WREB Local Anesthesia
Online Standardization
Grading Criteria
The following standardization slides are intended to familiarize you with the exam criteria and procedures necessary to serve as a Local Anesthesia Examiner. In addition, you must read the Policy and Candidate Guides and each of the Examiner Manual sections.

Should you have any questions, please contact the WREB office.
• Dental hygiene educators are not eligible to be a Patient for the examination.

• Patients cannot be shared for this examination.

• Must be 18 years or older.

• Must have right and left maxillary second molars and at least one premolar in each mandibular quadrant.

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Patient Acceptance Criteria

• Obtain written clearance from an appropriate healthcare provider if a Patient is pregnant. The medical clearance concern must be written on official letterhead.

• Obtain written clearance from healthcare provider if the Patient has had a heart attack, stoke, or cardiac surgery within the past six (6) months. The medical clearance concern must be written on official letterhead.

• No orofacial herpes at the vesicle or ulcerated vesicle stages or during the prodrome stage.

• No intraoral sores or puncture marks in any of the four (4) potential penetration sites.

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Patient Acceptance Criteria

• Have a systolic blood pressure reading of 159 or below and a diastolic blood pressure reading of 99 or below. A Patient with a systolic blood pressure reading between 160 and 180 or a diastolic blood pressure reading between 100 and 110 will only be accepted with written consent from the Patient’s physician or health care provider.

WREB does not allow a Patient with a systolic reading of greater than 180 or a diastolic reading of greater than 110. Preoperative blood pressure and pulse must be recorded on the Medical History/Patient Consent form and taken on the Patient no more than one hour prior to the scheduled clinical examination time.

• ASA I or II. ASA III status that does not alter dental hygiene care or pose a risk to the Candidate or Patient in a testing environment.
Candidate may submit one backup Patient without penalty if original/first submission is rejected for:

- Intraoral lesions
- Active Orofacial
- High blood pressure
There are two (2) categories of errors:

• **Critical (**)**
  – There are eight (8) *Critical* categories.
  – Receiving one (1) validated *Critical* error results in failure of the injection.

• **Less Critical**
  – There is one (1) *Less Critical* category.
  – Receiving three (3) validated *Less Critical* errors results in failure of the injection.
Critical Categories are noted on grade sheet with an asterisk *

1. *Medical History, Anesthetic & Syringe Selection
2. Syringe Preparation & Handling
3. *Penetration Site
4. *Angle & Depth
5. *Aspiration
6. *Amount & Rate
7. *Tissue Management
8. *Recapping
9. *Sharps Disposal
2. Syringe Preparation and Handling

- Incorrect Armamentarium
- Syringe Improperly Prepared
- Syringe in Patient’s Site

Receiving three (3) validated Less Critical errors in this category results in failure of the injection
*1. MEDICAL HISTORY, ANESTHETIC & SYRINGE SELECTION (IA and PSA)

• Contraindications - Medical History (Examples: blood pressure too high on second submission, landmark teeth missing)

• Long-acting anesthetics and high concentration vasoconstrictors are not allowed (i.e. bupivacaine and solutions with 1:50,000 epinephrine)

• Syringe incorrect (non-threaded or self aspirating syringes)
Preoperative blood pressure and pulse must be recorded on the Medical History/Patient Consent form and taken on the Patient no more than one hour prior to the scheduled clinical examination time.
Preoperative blood pressure and pulse must be taken and recorded on the Patient’s Medical History/Patient Consent form *no more than one hour prior* to the scheduled clinical examination time.

<table>
<thead>
<tr>
<th>BLOOD PRESSURE (and/or)</th>
<th>WREB Action</th>
</tr>
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<tbody>
<tr>
<td><strong>Systolic</strong></td>
<td><strong>Diastolic</strong></td>
</tr>
<tr>
<td>Normal</td>
<td>&lt; 120</td>
</tr>
<tr>
<td>Pre-Hypertensive</td>
<td>120-139</td>
</tr>
<tr>
<td>Stage 1 Hypertensive</td>
<td>140-159</td>
</tr>
<tr>
<td>Stage 2 Hypertensive</td>
<td>160-180</td>
</tr>
<tr>
<td>HYPERTENSIVE CRISIS (Emergency care needed)</td>
<td>&gt;180</td>
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</tbody>
</table>
2. SYRINGE PREPARATION & HANDLING (IA and PSA)

• *Incorrect armamentarium*
  – Appropriate protective eyewear for Candidate and Patient
  – Non-locking forceps or hemostat
  – Expired anesthetic

• *Syringe improperly prepared*
  – Harpoon not engaged
  – Large bubbles are not expelled from cartridge prior to injection
  – Expelled solution is more than the width of a stopper

• *Syringe Handling*
  – Syringe in Patient’s direct line of vision

• Needle or drug selection contradicts *Anesthesia Information Sheet*
Correct Armamentarium

Locking Forceps on Tray
Correct Armamentarium

Locking Hemostat on Tray
Incorrect Armamentarium

No Locking Forceps on Tray
Less Critical Error

Syringe Improperly Prepared: Harpoon Not Engaged
Syringe Preparation and Handling: Syringe in Patient’s direct line of vision
*3. PENETRATION SITE (IA and PSA)

- **Needle Contamination**
  - Needle touches any extra oral surface, facial anatomy or intra oral object prior to tissue penetration (tray, gauze, glove, bib, etc.).

