# GIL - Intro to BDS2

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# NIGHT-TIME CLINICAL SESSIONS

**SEMESTER ONE:**

- Similar to end-of-year BDS1 Clinical sessions → focus upon dental hygiene, dental products/ instruction and scaling using both manual & ultrasonic techniques.

- Focus:

    - Consolidate + be systematic with a full dental examination, including providing sound and confident dental advice.
      Practice and become familiar with Titanium →important when moving to family + friend sessions & moving into BDS3.
      Every tutor is different and will require different levels of commitment + interaction; try and embrace this… it will make you a more confident clinician.
      Follow up on any questions that arise yourself → e.g. how to manage a bleeding patient, how to manage an anxious patient etc.

TIP: Try to eat between sim clinic and clinical sessions (e.g. @ 4:30-5pm) → some tutors will tend to finish later than programmed e.g. 9:30pm

# NIGHT-TIME CLINICAL SESSIONS

**SEMESTER TWO:**

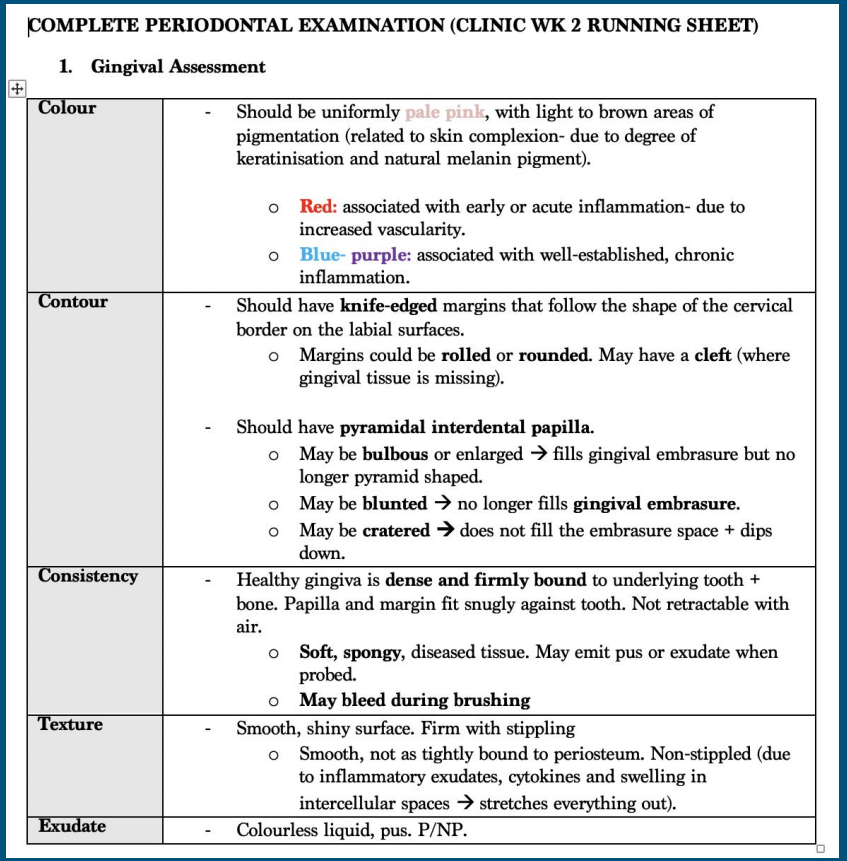
- Start and see family and friend patients (!!!)
    - Try to organise these patients earlier rather than later, + when they say to organise a back-up…. they do mean it (nothing worse than a no-show, two or three weeks in a row..)
    - Try to find a diverse range of patients:
        - Start with a patient with relatively good OH; to build confidence.
          HOWEVER try not to see pts with exclusively good Oral Health/ Hygiene → you will only be cheating yourself. Even if it isn't all smooth sailing (and it can get overwhelming sometimes), now is the perfect time to learn & make mistakes.
          Try not to be too nervous - F+F clinical sessions are relaxed and allow you room to learn + develop your skills.
- LA Sessions:
    - End of the year; will include 1x Sim Clinic Session and 2-3 Clinical Sessions on eachother
      Ensure you have a sound knowledge of the anatomical landmarks and infection control procedures → tutors will quiz you while you administer to mark you for clinical competency (you will have a summative quiz on this topic as well ! )

# PREPARING FOR SUCCESS: CLINICAL SESSIONS

- Have a summary clinical running sheet for each session → shows the tutor you are prepared (they will be impressed) and will help with nerves; tutors do not expect you to undergo clinical sessions without the running sheet until the end of the year- so don't stress!

