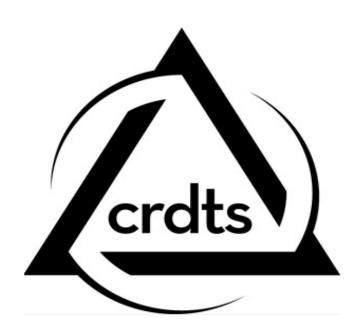
2026 LOCAL ANESTHESIA CANDIDATE MANUAL



A National Dental Hygiene Clinical Examination

As Administered by:

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Please read this candidate manual carefully and bring it with you to the examination.

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Introduction

This manual has been designed to assist dental hygiene candidates in their preparation for the CRDTS Local Anesthesia examination. The general directives and information for the conduct of the examination are outlined below.

Mission Statement: To provide the dental examination community with test construction and administrative standardization for a national, uniform local anesthesia licensure examination. The examination will demonstrate integrity and fairness to assist state boards with their mission to protect the health, safety, and welfare of the public by assuring that only competent and qualified individuals are allowed to administer local anesthetic.

Purpose: The purpose of this examination is to assess the candidate's professional knowledge, skills, abilities, and judgment (KSAJ's) as applied in the clinical technique of local anesthetic administration and procedures.

CRDTS: The Central Regional Dental Testing Service, Inc. (hereinafter abbreviated CRDTS) is an independent testing agency which develops and administers clinical competency examinations in dentistry and dental hygiene on behalf of its member and participating states. Regional testing agencies, such as CRDTS, do not have the authority to license individuals or to implement policy that goes beyond the laws of its member states. Regional testing agencies should not be confused with state boards of dentistry.

CRDTS Member States: See portability map on our website at www.crdts.org.

Jurisdictional Authority: State Boards of Dentistry are established by state law as the regulatory agencies of the dental profession, accountable to the state legislature and charged with protection of the public. Although all state laws are different, there are commonalities in their responsibilities to regulate the profession through licensure requirements, to interpret and enforce the dental practice act, to discipline those licensees who practice unethically or illegally, and to assess the competence of applicants for licensure in their jurisdictions through theoretical and clinical examinations. To evaluate competence, the CRDTS' member state boards have joined together to develop and administer skill-based examinations in dentistry and dental hygiene that are fair, objective, and meet established principles of measurement for clinical evaluation.

Candidate Ethical Responsibilities: Licensure as a dental health professional and the public trust, respect, and status that accompanies it, is both a privilege and a responsibility. Implicit in a state board's charge to protect the public is the responsibility to ensure that practitioners are not only competent, but also ethical. In addition to the American Dental Hygienists' Association's *Code of Ethics*, there are codes of professional conduct within state laws, and the requirements of many state boards for periodic continuing education courses in ethics for maintenance and renewal of licenses.

During the examination process, there are policies, rules and standards of conduct that are part of the candidate's responsibility; the candidate is expected to read the entire Candidate Manual and comply with all the rules and requirements.

The dental hygiene practitioner is entrusted with the oral health and welfare of a patient, and it is imperative that such trust be respected by candidates and that services to the patient's needs and well-being are always put first. In every step of the examination process, CRDTS has established policy and examination protocol to ensure that the welfare of patients is safeguarded.

- CRDTS will provide a Treatment Consent Form that documents the treatment (administration of local anesthetic) the patient will receive and the fact that the candidate is not a licensed hygienist. This consent form must be executed before the patient can be accepted.
- CRDTS will provide a Patient Health History Screening Form, to aid in screening for systemic
 conditions or medical considerations that might put the patient at risk during the examination
 or require antibiotic prophylaxis/premedication for the patient to participate. The health
 history must be completed, and appropriate precautions taken before the patient can be
 accepted.
- If during treatment a medical concern should arise for the patient, such as profuse bleeding
 or a lesion which would require medical follow-up, CRDTS will complete a Dental Hygiene
 Follow-up Form to document what additional treatment is necessary, who will provide it, and
 who will be financially responsible. The candidate, Testing Site Coordinator, and patient (all
 parties) will be informed and aware of the situation and the "follow-up" plan if such care
 should be needed.
- When patients are checked-in, examiners will review the Health History Screening Form and the Local Anesthetic Treatment Consent Form to see if they meet the criteria. Throughout the examination, a proctor (videographer) will be monitoring the procedures to ensure patients remain safe.

The CRDTS Local Anesthesia Examination addresses the ethical concerns raised about the use of patients in clinical examinations. It is the responsibility of candidates to solicit patient participation in an ethical manner. The candidate should fully inform a prospective patient about the purpose, process, and importance of a board examination, including the time involved. Copies of the Health History Screening Form and Local Anesthesia Treatment Consent Form can be printed from the forms in the back of this manual or downloaded from CRDTS website at www.crdts.org. These forms will be used to screen a patient's health condition and plan an appropriate response to any medical issues that may impact the patient's well-being during and after the examination. In the process of soliciting and screening patients, candidates should remain in compliance with ethical considerations and refrain from the following:

- Reimbursements between candidates and patients more than that which would be considered reasonable for remuneration for travel, lodging, meals, or loss of hourly wages.
- Remuneration to other licensure applicants or dental practitioners for acquiring patients.

- Utilizing patient brokering companies.
- Allowing themselves to be "extorted" by individuals who agree to participate in the examination and then refuse to come at the appointed time unless they are paid a fee.

Examiners: Candidates will be evaluated by examiners from the jurisdictions which comprise CRDTS. All examiners are trained and calibrated to CRDTS exam criteria prior to each examination. In addition, there may be observers at CRDTS exams such as: faculty members from other schools, new CRDTS' examiners, or examiners from other states. Such observers are authorized to participate in calibration and monitor all portions of the examination; however, they do not assign grades or participate in the grading process.

Test Development: In all aspects of test development, administrative protocol, and evaluation methodologies, CRDTS strives to be aligned with and guided by:

- Standards for Educational and Psychological Testing, published jointly by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education.
- Annual Statistical Analysis of each section of the exam along with summary statistics of candidate performance by school of graduation.
- Statistical profiles for examiners' self-assessment.
- Technical Reports by measurement specialists.
- Periodic Occupational Analysis.

The Local Anesthesia Examination is developed and revised by the CRDTS Dental Hygiene Examination Review Committee (HERC). HERC is comprised of representatives from CRDTS' Member States, as well as a dental hygiene faculty representative and content expert consultants. With both practitioners and educators involved, the Committee has considerable content expertise from which to draw. The Committee also relies on practice surveys, current curricula, and standards of competency to assure that the content and protocol of the examination is current and relevant to practice.

Application Information & Requirements

Qualified candidates may apply to take the examination by applying online at www.crdts.org. Once an application is completed, it is considered a contract with CRDTS. Additional portions of the application can be uploaded online. Detailed information regarding required documents, fees, test sites, and examination dates/deadlines are outlined on the CRDTS website and in this manual. A fully executed application, complete with appropriate documentation and fee is required to take the examination.

Please read the entire application form before submitting any information. Be accurate and complete. If directions are not followed, the application may not be accepted.

The following items must be provided:

Confirmation of Training to Administer Local Anesthetic

- Anticipated 2026 Accredited Graduates: Candidates who have not yet graduated must submit proof of training verifying appropriate educational and clinical training. For programs with multiple applicants, Program Directors may email one blanket "Letter of Certification" from the Program Director's school email with a list of all eligible students verifying training to administer local anesthetics.
- Accredited Graduates: Candidates who have graduated from an accredited dental hygiene
 program before the present year of testing must furnish a certificate or letter from their
 school or course on official letterhead verifying appropriate educational and clinical training
 to administer local anesthetic at the examination site.

Examination Fees: The appropriate examination fee must be paid at the time of application: \$445 for both examinations or \$150 for the written exam or \$295 for the clinical exam. Payment must be for the exact amount and can be paid online via VISA, Mastercard, or by cashier's check or money order with the applicant's 10-Digit CRDTS ID number written in the lower left-hand corner. Personal checks are not accepted.

Testing Site Selection: While every effort will be made to grant applicants their first choice in testing sites, it is not always possible to do so. Consequently, candidates are asked to enter three testing site choices.

Social Security Number and CRDTS ID Number: Candidates must enter their US government-issued social security number when applying online. Candidates without a social security number must contact CRDTS Central Office. The social security number will remain a part of the candidate's secure record. Each candidate will be assigned a 10-digit CRDTS ID number. The ID number will appear on candidate examination forms and will become the Username for login to the CRDTS website. When logged in, candidates will be able to manage their information and view examination results. The 10-digit CRDTS ID number will link the results to the candidate's permanent record.

