Class II Div 1
- Canine relationship:
  - Bilateral class II half unit
- Anterior open bite
- Labial tipping of upper incisors leading to increased overjet (approx. 3mm)
- Posterior crossbite



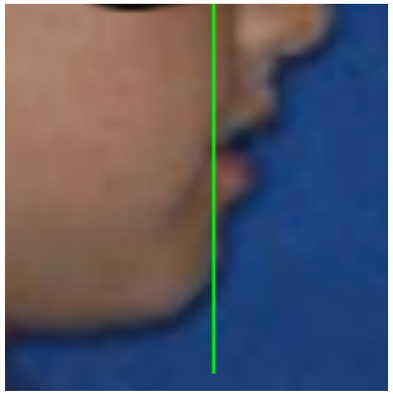






Problem list





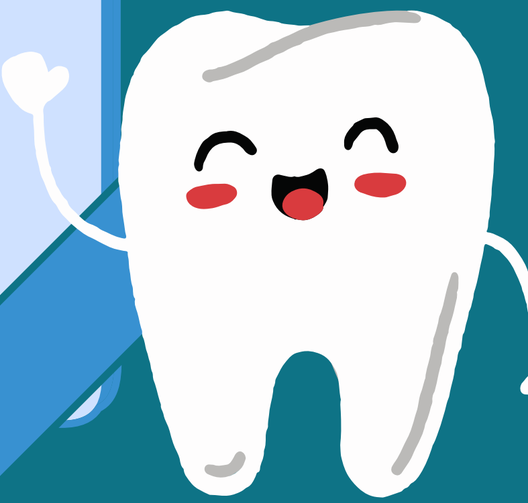
Problem	Functional	Structural
Anterior open bite	↓ Anterior biting efficiency	May become a skeletal open bite
Increased overjet	Altered anterior guidance	↑ Risk of incisor trauma
Class II relationship	Altered occlusal function	Persistent Class II relationship
Lip incompetence	↓ Ability to achieve lip seal	Altered soft-tissue profile
Midline discrepancy	Potentially altered anterior contacts	Persistent dental asymmetry
Diastema	Minimal functional effect	Persistent anterior spacing
Malocclusion overall	↓ Masticatory efficiency	Malocclusion may become more established with growth





What will happen if we decide to do nothing?





Caries Risk & Periodontal Issues?

- Teeth are not severely mal-aligned or crowded
- Evidence linking periodontal disease and severe malocclusion is weak
- Key factor for caries and periodontal disease development is motivation to maintain hygiene.









Psychosocial Challenges?

- May suffer from stereotypes of "looking dumb"
- May have an effect on self-esteem and future performance from social discrimination









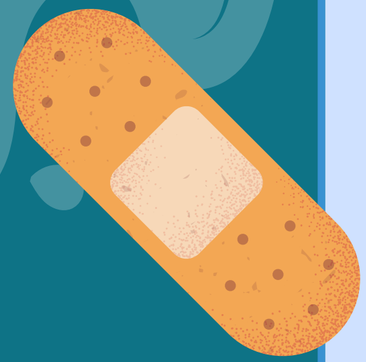


What options are available for treatment?

Main concern: Thumb sucking



What options are available for treatment?





Behavioural Management Options:

- Reminder therapy: where a bandage is placed on the finger that is sucked.
- Reward therapy: where a series of small daily rewards and a larger major reward are given to the child when the habit is not practiced over a period of time.
- An elastic bandage wrapped around the elbow to prevent flexion of the elbow so that the finger cannot be sucked.





What options are available for treatment?