- By the end of semester 2 you will be able to:

    - Full exam (E/O, I/O, Soft Tissues, Gingival, Base + All charting) + diagnosis + treatment planning + radiographs.



**COMPLETE PERIODONTAL EXAMINATION (CLINIC WK 2 RUNNING SHEET)**

**1. Gingival Assessment**

| | |
|---|---|
| **Colour** | - Should be uniformly pale pink, with light to brown areas of pigmentation (related to skin complexion- due to degree of keratinisation and natural melanin pigment).<br>o **Red:** associated with early or acute inflammation- due to increased vascularity.<br>o **Blue- purple:** associated with well-established, chronic inflammation. |
| **Contour** | - Should have **knife-edged** margins that follow the shape of the cervical border on the labial surfaces.<br>o Margins could be **rolled** or **rounded**. May have a **cleft** (where gingival tissue is missing).<br>- Should have **pyramidal interdental papilla**.<br>o May be **bulbous** or enlarged → fills gingival embrasure but no longer pyramid shaped.<br>o May be **blunted** → no longer fills **gingival embrasure**.<br>o May be **cratered** → does not fill the embrasure space + dips down. |
| **Consistency** | - Healthy gingiva is **dense and firmly bound** to underlying tooth + bone. Papilla and margin fit snugly against tooth. Not retractable with air.<br>o **Soft, spongy**, diseased tissue. May emit pus or exudate when probed.<br>o **May bleed during brushing** |
| **Texture** | - Smooth, shiny surface. Firm with stippling<br>o Smooth, not as tightly bound to periosteum. Non-stippled (due to inflammatory exudates, cytokines and swelling in intercellular spaces → stretches everything out). |
| **Exudate** | - Colourless liquid, pus. P/NP. |

# THE PROCESS OF TREATMENT PLANNING - EXEMPLAR

1. Clinical assessment of **radiographs, clinical pictures, hard tissues etc.**

2. Summarise **key** issues from clinical + factual analysis. Keep this concise.
    a. **Chief Concern** should always be number one.
    b. Follow with **biologically identified issues** e.g. *Multiple Active Carious Lesions, Active Gingivitis etc.*
    c. **MHx** or restorations that may provide **contraindications or risk** (asthma + Ventolin usage, TCR's etc.).
        i. Previous restorations best indicator of past caries prevalence,
    d. **SHx or DHx** factors that increase risk of pt : dietary analysis (cariogenic diet), OH habits (ineffective biofilm removal), lifestyle changes.
3. Further tests that may be applied:
    a. Further questions to ask the pt.
        i. Further medical, dental or social history questions to gain deeper understanding of the patient- time, stress, financial, medical etc.
        ii. Ask about Chief Concern
        iii. Ask + extrapolate about OH habits. Ask them to rate OH on a scale from 1-10 + identify any key issues. Open-ended Q's.
    b. If pt is indicated/ moderate-high caries risk + no bitewings in last six months, request bitewings to look for interproximal carious lesions.
    c. Tri-Plaque gel test → if OH habits low. To educate patient and show cariogenic plaque location.
    d. Saliva quality and quantity test FOR pt at risk

4. Possible **prognosis/ diagnosis**
5. Treatment plan **options**
    a. Always include no treatment
6. Final **treatment plan**

*For a **treatment plan** to be **accepted** by the patient, the patient must:*

1. *Understand their problem*
2. *Understand the consequences if the problem is not attended to*
3. *Understand how you can help*

*Ask the patient how they would prefer to manage the problem. Puts the onus on the patient and gives them control over their treatment plan.*

# EXAMPLES

EXAMPLE DIAGNOSIS:

- Generalised plaque induced gingivitis
- Incipient demineralised lesion on 36; adjacent to gingival margins

EXAMPLE TREATMENT OPTIONS:

- Patient education (always), educate on diagnosis and clinical findings ·
- OHI → separate to pnt education, specific to OH) ·
- Fluoride (specify product, why and where) ·
- Dietary advice ·
- Biofilm mechanical debridement → scale and clean

Ensure to have **justification** for each step in your treatment plan

# Sim Clinic

Notes:

- 3 sessions per week, each with a different tutor
- Semester 1= formative, semester 2 = summative
- Will be a chance to demonstrate knowledge gained in Minimal Intervention (MI) lecture series
    - This will include knowledge about how to perform specific restorations (site 1, site 2 (posterior and anterior), site 3, incisal fractures, cusp capping and cusp replacement) as well as on the three main dental materials (amalgam, GIC and CR)

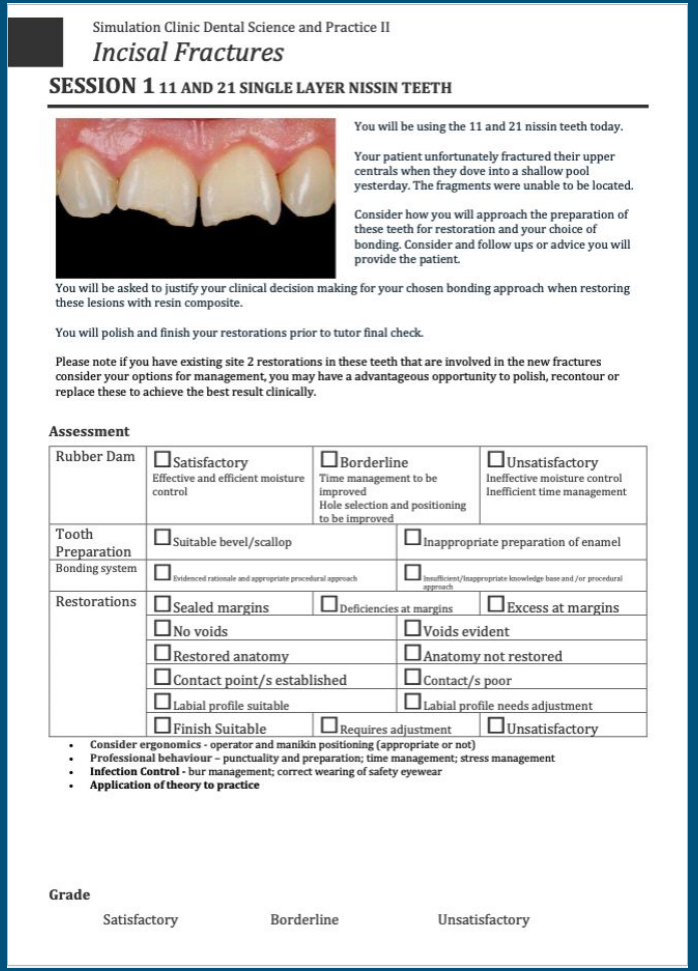
# Sim Clinic (Cont.)

Some More Advice:

- Arrive on time
- Consider pre flossing clamps in the dam prior to session - will save valuable time
- Cavity preps should be on the conservative side - you can always make them bigger if need be
- Ensure time spent waiting for tutor checks is not wasted, find something to occupy yourself during this time
- Try not to be disheartened if you perform lower than how you wished in sem 1 - need confidence heading into sem 2
- Priority is to achieve a ‘clinically satisfactory’ restoration - a pretty, yet non-functional restoration isn't worth as much!
- Consider use of a running sheet (for at least first few sessions) - will help you identify appropriate clinical rationale
- Dictate your self-assessments in a specific manner

# Sim Clinic (Cont.)

- A typical assessment sheet for a single session of formative sim clinic
- Section on restoration quality is much larger than section on tooth preparation - your time management should reflect this
- Sealed margins and no voids are a must, some tutors will also require contact points
- Summative assessment will also have good and excellent as grading options at the bottom
- Try not to rush to finish first; and if you do finish early- try to polish/ start a new restoration etc. Identify your weaknesses and practice them!