Photograph: Candidates must submit a digital photograph that is recent, square, and of passport quality. The photograph may be in black and white or color, JPG/JPEG, GIF, or PNG formats and must have minimal resolution of 200x200 and maximum resolution of 500x500.

Signature of Candidates: The candidate will sign the online application electronically. The electronic signature is legally binding and has the full validity and meaning as the applicant's handwritten signature. With the signature the applicant acknowledges that they have read and understand the application and the CRDTS Local Anesthesia Candidate Manual and agrees to abide by all terms and conditions contained therein.

Other General Application Information and Policies:

Professional Liability Insurance: Insurance in the amount of 1,000,000/3,000,000 is required. The Medical Protective Company of Fort Wayne, IN, in cooperation with CRDTS, will provide complimentary professional liability coverage in the required amount for all candidates taking this examination. No action or payment is required by candidates.

Application Deadlines: The application deadline for all exams is approximately 45 days before the date of the examination. Applications and all required documentation must be received by CRDTS Central Office on or before the published deadline date. It should be noted that for both the application and the required documentation, the testing agency uses the 'date of receipt' (not the 'date of postmark') and assumes no responsibility for insufficient postage or delays caused by the post office or other delivery agencies. Applications will be processed on a first-come, first-served basis.

Application Confirmation: Candidates will receive an email acknowledging receipt of their application.

Administrative Fee: An administrative fee of \$25.00 is included in the examination fee. This administrative fee is non-refundable and deducted from all returned application fees.

Incomplete Application: It is the candidate's responsibility to ensure that all application requirements are met and that all required items are received in CRDTS Central Office on or before the published deadline date. All applications with incorrect or missing information, documentation or fees will be assessed a \$25.00 fee and held until the missing item(s) and/or fees are received at CRDTS Central Office. Once an exam site deadline has passed, no additional applications will be processed, and forfeiture of fees may apply.

Exam Testing Site, Date, & Time Confirmation: Candidates will receive an email approximately 10 days after the deadline date for one of their three testing site choices submitted at the time of application. The email will include the following information, attachments, and/or links:

- Confirmation of the assigned exam site, exam date, exam time and one- or two-digit candidate number. Please note the one- or two-digit candidate number is not the ten-digit CRDTS ID number previously described.
- A letter from the school serving as a testing site, providing general information about their facilities, policies and "Testing Site Fee" with a deadline for payment. Most testing sites charge a site fee for use of their clinic facilities, supplies, disposables, etc. Testing sites set their own fee and deadline for advance payment. The "Testing Site Fee" must be remitted to the school, not to CRDTS. The site letter may also include additional information regarding nearby hotels and other information and/or forms which are required by the testing site.

Candidates taking the examination at a school other than their own are encouraged to visit the site prior to the time of the examination. It is the responsibility of the candidate to plan with the school for the provision of equipment if required (i.e.: extra syringe) and to ascertain whether the appropriate equipment is available.

Exam Assignment & Schedule Changes: Examination assignments (day and time of testing) are considered final when issued and emailed to the candidate. School personnel do not have the authority to accept a candidate for examination at their site or to make assignment changes. Such arrangements made between school personnel and the candidate may preclude the candidate from being admitted to the examination, as well as forfeiture of fee. If unusual circumstances warrant a schedule change, the CRDTS Proctor is the only authorized individual who may consider/authorize approval for such a request.

Disqualification: After applying, a candidate may be disqualified to sit for the exam by their Program Director (or designated school official) for any reason within their discretion. Notification of disqualification by the Program Director must be sent to and received at CRDTS Central Office in writing, via email, prior to the start date of the candidate's scheduled examination.

Depending on the timing of the notice, CRDTS refund policy will apply. Candidates who are disqualified shall have access to the examination upon graduation and presentation of diploma or in a subsequent academic year in which the Program Director (or designated school official) has appropriately certified the candidate. A new application must be submitted with all required documentation and the appropriate fee.

Fee Deferral: Under extenuating circumstances, the examination fee may be deferred to a later examination. Requests will be considered on an individual basis when received before the candidate's scheduled exam start date. Requests must be made in writing via email to CRDTS and must include original documentation in support of the request. Notification will be sent immediately after a determination is made. Should a fee deferral be granted, the terms and conditions for the future examination will be included. Requests for fee deferral on or after the date of the scheduled examination will not be considered.

Fee Refunds: Notification of cancellation must be made in writing via email and submitted to the CRDTS Central Office. A refund (administrative fee deducted) will be made if notification is submitted at least 30 days prior to the candidate's scheduled exam start date. A 50% refund (administrative fee deducted) will be made if notification is submitted at least six business days prior to the candidate's scheduled exam start date. After that time, any cancellations will result in forfeiture of the entire examination fee. In addition, failure to appear for the exam will result in a forfeiture of the entire examination fee. This policy applies to all cancellations, regardless of reason.

Reporting of Scores

Passing Score: Only State Boards of Dentistry are legally authorized to determine standards of competence for licensure in their respective jurisdictions. However, in developing the local anesthesia examination, CRDTS has recommended a score of '75' to demonstrate sufficient competence for the WRITTEN portion of the examination and a score of 'Pass' to demonstrate sufficient competence for the CLINICAL portion of the examination and participating State Boards of Dentistry have agreed to accept that standard. To achieve "CRDTS Local Anesthesia status," candidates must successfully complete the Local Anesthesia examinations with a score of '75' or more on the WRITTEN examination and/or a score of 'Pass' on the CLINICAL examination.

Release of Scores to Candidates: Scores will be released to candidates online (via their private CRDTS profile) on the day of the exam. To access scores online, candidates must login to their personal profile using their assigned 10-digit CRDTS ID number and candidate-created password. The Candidates' tab will allow access to scores. In addition, CRDTS will mail candidates one certified copy of their final examination results in a sealed envelope approximately 3-4 weeks after their examination. Candidates should mail the sealed, certified copy directly to the licensing state of their choice. DO NOT OPEN the sealed envelope. For security and confidentiality reasons, no official scores can be released by telephone or email.

Release of Scores to State Boards: A Master Grade Report, listing all scores, will be automatically distributed to all CRDTS' member state boards, as well as those non-member states which recognize CRDTS' results and have requested routine receipt of examination results. Each state board has its own requirements regarding proof of testing to grant licensure. For state boards that do not accept the CRDTS Master Grade Report or the official results letter with watermark as proof of testing, candidates may request a duplicate score report to be sent to a state board by submitting an online "Score Request" (See Duplicate Score Request Instructions).

Release of Scores to Dental Hygiene Schools: Scores will be reported to the dental hygiene school of graduation if the candidate is a current graduate.

Duplicate Score Request: Scores will be sent upon receipt of a request made online via the CRDTS website. The "Score Request" link can be found on the CRDTS Homepage. Such requests must include the following:

- Candidate's name, mailing address and telephone number.
- Candidate's name at the time of examination.
- The year in which the CRDTS clinical examination was completed.
- Address to where the results are to be sent.
- \$50 for up to three score reports.

If the candidate wishes to have the Candidate Manual sent along with the scores to provide an explanation of scores, an additional \$25 will be assessed. There is an additional fee of \$4 to have the scores notarized. A credit card must be used when requesting a Score Report online.

Policy for Reexamination, Remediation, and On-Site Retakes

Candidates who are unsuccessful can retest **on-site** or retest at a **future exam site**. In either case, candidates must pay the exam retake fee: \$445 for both exams, \$150 for the written only, \$295 for the clinical only. Unsuccessful candidates receive an online critique listing the reason(s) for which they were unsuccessful. Note: Candidates who are unsuccessful with their first CRDTS written and/or clinical local anesthesia exam because of unprofessional conduct are NOT eligible for the on-site retake option.

Clinical On-site Exam: Retakes are offered immediately upon completion of the first attempt groups. Candidates must pay the retake fee prior to retesting. Only the unsuccessful injection(s) need(s) to be retaken.

Clinical Future Exam: Candidates who retest at a future exam site must submit a new application, pay the appropriate examination fee, and fulfill current examination requirements. Only the unsuccessful injection(s) need(s) to be retaken.