- **Three Penetrations Allowed**
  - Optimum angle and depth are not reached in three (3) penetrations.
  - If the third penetration attempt results in a first positive aspiration, a fourth penetration is permitted.

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Critical Error

Contaminated Needle: Needle Touching Glove
Critical Errors – Penetration Site

*3. PENETRATION SITE (IA)

- **Too superior**
  - 10 mm too superior
- **Too inferior**
  - 5 mm inferior
- **Too medial**
  - 5 mm too medial
- **Too lateral**
  - 5 mm too lateral

PENETRATION SITE (PSA)

- **Too anterior**
  - Needle inserted above the 1\textsuperscript{st} molar or anterior
- **Too posterior**
  - Needle inserted distal to a 3\textsuperscript{rd} molar or in that location if 3\textsuperscript{rd} molar is missing
- **Not in mucobuccal fold**
*4. ANGLE (IA)

- **Barrel too distal**
  - Over the 2nd molar on the contralateral side
- **Barrel too mesial**
  - Mesial to the cuspid
- **Angle too High**
  - 10 degrees or more above the occlusal plane
- **Angle too Low**
  - 10 degrees or more below the occlusal plane

**ANGLE (PSA)**

- **Needle not at 45 degree angle toward midline**
  - ( +/- 20 degrees)
- **Needle not at 45 degree angle to occlusal plane**
  - ( +/- 20 degrees)
Common length of needles

32 mm

25 mm
*4. Depth (IA)

Needle insertion is:

- **Too Shallow**
  - IA: 9 mm or less in tissue

- **Too Deep**
  - IA: Hub touching tissue

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Depth (PSA)

Needle insertion is:

- **Too Shallow**
  - PSA: 6 mm or less in tissue

- **Too Deep**
  - PSA: Long needle hubbed or within 8 mm of the hub. Short needle hub touching tissue
Critical Errors - Depth

Angle and Depth: Too Deep
*5. **ASPIRATION (IA and PSA)**

*Large window not visible*
- Observed when the aspiration is declared to be negative by Candidate but before the Candidate begins to deposit.

*No Aspiration Observed*
- No movement of the stopper or harpoon is not engaged when aspiration is declared to be negative.

*No Movement of the stopper*

*Harpoon was not engaged in the stopper at time of the aspiration*

*Continued on next slide*
* 5. ASPIRATION (IA and PSA)

• Improper Handling of Positive Aspiration
  – Candidate fails to reposition the needle & re-aspirate (after a small amount of blood is observed)
  – Candidate can not determine if the aspiration is negative/positive and chooses to continue
  – Candidate fails to withdraw and replace the cartridge when a positive aspiration causes the cartridge to rapidly fill with blood.
Critical Error

Aspiration: Large Window Not Visible
*6. AMOUNT & RATE (IA and PSA)

- **Too much anesthetic before aspiration**
  - More than one-fourth of the cartridge deposited prior to reaching the deposition site and before aspiration.

- **Too fast**
  - Rate of deposition is less than twelve (12) seconds for two stopper widths of anesthetic.
7. **TISSUE MANAGEMENT (IA and PSA)**

- **Excessive bending/bowing of the needle**
  - The needle is visibly bent upon removal from tissue.
  - The degree of the bowing would result in excessive submucosal soft tissue injury.
  - The safety and well being of the Patient is not taken into consideration.

- **Tearing/laceration of tissue**
  - Visible laceration of tissue upon approach or withdrawal of the needle with or without bleeding.
Critical Error

Tissue Management: Bowing of Needle
*8. **Recapping (IA and PSA)**

- *Improper Recapping*
  - Any two handed re-capping method
  - Hand anywhere on safety shield during INITIAL recapping
  - Holding needle cap with hand or hemostat during recapping
Acceptable recapping devices
Once the needle is safely placed inside the cap the Candidate may use their other hand to secure the cap
Improper Recapping

Two handed recapping technique
Although the hand is positioned behind the card it is unprotected.
Improper Recapping

- Holding the needle cap with the following:
  - Unprotected hand
  - Hemostat
  - Locking forceps
- Results in failure of the injection
*9 Sharps Disposal - Needles and cartridges must be disposed of in a designated sharps container (follow individual exam site protocol regarding waste disposal). Examiners are required to review the proper disposal of sharps at each assigned exam site. Improper disposal results in failure of both injections.
The following are "Stop and Hold" reasons
Stop and Hold Reasons

Either Examiner may interrupt and/or stop the Candidate/procedure any time the health, safety, or welfare of the Patient is jeopardized or a critical error is noted.

**Justification for stopping a Candidate (critical errors):**

- Inappropriate anesthetic
- Contaminated needle
- Three unsuccessful penetrations without reaching optimum depth and angle
- Small window is toward the operator during aspiration
- No backward movement of the stopper prior to deposition
- Harpoon not engaged and the Candidate elects to deposit anesthetic solution
- Improper handling of a positive aspiration
- Deposition rate too rapid
- Tissue Management – Tissue Trauma
- Improper recapping
- Improper sharps disposal
Congratulations!

You have completed the **WREB Local Anesthesia Standardization Grading Criteria** presentation

If you like, take a break or continue with the **WREB Local Anesthesia Standardization IA & PSA Parameters** presentation