Appliance Therapy Options

- Reminder appliance: Is cemented on the teeth to discourage thumb sucking

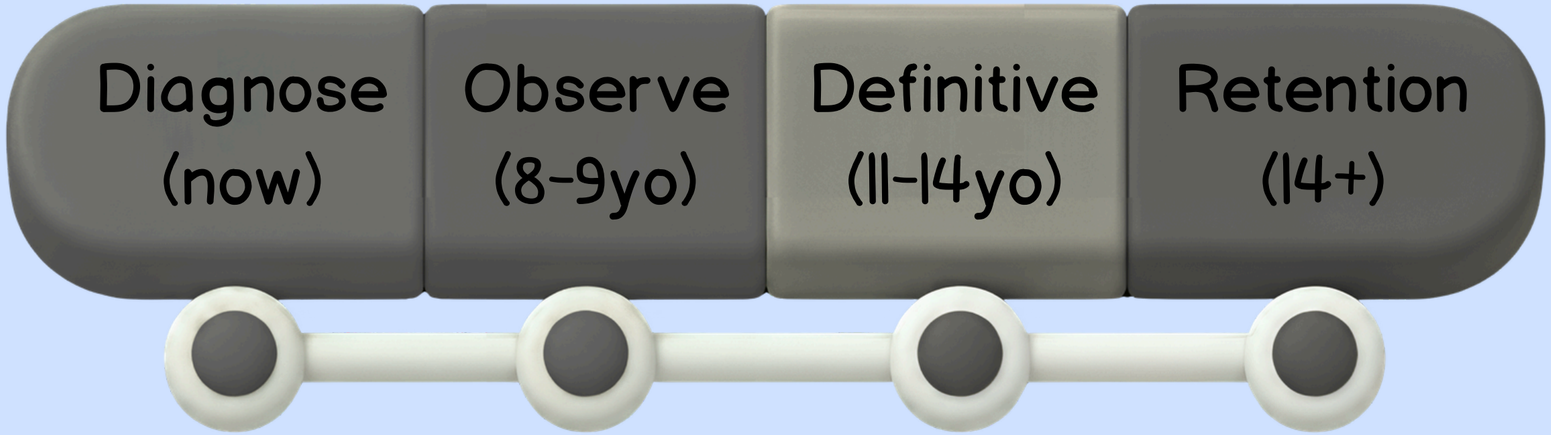








Treatment Sequencing









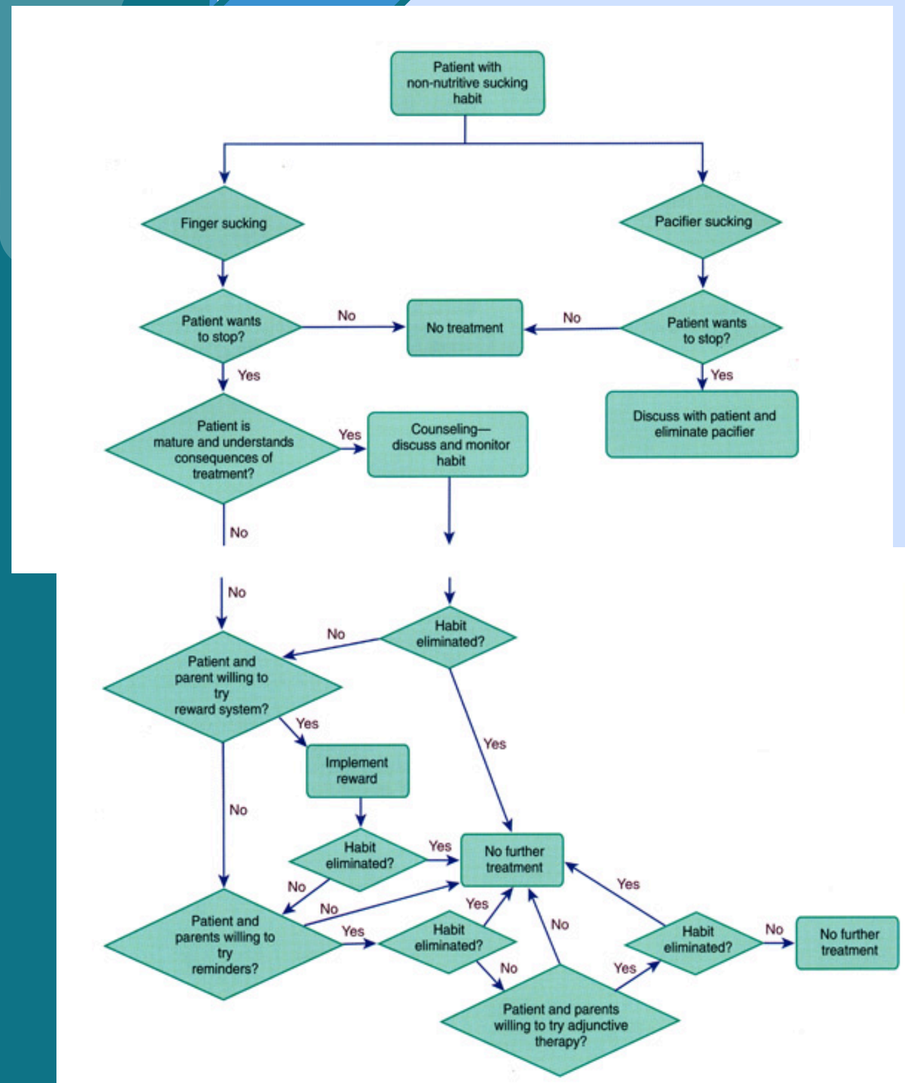


Phase 1: Diagnosis

- Lateral ceph
- OPG
- Dental models
- Habit interview – type, frequency, activity
- OHI + plaque/bleeding baseline
- No appliance







Phase 2: Observe (8-9)

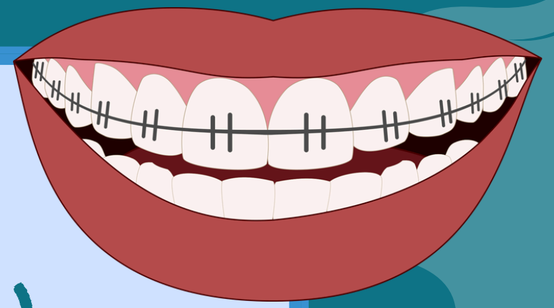
- Habit cessation: reinforcement first, crib appliance only if that fails
- Re-measure at 6 and 12 months: OB, OJ, diastema

- If OJ persists post-habit:
  - Upper removable appliance
  - 2x4 orthodontic appliance





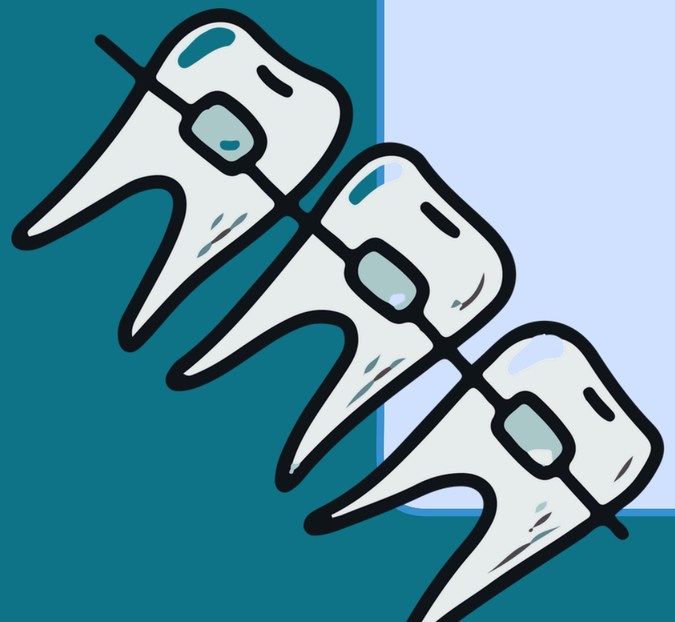




Phase 3: Definitive (11-14)

- Full fixed, permanent dentition
- Growth modification if ceph confirms skeletal class 2
- Can consider use of TADs in this phase as patient should have bone maturity to support them
- Extractions if dental casts suggest need for space











Phase 4: Retention (14+)

- Bonded maxillary retainer
- Diastema can relapse
- Monitor habit recurrence





What is the cost/benefit ratio?









Financial: $2500 - $13000 AUD (treatment fees) + ~$1800 (Consult fees, diagnostics fees, retainer fees)

Time: 1-3 years of effort, travel time, 5-20+ appointments

Effort: Bad Habit breaking, good habit formation, travel to/from appointments

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Benefit: Reduced/No malocclusion →

- Better facial + smile aesthetics (More Halo Effect),
- Better chewing strokes (More efficient mastication and eating QOL)
- Well established meticulous OH habits (Lifelong decreased risk of periodontal disease/caries)
- A potentially positive outlook on visiting dentists (Increase likelihood of seeking professional help in future for oral/dental disease + appointment attendance).










THANK
YOU





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