Written On-Site retakes are offered on a subsequent day (PROVIDING the site can accommodate a retest schedule) to allow time for study between attempts. Candidates wishing to retake the written exam must pay the retake fee and notify the CRDTS Proctor of their intent to retake within an hour after receiving their unsuccessful score. Unsuccessful candidates are encouraged to study the areas of deficiency provided in their critique prior to attempting the exam again.

Candidates are permitted to apply for only one examination at a time and may not submit another application until after the results of the prior examination have been distributed.

After three unsuccessful attempts of either examination, CRDTS requires that the candidate submit documentation from a state which accepts the results of the CRDTS examination, verifying that the candidate has completed remediation requirements for that state and that the state will accept the results of the candidate's reexamination with CRDTS.

Note: All exam attempts (e.g., initial, on-site retake, and future retakes) are reported to state boards and may affect the state's reexamination remediation requirements. Candidates should carefully consider whether the on-site option is in their best interest.

Policy for Testing Candidates with Disabilities

Any candidate with a documented physical and/or learning disability that impairs sensory, physical, or speaking skills which require a reasonable deviation from the normal administration of the examination may be accommodated. All reasonable efforts will be used to administer the examination in a place and manner accessible to people with disabilities or an attempt will be made to offer alternative accessible arrangements for such individuals. Efforts will be made to ensure that the examination results accurately reflect the individual's impaired sensory, physical, or speaking skills, except where those skills are factors the examination intends to measure. Also, attempts will be made to provide appropriate auxiliary aids for such people with impaired sensory, physical, or speaking skills unless providing such auxiliary aids would fundamentally alter the measurement of the skills or knowledge the examination is intended to evaluate or would result in undue burden.

Candidates seeking modifications or auxiliary aid, must note their request on the CRDTS online application, under "Additional Considerations." This allows CRDTS to ensure that an auxiliary aid or other requested modification exists and can be provided. Please note the following:

- Requests received after the registration deadline or retroactive requests will not be considered.
- Documentation of the need for the auxiliary aid or modification must be provided. If the candidate is a student in an accredited school, a letter from a school official fulfills this requirement. Otherwise, a letter from the appropriate health care professional is required.
- The candidate must make known in their request the exact auxiliary aids or modifications required and indicate the exact portion(s) of the examination for which such auxiliary aid or modification will be needed.

In providing such auxiliary aids or modifications, the testing agency reserves the ultimate discretion to choose between effective auxiliary aids or modifications and reserves the right to maintain the security of the examination.

All information obtained regarding any physical and/or learning disability of a candidate will be kept confidential with the following exceptions:

- Authorized individuals administering the examination may be informed regarding any auxiliary aid or modification.
- First aid and safety personnel at the test site may be informed if the disability may require emergency treatment.

Professional Conduct

Dishonesty Clause: Candidates failed for dishonesty shall be denied reexamination for one full year from the time of the infraction. Additionally, all State Boards will be notified of the situation. In some states, candidates failed for dishonesty may be permanently ineligible for licensure. Therefore, candidates should address these matters with the state(s) where they desire licensure prior to retaking the examination.

As a participant in an examination to assess professional competency, each candidate is expected to maintain professional standards. The candidate's conduct and treatment standards will be observed during the examination and failure to maintain appropriate conduct and/or standards may result in dismissal from the exam.

Each candidate will be expected to conduct himself/herself in an ethical, professional manner and maintain a professional appearance at all times. Candidates are prohibited from using any study or reference materials during the examination other than the CRDTS Candidate Manual and forms. Any substantiated evidence of dishonesty, such as collusion, use of unauthorized assistance or intentional misrepresentation during registration, pre-examination or during the examination shall automatically result in no points awarded and dismissal from the exam. In addition, the candidate will forfeit all examination fees for the current examination.

Some examples of unprofessional conduct that would result in failure of the examination:

- Falsification or intentional misrepresentation of application requirements.
- Cheating.
- Any candidate demonstrating complete disregard for the oral structures, welfare of the patient and/or complete lack of skill and dexterity to perform the required procedures.
- Misappropriation or thievery of equipment during the examination.
- Alteration of examination records.
- Using unauthorized equipment at any time during the examination process.
- Failure to follow time limits and/or complete the examination within the assigned time.
- Administering anesthetics without proper authorization and/or supervision.
- Receiving assistance from another practitioner including but not limited to; another candidate, patient, hygienist, dentist, faculty, school representative(s), etc.
- Failure to recognize or respond to systemic conditions that potentially jeopardize the health of the patient and/or total disregard for patient welfare, comfort, and safety.
- Unprofessional, rude, abusive, uncooperative, or disruptive behavior to other candidates, patients and/or exam personnel.
- Noncompliance with anonymity requirements.
- Unauthorized use of cellular telephones or any electronic equipment or the taking of photographs in patient care areas by the candidate or a patient during any part of the examination.

Local Anesthesia Examination Content and Scoring Overview

The local anesthesia examination has TWO individual components, a written exam and a clinical exam. States differ in what they require for licensure, with some requiring both exams and some requiring only one (typically the written) exam. It is up to the candidate to ascertain what is needed in the state in which they wish to obtain licensure/certification. For candidates who require both the written and clinical exams, they may take them in any order they prefer (i.e.: there is no requirement to take and/or successfully complete one part of the exam before the other). Candidates who require both exams must pass both the written and clinical examination within twelve (12) months after the initial attempt of either part. The examinations are an evaluation of specific local anesthesia knowledge and clinical technique, as well as the candidate's compliance with professional standards

during the examinations. The following is a summary of the specific content, criteria and scoring associated with the examination.

| Written LA Examination | Scorable Items x | Points scored per Item = | Max Points |
|---|---------------------|--------------------------|------------|
| Case Based Questions | | | |
| 40 case-based, multiple-choice questions | 40 | 1 | 40 |
| Multiple Choice Questions | | | |
| 20 multiple choice questions | 20 | 1 | 20 |
| Beta Test Questions and Cases | varies | 0 | |
| TOTAL EXAM POINTS/ MAX SCORE | | | 60 |
| (Each question has only 1 correct answer) | | | OU |

Passing score: 75% = 45/60 questions answered correctly

Time Limit: 2 hours maximum is allowed for the written examination

Cases, Categories and Topics covered:

- Pre-Anesthetic Patient Assessment
- Head, Neck, Oral, and Neuroanatomy
- Pharmacology and Physiology
- Delivery Technique
- Prevention, Recognition, and Management of Complications

The written LA examination is administered by CRDTS' proctors at dental hygiene schools. Candidates take the examination in a classroom using CRDTS' secure tablets.

Clinical LA Examination The candidate must successfully, safely, and competently administer: One (1) posterior superior alveolar (PSA) injection One (1) inferior alveolar (IA) injection Successful completion of BOTH injections is required to Pass the clinical examination The clinical examination is Pass/Fail based on the scoring criteria in this manual EXAM SCORE Pass/Fail

Examination Scoring System

Scoring for the written examination is described in the scoring chart listed previously.

Scoring for the clinical examination utilizes a Pass/Fail criterion-based grading system to differentiate between acceptable and unacceptable performance. Criteria have been established for each of the two required injections. CRDTS on-site proctors and three off-site examiners independently evaluate

each injection and apply the criteria in assessing performance. Any scorable item that is confirmed as a Critically Deficient (DEF) error by CRDTS proctors or by at least two independent examiners will result in failure of the Local Anesthesia Examination even if all other rated criteria and scorable items are successfully completed.

Satisfactory Performance and Critically Deficient Errors

SAT: (Satisfactory) Techniques that are of acceptable to ideal quality, demonstrating competence in clinical judgment, knowledge, and skill, to include slight deviations from ideal which will not lead to injury or jeopardize overall patient safety.

DEF: (Critically deficient) Any actions or techniques that could lead to patient injury and/or may jeopardize the overall safety of the patient. Such an error demonstrates unacceptable skill, knowledge, or judgment of the local anesthetic procedure.

Exam Time Schedule Overview

Candidates will be informed of their examination date and time for both the written and clinical portions of the examination approximately three weeks in advance of the examination and need only report to the school on this date and time.

The written examination will begin at a designated time and candidates will have up to two hours to complete the examination.

The clinical examination will be conducted with preassigned and staggered start times for each group of candidates. Candidates will be allowed time to seat their patient, set up their unit and familiarize themselves with the CRDTS-provided, head-mounted, action-camera. When the candidate and proctors are ready, the candidate will begin the examination. Given the variability of clinical scenarios (positive aspirations, needle change time, etc.) it is not uncommon to run slightly ahead or slightly behind schedule.