Simulation Clinic Dental Science and Practice II

*Incisal Fractures*

**SESSION 1** 11 AND 21 SINGLE LAYER NISSIN TEETH



You will be using the 11 and 21 nissin teeth today.

Your patient unfortunately fractured their upper centrals when they dove into a shallow pool yesterday. The fragments were unable to be located.

Consider how you will approach the preparation of these teeth for restoration and your choice of bonding. Consider and follow ups or advice you will provide the patient.

You will be asked to justify your clinical decision making for your chosen bonding approach when restoring these lesions with resin composite.

You will polish and finish your restorations prior to tutor final check.

Please note if you have existing site 2 restorations in these teeth that are involved in the new fractures consider your options for management, you may have a advantageous opportunity to polish, recontour or replace these to achieve the best result clinically.

**Assessment**

| | | | |
|---|---|---|---|
| Rubber Dam | ☐ Satisfactory<br>Effective and efficient moisture control | ☐ Borderline<br>Time management to be improved<br>Hole selection and positioning to be improved | ☐ Unsatisfactory<br>Ineffective moisture control<br>Inefficient time management |
| Tooth Preparation | ☐ Suitable bevel/scallop | ☐ Inappropriate preparation of enamel | |
| Bonding system | ☐ Evidenced rationale and appropriate procedural approach | ☐ Insufficient/Inappropriate knowledge base and /or procedural approach | |
| Restorations | ☐ Sealed margins | ☐ Deficiencies at margins | ☐ Excess at margins |
| | ☐ No voids | ☐ Voids evident | |
| | ☐ Restored anatomy | ☐ Anatomy not restored | |
| | ☐ Contact point/s established | ☐ Contact/s poor | |
| | ☐ Labial profile suitable | ☐ Labial profile needs adjustment | |
| | ☐ Finish Suitable | ☐ Requires adjustment | ☐ Unsatisfactory |

- **Consider ergonomics** - operator and manikin positioning (appropriate or not)
- **Professional behaviour** – punctuality and preparation; time management; stress management
- **Infection Control** - bur management; correct wearing of safety eyewear
- **Application of theory to practice**

**Grade**

Satisfactory Borderline Unsatisfactory

# Content - Semester 1

Topics:

Minimal Intervention (MI) + Dental Foundations
- Dental Anxiety
- Social Context of Dentistry
- Biology of Occlusion/Neuroanatomy
- Gingivitis & periodontitis*
- Endocrinology*
- Microbiology*

Development of Dental Structures
- Embryology
- Tooth Development
- Genetics

*Direct extensions of BDS1 content (other topics also utilise previous information however)

# Content - Semester 2

Topics:

Anatomy & Neuroanatomy

- Local anaesthetics
- Immunology* & Virology
- General Pathology
- Microbiology*
- Volunteer Patient Program (VPP)- mock patients roleplaying in certain tricky scenarios of the dental clinic
    - Talkative Pt
    - Anxious Pt
    - Complaining Pt
    - Giving LA to Pt (getting informed consent, peri-operative phase, post-op instructions)

*Direct extensions of BDS1 content (other topics also utilise previous information however)

Note: Let us know what topics you guys would like additional assistance with - these will become the primary focus of GILs in future

# ILA

- Similar in structure to BDS1: ILA Steps 1-4; ILA Introduction & ILA summary
- ILA topics are a **big focus** within the end of semester exams + clinical practice:

  - **ILA 2.1-** Type I diabetes
  - **ILA 2.2-** Cleft Lip + Palate
  - **ILA 2.3-** Amelogenesis Imperfecta/ Developmental defects
  - **ILA 2.4-** Menopause, Aging, Oral Pathology
  - **ILA 2.5-** Odontogenic Infection
  - **ILA 2.6-** Oral Cancer
  - **ILA 2.7-** Local Anaesthesia
  - **ILA 2.8-** Cross-cultural care & rheumatic fever

Tip: After each ILA session, write brief notes on each of the ILA questions → good for quick revision on topics before exams. Focus study on different pt types e.g. diabetic patient, patient undergoing menopause, pregnant patient, aging patient etc.