General Directives and Information (listed in alphabetical order)

Action Cameras – CRDTS will provide and utilize two action cameras to film each candidate's clinical performance. One camera will be mounted on a head strap fitted to the candidate's head. Candidates with long hair are asked to secure the hair in a low ponytail rather than high ponytail or bun so the camera head strap can fit securely without discomfort. The other camera will be mounted on a monopod just outside the candidate's field of operation.

Anonymity - The anonymous testing procedures for the examination shall exclude the possibility that examiners who are involved with the grading of the examination may know, learn of, or establish the identity of a candidate, or relate or connect the patient or work to be graded to a particular candidate. The candidate's face, name and school information will not be filmed and will not appear on any examination forms or materials. CRDTS examiners will be physically isolated from the candidates and will conduct their evaluations based on film footage.

Approved Communication - All approved communication must be in English. Candidates may communicate with their patient in another language but communication between candidates and CRDTS Examination Proctors must be in English.

Assistants (Chairside) - Candidates are NOT allowed to use chairside assistants.

Attire (Clinic) - Candidates must wear CDC and OSHA mandated operating attire, and there must be no personal identification on clinic attire. No bare arms, legs or open-toed shoes are allowed in the clinic areas. Lab coats, lab jackets, and/or long-sleeved protective garments are all acceptable. Color and style are not restricted.

Electronic Equipment - There will be no unauthorized use of phones or any electronic equipment or the taking of photographs or videos in patient care areas by candidates or patients during any part of the examination.

Equipment Failure - In case of equipment failure the CRDTS Proctor must be notified immediately so the malfunction may be corrected.

Equipment: Use/Misappropriation/Damage - No equipment, instruments or materials shall be removed from the examination site without written permission of the owner. Nonpayment of fees for rental of space or equipment will be treated as misappropriation of equipment.

Eyewear - Candidates are responsible for providing protective eyewear for their patients. Candidates may wear loupes, goggles or face shields for the exam as long as there is no interference with the head mounted camera.

Evaluation - Each candidate's performance will be evaluated by 3 independent examiners.

Examination Materials - CRDTS examination materials distributed by the testing agency may NOT be removed from the exam site, nor may the forms be reviewed by unauthorized personnel. All required forms and records must be turned into the CRDTS Proctor before the examination is considered complete.

Extraneous Study Materials - Only this Candidate Manual and approved examination forms may be brought into the candidate's cubicle. No textbooks or other study materials are permitted in the candidate's cubicle at any time.

Health History - A Health History Form must be completed for all patients. The CRDTS Health History Form is included in this manual (copies are acceptable) and/or can be downloaded from the CRDTS website.

Identification Picture Badges - Candidate ID picture badges will be distributed prior to the examination and should remain with the candidate until collected by the proctor.

Infection Control Standards - Candidates must follow the most current recommended infection control procedures as published by the CDC and OSHA and must be consistent with the policies of the testing site. The operatory and/or operating field must remain clean and sanitary in appearance.

Instruments and Required Armamentarium for the Clinical Examination

CRDTS will provide each candidate with the needles for the examination. Candidates must use these provided needles. (Note: If schools wish to practice with similar needles, pictures and manufacturer information are provided on the checklist of exam materials page of this manual.)

- Short (~20 mm) 27-gauge (yellow cap) needles with plastic hub
- Long (~32 mm) 25-gauge (red cap) needles with plastic hub

Testing Sites will provide each candidate with the following:

- Gloves and masks
- Operatory asepsis supplies and disposables to include surface disinfectants, surface barriers, headrest covers, tray covers, etc.
- Clinic supplies to include cotton swabs, gauze, saliva ejectors and air/water syringe tips
- Candidates can bring their own supplies as listed above if they feel more comfortable using a specific brand or type of product

Candidates must provide/bring with them to the examination the following: (Note: At SOME sites, SOME of the following materials are provided – please read the site letter carefully to know if your site provides these items.)

- Lab coat/lab jacket/long sleeved protective garment, or disposable gown
- Protective eyewear for the patient
- Loupes, goggles or face shield for themselves
 - o As long as there is no interference with the head mounted camera
- Blood pressure cuff (Manual/Automatic/Arm/Wrist are all acceptable) & Stethoscope, if needed
- Topical anesthetic of choice (not mandatory but strongly recommended)
- Injectable anesthetic of choice
 - No long-acting anesthetics
 - No expired anesthetics
- Two aspirating syringes
 - No self-aspirating syringes allowed
- Recapping device if one-handed scoop technique is not used
- Locking cotton forceps or hemostat
- Mouth mirror
- Optional: Engineering controls designed for cheek retraction that do not interfere with vision of injections are allowed and can be used at the candidate's discretion if desired

Patient Selection and Management - Consideration should be demonstrated for the patient's welfare and comfort. A patient should not be selected who is apprehensive or hypersensitive.

Shared Patients – Shared patients are NOT allowed for the local anesthetic examination.

Test Site Fees - All testing sites (schools) charge a fee for use of clinic facilities, equipment, supplies and disposables. This fee is independent of the examination fee and is not collected by CRDTS. Testing site fees vary from school to school. Specific information regarding site fees will be included in the candidate's application email confirmation.

Treatment Consent - The candidate must complete a Treatment Consent Form for each patient. The minimum acceptable age to sit for the local anesthesia examination is 18. This form is included in this manual (copies are acceptable) and/or can be downloaded from the CRDTS website. The Treatment Consent Form must be completed and submitted PRIOR to starting the examination.

Written Examination Information

The following information is provided to candidates to aid in preparation for the written exam. It is **NOT A COMPLETE** list of information included in the exam, but rather examples of the types of questions found in each of the five categories of the exam. Questions cover all five available local anesthetic drugs: articaine, bupivacaine, lidocaine, mepivacaine, prilocaine, two types of vasoconstrictors: epinephrine and levonordefrin, and topical anesthetics: benzocaine and lidocaine. Generic names are used in the exam. For drug dose calculation questions, this exam uses 1.8 ml of solution per cartridge. (It is known that some cartridges are labeled 1.7 ml, however the resource tables in textbooks used for the exam use 1.8 ml.) Some released exam questions are provided to further guide candidates' study efforts. When taking the written exam, please be quiet and respectful of candidates around you.

1. Pre-Anesthetic Patient Assessment

- Health history review to include medications being taken and how they might influence local anesthetic drug and vasoconstrictor selection
- ASA classification based on a review of the health history
- Systemic conditions that modify or prevent use of local anesthetics and vasoconstrictors

Example Question 1:

All of the following are considerations for the selection of a local anesthetic drug EXCEPT one. Which is the EXCEPTION?

- a. ASA status of the patient
- b. Need for post-treatment pain control
- c. Anxiety and fear level of the patient
- d. Potential for self-inflicted injury while anesthetized

Example Question 2:

Which of the following would be an ABSOLUTE contraindication for use of a local anesthetic agent containing epinephrine?

- a. anxious patient
- b. children under 12
- c. patient with a heart murmur
- d. patient with poorly controlled hyperthyroidism

2. Head, Neck, Oral, and Neuroanatomy

- Anatomic landmarks associated with local anesthetic injections (bony projections, foramen, etc.)
- Trigeminal nerve, its branches, cross-over and accessory innervation
- Neuroanatomy
- Tissues, hard and soft, anesthetized by nerves and injections
- Impulse generation

Example Question 1:

Which nerve provides sensory information to the brain from the teeth and associated tissues?

- a. facial nerve
- b. trigeminal nerve
- c. seventh cranial nerve
- d. mandibular division of the ophthalmic nerve

Example Question 2:

Only the form of local anesthetic molecule diffuses across nerve membrane.

- a. Free base (RN)
- b. Ionic (RNH+)
- c. Acidic
- d. Ketone

3. Pharmacology and Physiology

- Maximum safe doses of local anesthetics and vasoconstrictors
- Duration of action and onset of action of local anesthetics
- Metabolism of local anesthetic drugs and vasoconstrictors
- Potency and half-life of local anesthetic drugs
- FDA Pregnancy and Lactation Labeling Rules (Previously pregnancy categories)

Example Question 1:

Which of the following drugs provides the LONGEST duration of action?

- a. articaine
- b. bupivacaine
- c. lidocaine
- d. mepivacaine
- e. prilocaine

Example Question 2:

Your healthy 30-year-old patient weighs 135 lbs. You administered 3 cartridges of lidocaine 2% with 1:100,000 epinephrine. The doctor would like you to administer 3% mepivacaine. What is the maximum number of additional cartridges your patient can receive?

- a. 2
- b. 3
- c. 4
- d. 5

4. Delivery Technique

- Minimum and maximum volume of anesthetic for each injection type
- Needle length and gauge selection for each injection type
- Positive aspiration management
- Deposition rate

Example Question 1:

What is the minimum recommended volume of anesthetic for a single greater palatine (GP) injection?

- a. .25 ml
- b. .45 ml
- c. .9 ml
- d. 1.5 ml

Example Question 2:

Multiple aspirations during the delivery of a local anesthetic agent achieve all of the following benefits EXCEPT one. Which is the EXCEPTION?

- a. reaffirms that the solution is being deposited extravascularly
- b. slows the rate of deposition
- c. minimizes discomfort experienced by the patient
- d. prevents an allergic reaction
- 5. Prevention, Recognition, and Management of Local and Systemic Complications
 - Self-explanatory techniques for preventing and recognizing complications and for managing complications should they occur (hematoma, muscle trismus, overdose, allergic reaction, etc.).

Example Question 1:

A patient experienced hemi-facial paralysis immediately after an inferior alveolar (IA) injection. The cause of this complication is that the needle was positioned too far:

- a. Superiorly
- b. Inferiorly
- c. Anteriorly
- d. Posteriorly

Example Question 2:

The medical emergency most often associated with the administration of local anesthetic is:

- a. mild overdose reaction
- b. allergic reaction
- c. syncope
- d. anaphylaxis

The exam consists of 60 questions, 20 stand-alone, multiple-choice questions, and 40 case related questions. For the cases, candidates are given vital statistics for a patient to include age, gender, weight, health history, medications, dental history/assessment, and treatment plan followed by 3 to 8 questions. Candidates are asked to answer questions related to the case using the information provided. Questions come from the previously noted five categories.

CRDTS provides ear plugs, calculators, scratch paper, pens, and an electronic tablet for the written exam. No outside materials will be allowed in the testing room.

Clinical Examination Information

Patient Acceptability and Health History Requirements

- The same (one) patient must be used for both injections. Most patients for the Local Anesthesia examination are fellow classmates, family or friends who meet the CRDTS criteria for patient acceptability.
- No patient may be a dental or dental hygiene educator.
- No patient may be shared with another candidate during the same examination.
- Minimum patient age is 18 years.
- Patients must have:
 - Second molars (teeth #'s 2 and 15) present in both maxillary quadrants
 - o At least one permanent premolar in both mandibular quadrants
 - o No intraoral sores or puncture marks near selected injection sites
 - Back-up patient can be submitted without penalty if patient is rejected due to pre-existing sores or puncture marks
- On the day of the exam, the CRDTS Health History will be submitted with the patient. This
 submitted form must reflect the patient's current health. All items marked with an asterisk (*)
 must be completed on the day of the exam at the testing site. This includes the current blood
 pressure reading, pulse, and all medications (prescription, nonprescription, supplements or pills)
 being taken by the patient.
- Candidates must ensure the confidentiality of the patient's health history.
- Medical Clearance must be obtained for pregnant patients and patients with blood pressure readings that exceed the CRDTS criteria as listed below.
- Patients must present with an acceptable blood pressure:
 - o 159/94 or below: Can proceed without medical clearance
 - o 160/95 to 179/109: Are accepted only with written medical clearance
 - 180/110 or above: Will not be accepted for this examination even if a consult from a physician or dentist of record authorizes treatment
- Medical clearance letters can be written on the Medical Clearance Form (provided in this manual) or on a separate piece of paper and must include:
 - A legible statement from a licensed physician or dentist of record written within 30 days of the examination clearly stating the medical concern
 - A positive statement of how the patient should be managed during the examination (including a statement on the use or non-use of local anesthesia for pregnant patients)
 - The physician's or dentist's name, address, and phone number
- Any item on the Health History Screening Form with a "YES" response MAY require a written medical clearance letter if the explanation section indicates the possibility of a significant systemic condition that could affect the patient's suitability to sit for this examination.
- Candidates MUST obtain and submit a written medical clearance letter for all patients that respond "YES" to any of the shaded questions on the Health History Screening Form.

Questions #4.G thru #4.M:

- 4.G Artificial/Prosthetic/Damaged Heart Valve(s)
- 4.H History of Infective Endocarditis
- 4.I Heart Conditions (congenital, atrial fibrillation)

- 4.J Cardiac Medical Devices (including pacemaker, defibrillator, watchman)
- 4.K Joint Replacement
- 4.L Osteochemonecrosis of the Jaw
- 4.M Pregnant If yes, due date: _____

Patients with these conditions will NOT be accepted for the CRDTS local anesthesia examination under any circumstances:

- Patients requiring antibiotic prophylaxis for dental treatment.
- Patients who have used methamphetamines or cocaine in the past 24 hours.
- Patients who answer "YES" to Question 3: Are you currently receiving INTRAVENOUS Bisphosphonates for the treatment of osteoporosis or cancer?
- Cardiac/Organ transplant recipients (Question 4.A).
- Active tuberculosis. (Question 4.B) Note: A patient who has tested positive for TB or is being treated for TB but does not have clinical symptoms is acceptable.
- Heart attack, heart surgery (including stents), stroke or chemotherapy/radiation therapy within the past six months (Question 4.C-F).
- Any condition or medication/drug history that might be adversely affected by the nature of the examination procedures.

Clinical Examination Performance Requirements

The purpose of the clinical examination is to evaluate the candidate's ability to administer one posterior superior alveolar (PSA) injection and one inferior alveolar (IA) injection successfully, safely, and competently for a patient. For this examination, CRDTS provides the needles. **The short needle must be used for the PSA.** The long needle must be used for the IA. The cap color of CRDTS needles identifies the gauge, not the length, however ALL CRDTS yellow-cap, 27-gauge needles are short (~20mm) and ALL CRDTS red-cap, 25-gauge needles are long (~32 mm) The specific injection criteria are listed below and detailed in the Grade Sheet provided in this manual.

Clinical Examination Flow

- Candidates and patients should plan to arrive at the testing site 30 minutes prior to their Clinical Exam assigned start time. (Arrival time for written exam is emailed separately.)
- Candidates must present a picture ID (e.g., driver's license, passport, school ID badge) to pick up their examination materials from CRDTS personnel.
- Candidates will be called by CRDTS personnel and escorted to their assigned cubicle approximately 15 minutes prior to their assigned start time.
 - Cubicles will already be set up with barriers and disposable supplies by testing site personnel prior to the candidate's arrival
 - Prior to seating their patient, candidates will be allowed time to:
 - Set up their tray, anesthetic syringes and other supplies
 - Work with CRDTS proctors who will help candidates:
 - Fit and familiarize themselves with the CRDTS head-mounted action camera

- Confirm both cameras, the peripheral camera (mounted on a monopod) and the head-mounted camera, are ready to record/film procedures and are positioned so as to maintain candidate anonymity
- After cubicle set-up is complete, candidates will return to the reception area to:
 - Escort and seat their patient in the clinic
 - o Update their patient's health history, take and record blood pressure and pulse
- CRDTS proctors will come to each candidate's cubicle to begin evaluation procedures
- CRDTS proctors will use the CRDTS grade sheet to complete the Pre-Exam Checklist
 - Confirm patient's health history conforms with CRDTS criteria
 - Confirm candidate's syringes, cartridges and other required armamentarium conform with CRDTS criteria
 - o Confirm patient's dentition and tissues conform with CRDTS criteria
 - Patient must have at least one permanent premolar present in both mandibular quadrants AND teeth numbers 2 & 15 must be present
 - Patient must have NO intraoral sores or puncture marks near injection sites
- Filming will begin when the candidate, patient and CRDTS proctors are ready
- Candidates can administer the PSA and IA in any order they prefer
- Candidates can administer the PSA and IA in the quadrant of their choice
- Candidates will need to verbalize their injection technique by announcing:
 - Posterior Superior Alveolar (PSA)
 - Initial penetration, the bevel is covered
 - At target
 - Aspirating
 - Negative (or Positive) aspiration
 - Delivering anesthetic
 - Inferior Alveolar (IA)
 - Initial penetration, the bevel is covered
 - At periosteum
 - Aspirating
 - Negative (or Positive) aspiration
 - Delivering anesthetic
- For positive aspirations, the CRDTS proctor will wait for the candidate to self-correct. If the candidate does not self-correct and starts to deliver anesthetic, the exam will be stopped and recorded as unsuccessful.
- Candidates will be told by the CRDTS proctor when to stop depositing and withdraw
 - Delivery will be stopped when the CRDTS proctor determines an appropriate amount of anesthetic (approximately one stopper width) has been filmed to give examiners enough film footage to evaluate the candidate's deposition rate
 - o Candidates will be required to demonstrate appropriate recapping technique
 - Work practice control using the one handed-scoop technique, or
 - Engineering control designed to assist with one-handed recapping
- After completing the first injection and recapping, candidates can proceed with their second injection.