# ILA- EXAMPLE SUMMARY SHEET

## ILA 2.7 SUMMARY DOCUMENT

### KEY ANATOMICAL ISSUES

- The key anatomical area that needs to be considered during an IANB block is the **pterygomandibular space**.
- The pterygomandibular space has the following **borders** and **contents**:

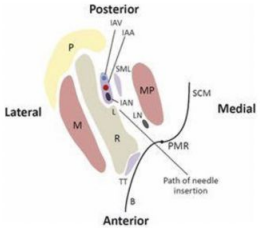
**Borders:**

1. *Medial and inferior:* Medial pterygoid muscle
2. *Lateral*: Medial surface of the mandibular ramus
3. *Superior:* lateral pterygoid muscle
4. *Posterior:* parotid gland
5. *Anterior:* Buccinator and superior constrictor muscle (which together form the fibrous junction, the pterygomandibular raphe).

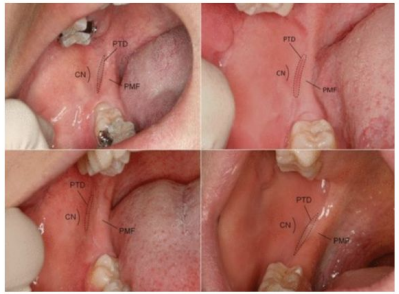
**Contents:**

1. Inferior Alveolar Nerve (IAN), Inferior alveolar artery and Inferior alveolar vein
2. Lingual Nerve
3. Nerve to Mylohyoid (which branches off the IAN before it enters the mandibular foramen; which is located on medial aspect of mandibular ramus)
4. Sphenomandibular ligament + Fascia (sheet of CT)

- **IANB:** is a technique involving the insertion of the needle through the pterygotemporal depression and into the pterygomandibular space, by piercing through the buccinator muscle (adjacent to the pterygomandibular raphe). The aim of this is to deposit the LA solution superior to the lingula and produce anaesthesia of the IAN before it enters the mandibular foramen.
- The **level of needle inserton** should be superior to the lingula; near the coronoid notch (Area of maximum concavity of ramus). This should be approximately 1cm above the mandibular occlusal plane → when the mouth is positioned at maximum mandibular opening.




  - The lingual nerve (posterior branch of the mandibular division of the trigemical nerve- V3) lies anterior and medial to the IAN → can also be anaesthetised during an IANB.
    - To do this: swing barrel of syringe toward the midline; and withdraw approximately half of the needle. Re-aspirate and deposit a portion of the remaining solution.




PTD: Pterygomandibular depression
CN: Coronoid Notch
PMF: Pterygomandibular fold

*Other considerations:*

Ensure to remain parallel to occlusal plane → otherwise may not be injecting superior to lingula and thus will not anaesthetise IAN before it enters mandibular foramen.

In obese pts → palpate coronoid notch and slide finger medially until a sharp piece of bone is felt (internal oblique ridge). Inject behind this.

### CAUSES OF FAILURE

- Could be due to poor operator technique or anatomical variation.
- If the ipsilateral (same side as injection) chin/lip is not anaesthetised → indicative of incorrect IANB technique
- If there is soft tissue anaesthesia of the chin/ lips, but not the teeth → indicative of anatomical variation

### PATIENT FACTORS

**Anatomical variations:**

| | |
|---|---|
| Accessory Innervation | - Nerve to mylohyoid often has motor function; but may also provide sensory function in some cases.<br>- If this nerve separates higher (than usual), it may be beyond the area of diffusion of a conventional md block. |
| Accessory Foramina | - May be a crossover of nerves between the L/R side; seen within the anterior teeth |
| Bifid Mandibular nerve | - Presence of a secondary branch of the inferior alveolar nerve, which may bifurcate before it enters the foramen → normal IANB technique may be insufficient in blocking conduction from both branches. |
| Landmarks | - May be anatomical variation in shape/ width/ length of the mandible. |

- **Anxiety**: Patients are more likely to experience pain due to a lowered pain threshold.
- Other patient related factors include **pathology**.
  - Inflammation: If there is inflammation or pathology within the area, there will be a decreased pH of the tissues

# Questions