- After completing both injections, candidates must verbalize to the CRDTS proctor how they
 intend to perform proper needle and cartridge disposal. If no positive aspiration, CRDTS will
 follow the school's protocol on proper cartridge disposal.
- The CRDTS proctor will conclude filming when the above procedures are complete.
- Film footage will be utilized by three independent examiners to evaluate:
 - Insertion site
 - PSA
 - SAT anything other than DEF
 - DEF
 - Too Anterior
 - o Too Posterior
 - Erroneous insertion of needle into any tissue other than mucobuccal fold
 - IA
 - SAT anything other than DEF
 - DEF
 - Too Superior
 - o Too Inferior
 - o Too Lateral
 - o Too Medial

Injection angle

- PSA
 - SAT anything other than DEF
 - DEF
 - Not at 45° to occlusal plane
 - Not at 45° to midsagittal plane
- IA
 - SAT anything other than DEF
 - DEF
 - o Barrel too mesial
 - Barrel too distal
 - Occlusal plane angle too high or low

Injection depth

- PSA using CRDTS provided 27 gauge Short (~20mm) needle
 - SAT anything other than DEF
 - DEF
 - Too shallow
 - Too deep (hubbing hub touching tissue)
- IA using CRDTS provided 25 gauge Long (~32mm) needle
 - SAT anything other than DEF
 - DFF
 - Too shallow
 - Too deep (hubbing hub touching tissue)

Deposition rate

- Depositing anesthetic at a rate of 1.0 ml/minute is ideal and a rate of 1.8 ml/minute is acceptable for both the IA and PSA injections
 - SAT anything other than DEF with the following being ideal:
 - Depositing 1.5ml/minute equates to .025ml/sec
 - One stopper = .2ml = 8 seconds
 - Administering one stopper width at 6 seconds or more
 - DEF
 - Administering too fast defined as one stopper width at 5 seconds or less
 - Administering anesthetic prior to aspiration
 - Administering more than 2 stopper's width of anesthetic prior to arriving at terminal deposition site
- The following **Critical Deficiencies**, as determined by CRDTS proctors, will result in the exam being stopped and recorded as an unsuccessful attempt:
 - Inappropriate anesthetic found on tray
 - Long acting and/or Expired
 - Contraindicated by patient's Health History

o Incorrect needle selected for injection

- PSA must use the short needle
- IA must use the long needle

Contaminated needle

- Candidate attempts to use previously used or uncapped needle
- Candidate fails to notice and change contaminated needle that touches an inanimate, extraoral or vermilion zone surface prior to starting injection
 - Contact with any inanimate surface such as a tray cover, lab coat, sleeve or glove would be unacceptable
 - Contact with any extraoral tissue such as the patient's face and vermilion zone would be unacceptable
 - Contact with any intraoral anatomy is acceptable

Three unsuccessful initial attempts to reach target area

- Attempting and stopping 2 times is allowed
- Starting a 3rd attempt is allowed but must be achieved
- After 3rd unsuccessful attempt, exam is stopped and recorded as unsuccessful
- Unsuccessful attempt does not include proper management of a positive aspiration and/or re-engaging a harpoon, i.e. if on the 3rd attempt, a positive aspiration happens, the candidate can withdraw. A 4th attempt is allowed in this case. If on the 4th attempt, another positive aspiration occurs, the videographer will ask the candidate to pause so examiners can grade depth and angle for the injection. The candidate will not administer any local anesthetic and will not be penalized for rate of deposition.

- Large window not visible to candidate prior to depositing anesthetic
- Failure to aspirate prior to depositing anesthetic
- Failure to correct a non-engaged harpoon prior to depositing anesthetic
- Failure to change anesthetic cartridge after a positive aspiration that involves so much blood it would impede visualizing future positive aspirations
- Improper recapping of needle
 - Using a recapping device or engineering control is allowed
 - Using the one-handed scoop technique is allowed
 - Using a two-handed recapping technique is not allowed

Excessive trauma to patient

- Damage caused by candidate which demonstrates gross disregard for local anesthetic techniques and/or patient safety
 - Visibly bent needle after injection
 - Excessive bowing of needle during injection
- Unwarranted damage caused by candidate to any extra/intraoral tissues resulting in significant injury to the patient
- o Improper needle and/or cartridge disposal verbalized to the proctor

References

- 1. Bassett, KB, DiMarco, AC, Naughton, DK; <u>Local Anesthesia for Dental Professionals</u>; Pearson, Revised 2nd Edition, 2022.
- 2. Logothetis, DD; <u>Local Anesthesia for the Dental Hygienist</u>; Elsevier, 3rd Edition, 2021. Note: A new edition of this text will be published in March 2026. It will not be utilized as a reference until the 2027 exam season.
- 3. Malamed, SF <u>Handbook of Local Anesthesia</u>; Elsevier, 7th Edition, 2020.

Checklist of Required Exam Materials

The items listed below are required for the examination. Please bring the following with you:

Day of Exam

- Picture ID for admission
- This Candidate Manual (optional)
- Completed Patient Health History Form (Print copy from CRDTS website or manual)
- Completed Patient Informed Consent Form (Print copy from CRDTS website or manual)
- Blood pressure cuff (Manual/Automatic/Arm/Wrist are all acceptable) & Stethoscope, if needed
- Protective eyewear for the patient. Loupes, goggles or face shield for the candidate that do not interfere with head-mounted camera
- Topical anesthetic of choice (not mandatory but strongly recommended)
- Injectable anesthetic of choice (no long-acting anesthetics, no expired anesthetics)
- Two aspirating syringes (no self-aspirating syringes)
- Recapping device if one-handed scoop technique is not used
- Locking cotton forceps or hemostat
- Sterile mouth mirror
- Comfort items for your patient; blanket in case the clinic is cold, reading materials, etc.

CRDTS will be providing each candidate with the following:

Anesthetic needles (27 gauge, short, ~20mm, plastic-hub. 25 gauge, long, ~32mm, plastic-hub.
 Monoject brand.)



ONE OR TWO DIGIT CANDIDATE NUMBER

Central Regional Dental Testing Service, Inc. LOCAL ANESTHESIA TREATMENT CONSENT FORM

| i,, authorize Cal | naidate #, |
|---|--|
| an examinee, to perform upon myself local anesthetic injections | S. |
| I understand that the candidate may not be a licensed dental hy understand that the injections will be performed by the candidate examination conducted by Central Regional Dental Testing Servidetermine the qualification of the candidate for licensure. I recompersonnel will be shown and informed of my medical information pertinent to the procedures I receive during the examination. | ate as part of an ice, Inc. to ognize that CRDTS |
| The nature and purpose of the procedures as well as the risks and complications have been explained to me. My questions regardinate been answered. I acknowledge that no guarantee or warra made as to the results to be obtained. | ing the procedures |
| I consent to having CRDTS personnel take photographs and film being performed today provided my name is not in any way assephotographs or filming. | • |
| I understand that as part of this examination it will be necessary anesthetics and I consent to the use of such anesthetics by the o | |
| Patient's Signature | |
| Patient's Address, City, State, Zip Code | |
| Patient's Phone Number | Date |
| | |

Central Regional Dental Testing Service, Inc.

| For CRDTS Use Only |
|--------------------|
| |
| |

CRDTS Medical Clearance Form

This form is only needed for patients who have conditions requiring medical clearance.

| Candidate to complete this top section: | | | |
|--|--|-----------------------|---------------------|
| Dental Patient Information: | Physician/Dentist of Reco | ord Informa | tion: |
| Name: | Name: | | |
| DOB: | Address: | | |
| *Date patient scheduled to sit | City/State/Zip: | | |
| for CRDTS Exam: | Phone: | Fax: | |
| Dear Provider: Our mutual patient (listed above) is scheduled board exam. The medical history (see attached CRDTS medicates a medical concern of: | |) completed | by this patient |
| Primary Care Provider or Dentist of Recor Please evaluate this patient's medical history made for this patient regarding the dental tre | and advise us on any special | considerati | |
| Would you recommend any treatment modif If yes, specify: | | □No | □Yes |
| Is antibiotic prophylaxis necessary? If yes, specify: | | □No | □Yes |
| May local anesthetic be used on this patient? | | □Yes | □No |
| If yes, may local anesthetic with epinephri | | □Yes | □No |
| Is high blood pressure (160/95 to 179/109) a Note: CRDTS guidelines state patients with a BP 180. If yes, would you allow this patient to sit for | /110 or above are NOT allowed to s | Yes Sit for this exar | □ No n. |
| had a blood pressure reading in the range | | □Yes | □No |
| Additional comments: | | | |
| Provider (please print): Provider Signature: | | | |
| *Dat | e Signed:st be signed within 30 days o | of the above | e exam date listed. |

Thank you for your assistance in providing optimum care for this patient.

INSTRUCTIONS:

- Use INK to complete this form

- Have patient complete this form PRIOR to the exam

If YES, please specify:_____

- Bring this completed form with you to the $\mbox{\it exam}$

ONE OR TWO DIGIT CANDIDATE NUMBER

2026 CRDTS PATIENT HEALTH HISTORY SCREENING FORM

| Pre-exam Screening Blood Pressure | Pati | ient n | ame: | | |
|--|--------|---------|---|-----------------------------------|--|
| YES NO 1. Are you currently under the care of a physician/primary care provider or have you been treated by a healthcare provider in the last six months? If YES, please specify: YES NO 2. Are you allergic or had any adverse reactions to LATEX, any medicines, drugs, local anesthetics, or other substances? If YES, please identify: YES NO 3. Are you currently receiving INTRAVENOUS Bisphosphonates for the treatment of osteoporosis or cancer? Answer Below 4. Do you have or have you had any of the following diseases/conditions? YES NO 4A. Cardiac/Organ Transplant YES NO 4B. Tuberculosis (active/currently) YES NO 4B. Tuberculosis (active/currently) YES NO 4C. Stroke If YES Date: YES NO 4C. Stroke If YES Date: YES NO 4C. Artificial/Prosthetic/Damaged Heart Valve(s) YES NO 4F. Heart Surgery (including stents) If YES Date: YES NO 4F. History of infective Endocarditis YES NO 4I. History of infective Endocarditis YES NO 4I. Gardiac Medical Devices (including pacemaker, defibrillation) YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Asthma/Lung/Breathing Disorder/COPD YES NO 4D. Bleeding Disorder YES NO 4D. Bleeding Disorder YES NO 4D. Diabetes If YES Type: YES NO 4D. Diabetes If YES Type: YES NO 4D. Diabetes If YES Type: YES NO 4T. High Blood Pressure YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disease YES NO 4V. Mental Health Disorders YES NO 4V. Substance Abuse Disorders YES NO 4V. Substance Abuse Disorders If more space is needed, please Use the back of this form. | Birt | hdate | | • | |
| provider in the last six months? If YES, please specify: NO 2. Are you allergic or had any adverse reactions to LATEX, any medicines, drugs, local anesthetics, or other substances? If YES, please identify: YES NO 3. Are you currently receiving INTRAVENOUS Bisphosphonates for the treatment of osteoporosis or cancer? Answer Below 4. Do you have or have you had any of the following diseases/conditions? YES NO 4A. Cardiac/Organ Transplant YES NO 4B. Tuberculosis (active/currently) YES NO 4C. Stroke If YES Date: | INSTR | RUCTIO | NS TO PATIENT: Please answer the following | questions as completely and accur | rately as possible. All Information is CONFIDENTIAL. |
| If YES, please identify: | YES | NO | provider in the last six months? | | |
| Answer Below 4. Do you have or have you had any of the following diseases/conditions? YES NO 4A. Cardiac/Organ Transplant YES NO 4B. Tuberculosis (active/currently) YES NO 4C. Stroke If YES Date: | YES | NO | | | |
| YES NO 4A. Cardiac/Organ Transplant YES NO 4B. Tuberculosis (active/currently) YES NO 4C. Stroke If YES Date: YES NO 4D. Chemotherapy/Radiation Therapy If YES Date: YES NO 4E. Heart Attack If YES Date: YES NO 4F. Heart Surgery (including stents) If YES Date: YES NO 4H. History of Infective Endocarditis YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator) YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4D. Bleeding Disorder YES NO 4D. Diabetes If YES Type: YES NO 4D. Diabetes If YES Type: YES NO 4D. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disease YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 3. Are you currently receiving INTRAV | ENOUS Bisphosphonates for th | ne treatment of osteoporosis or cancer? |
| Please explain any YES answers here YES NO 4C. Stroke If YES Date: | Answei | r Below | 4. Do you have or have you had any of | the following diseases/condition | ons? |
| Please explain any YES answers here YES NO 4C. Stroke If YES Date: | YES | NO | 4A. Cardiac/Organ Transplant | | |
| YES NO 4D. Chemotherapy/Radiation Therapy If YES Date: Explanation: YES NO 4E. Heart Attack If YES Date: Explanation: YES NO 4G. Artificial/Prosthetic/Damaged Heart Valve(s) YES NO 4H. History of Infective Endocarditis YES NO 4I. Heart Conditions (Congenital, Atrial Fibrillation) YES NO 4I. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4O. Bleeding Disorder YES NO 4O. Diabetes If YES Type: YES NO 4C. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disorders If more space is needed, please use the back of this form. | | | | | Please explain any YES answers here |
| YES NO 4D. Chemotherapy/Radiation Therapy If YES Date: Explanation: YES NO 4E. Heart Attack If YES Date: Explanation: YES NO 4G. Artificial/Prosthetic/Damaged Heart Valve(s) YES NO 4H. History of Infective Endocarditis YES NO 4I. Heart Conditions (Congenital, Atrial Fibrillation) YES NO 4I. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4O. Bleeding Disorder YES NO 4O. Diabetes If YES Type: YES NO 4C. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disease YES NO 4V. Kidney/Renal Disorders If more space is needed, please use the back of this form. | YES | NO | 4C. Stroke | If YES Date: | |
| YES NO 4E. Heart Attack If YES Date: | YES | NO | 4D. Chemotherapy/Radiation Therapy | | Question # |
| YES NO 4G. Artificial/Prosthetic/Damaged Heart Valve(s) YES NO 4H. History of Infective Endocarditis YES NO 4I. Heart Conditions (Congenital, Atrial Fibrillation) YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4K. Joint Replacement YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4M. Pregnant If YES Due Date: YES NO 4D. Bleeding Disorder YES NO 4D. Bleeding Disorder YES NO 4D. Diabetes If YES Type: YES NO 4C. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4E. Heart Attack | | Explanation: |
| YES NO 4G. Artificial/Prosthetic/Damaged Heart Valve(s) YES NO 4H. History of Infective Endocarditis YES NO 4I. Heart Conditions (Congenital, Atrial Fibrillation) YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4K. Joint Replacement YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4M. Pregnant If YES Due Date: YES NO 4D. Bleeding Disorder YES NO 4D. Bleeding Disorder YES NO 4D. Diabetes If YES Type: YES NO 4C. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4F. Heart Surgery (including stents) | If YES Date: | |
| YES NO 4I. Heart Conditions (Congenital, Atrial Fibrillation) YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4K. Joint Replacement YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant YES NO 4M. Pregnant YES NO 4O. Bleeding Disorder/COPD YES NO 4O. Bleeding Disorder YES NO 4Q. Diabetes If YES Type: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4W. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4G. Artificial/Prosthetic/Damaged Heart Va | | |
| YES NO 4J. Cardiac Medical Devices (including pacemaker, defibrillator, watchman) YES NO 4K. Joint Replacement YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4N. Asthma/Lung/Breathing Disorder/COPD YES NO 4O. Bleeding Disorder YES NO 4Q. Diabetes If YES Type: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4H. History of Infective Endocarditis | | |
| YES NO 4K. Joint Replacement YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: YES NO 4M. Asthma/Lung/Breathing Disorder/COPD YES NO 4O. Bleeding Disorder YES NO 4P. Cancer YES NO 4Q. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4X. Substance Abuse Disorders Explanation: Explanation: If more space is needed, please use the back of this form. | YES | NO | 41. Heart Conditions (Congenital, Atrial I | Fibrillation) | |
| YES NO 4L. Osteochemonecrosis of the Jaw YES NO 4M. Pregnant If YES Due Date: | YES | NO | 4J. Cardiac Medical Devices (including pace | emaker, defibrillator, watchman) | Question # |
| YES NO 4M. Pregnant If YES Due Date: YES NO 4N. Asthma/Lung/Breathing Disorder/COPD YES NO 4O. Bleeding Disorder YES NO 4P. Cancer YES NO 4Q. Diabetes If YES Type: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4K. Joint Replacement | | Explanation: |
| YES NO 4N. Asthma/Lung/Breathing Disorder/COPD YES NO 4O. Bleeding Disorder YES NO 4P. Cancer YES NO 4Q. Diabetes If YES Type: YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4L. Osteochemonecrosis of the Jaw | | |
| YES NO 40. Bleeding Disorder YES NO 4P. Cancer YES NO 4Q. Diabetes If YES Type: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4M. Pregnant | If YES Due Date: | |
| YES NO 4P. Cancer YES NO 4Q. Diabetes If YES Type: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders Question # Explanation: If more space is needed, please use the back of this form. | YES | NO | 4N. Asthma/Lung/Breathing Disorder/COPE |) | · |
| YES NO 4Q. Diabetes If YES Type: Question # Explanation: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 40. Bleeding Disorder | | |
| YES NO 4Q. Diabetes if YES Type: Explanation: YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders Explanation: If more space is needed, please use the back of this form. | YES | NO | 4P. Cancer | | Question # |
| YES NO 4R. Epilepsy/Seizures YES NO 4S. Liver disease/Jaundice/Cirrhosis/Hepatitis If YES Type: YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4Q. Diabetes If YES Type: | | |
| YES NO 4T. High Blood Pressure YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4R. Epilepsy/Seizures | | |
| YES NO 4U. Immune Suppression/HIV/AIDS YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4S. Liver disease/Jaundice/Cirrhosis/Hepati | tis If YES Type: | |
| YES NO 4V. Kidney/Renal Disease YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | NO | 4T. High Blood Pressure | | |
| YES NO 4W. Mental Health Disorders YES NO 4X. Substance Abuse Disorders If more space is needed, please use the back of this form. | YES | N0 | • • | | |
| YES NO 4X. Substance Abuse Disorders use the back of this form. | YES | NO | 4V. Kidney/Renal Disease | | |
| 1.50 IN GUSSAINGE FIGURE SIGNAGES | YES | NO | 4W. Mental Health Disorders | | I |
| YES NO 4Y. Do you have any disease or condition not listed above? | YES | NO | | | use the back of this form. |
| 1.25 TO THE FOR HAVE ANY ADDRESS OF CONDITION FOR HAVE ADDRESS. | YES | NO | 4Y. Do you have any disease or condition no | t listed above? | |

2026 CRDTS PATIENT HEALTH HISTORY SCREENING FORM page 2 of 2

Any item on the health history with a YES response may require medical clearance from a licensed primary care provider or dentist of record if the explanation section indicates the possibility of a significant systemic condition that could adversely affect the patient's suitability to take part in the examination.

Securely attach any medical clearance letters to this form.

Reason for Taking

Last Taken (Day/Time)

DH-2026

| List all prescribed, over the counter and recreational drugs taken within the last 48 hours |
|---|
| IF NONE PLEASE MARK "X" HERE: |

Amount/Dose

Name of Drug

Central Regional Dental Testing Service, Inc.

| If needed, record additional | information be | low: | |
|---|--------------------------|-------------------------------|---|
| | | | |
| | | | |
| I certify that I have read and un accurately and completely. I wil because of errors I may have m | I not hold the tes | ting agency responsible for a | · · |
| PATIENT SIGNATURE:(Parent or | Guardian if patient is a | | |
| hereby attest to the fact that this *Patient Initials | - | _ | updated on the day of the exam. s exam date $__$ / $__$ /2026 |

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*All items marked with an asterisk must be completed the DAY OF THE EXAMINATION

CRDTS LOCAL ANESTHESIA CLINICAL EXAMINATION

ONE OR TWO DIGIT CANDIDATE NUMBER

Candidate to complete this top section:

| PATIENT'S FIRST NAME: | BIRTHDATE: | TODAY'S DATE: | FOR CRDTS USE ONLY |
|-----------------------|------------|---------------|-----------------------------------|
| ANESTHETIC SELECTION: | | | Patient's Health History Approved |
| BLOOD PRESSURE: | PULSE: | | YESNO |

CRDTS proctors and examiners will use an electronic copy of this grade sheet for examination scoring.

This grade sheet can be copied and used in school settings to help prepare students for the CRDTS Local Anesthesia Exam.

PSA IA

| PRE-EXAM CHECKLIST | Yes | At least one permanent premolar present in both mandibular quadrants | Ye | es | Both 2 nd maxillary molars present (teeth #'s 2 & 15) |
|--|---|--|---------------------------------|-------------------------|--|
| CHECKEIST | Yes | No intraoral sores/marks present near injection sites | Ye | es | No intraoral sores/marks present near injection sites |
| | Yes | Syringe: Aspirating but NOT self-aspirating | Ye | es | Syringe: Aspirating but NOT self-aspirating |
| | Yes | Eyewear: Candidate and Patient | Ye | es | Eyewear: Candidate and Patient |
| | Yes | Required armamentarium present & set-up correctly | Ye | es | Required armamentarium present & set-up correctly |
| | | | | | |
| CRITICAL | DEF | Inappropriate Anes: Expired/long acting | | DEF | Inappropriate Anes: Expired/long acting |
| DEFICIENCIES | DEF | Inappropriate Anes: Contra patient's Health History | | DEF | Inappropriate Anes: Contra patient's Health History |
| | DEF | Incorrect needle selected for injection | | DEF | Incorrect needle selected for injection |
| | DEF | Contaminated needle | | DEF | Contaminated needle |
| | DEF | Three unsuccessful attempts | | DEF | Three unsuccessful attempts |
| | DEF | Large window NOT visible during injection | | DEF | Large window NOT visible during injection |
| | DEF | Failure to aspirate prior to delivery | | DEF | Failure to aspirate prior to delivery |
| | DEF | Failure to correct non-engaged harpoon | | DEF | Failure to correct non-engaged harpoon |
| | DEF | Failure to change cartridge after positive aspiration | | DEF | Failure to change cartridge after positive aspiration |
| | | when indicated | | | when indicated |
| | DEF | Improper recapping | | DEF | Improper recapping |
| | DEF | Excessive trauma to patient | | DEF | Excessive trauma to patient |
| | | on this be graded by three (b) macpenaent | | | below will be graded by tillee (5) illdepellacit |
| 0 | f-site examin | ow will be graded by three (3) independent ers via film: | | | below will be graded by three (3) independent niners via film: |
| _ | SAT DEF | ers via film: | | | |
| NSERTION | | | off-si | te exar | niners via film: |
| | SAT DEF | Too superior | off-si | te exar | niners via film: Too anterior |
| NSERTION | SAT DEF | Too superior Too inferior | SAT SAT | DEF DEF | Too anterior Too posterior |
| NSERTION | SAT DEF SAT DEF SAT DEF | Too superior Too inferior Too lateral | SAT SAT | DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold |
| INSERTION SITE | SAT DEF SAT DEF SAT DEF SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial | SAT SAT SAT SAT | DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane |
| NSERTION SITE | SAT DEF SAT DEF SAT DEF SAT DEF SAT DEF SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal | SAT SAT SAT | DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold |
| NSERTION SITE | SAT DEF SAT DEF SAT DEF SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial | SAT SAT SAT SAT | DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane |
| INSERTION SITE INJECTION ANGLE | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low | SAT SAT SAT SAT SAT | DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane |
| INSERTION SITE INJECTION ANGLE | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low | SAT SAT SAT SAT SAT SAT | DEF DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane Too shallow |
| NSERTION SITE NJECTION ANGLE | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low | SAT SAT SAT SAT SAT | DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane |
| NSERTION SITE NJECTION ANGLE NJECTION DEPTH | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low | SAT SAT SAT SAT SAT SAT | DEF DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane Too shallow |
| INSERTION SITE INJECTION ANGLE INJECTION DEPTH | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low Too shallow Too deep Too fast | SAT SAT SAT SAT SAT SAT | DEF DEF DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane Too shallow Too deep Too fast |
| NSERTION SITE NJECTION ANGLE NJECTION DEPTH | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low Too shallow Too deep | SAT SAT SAT SAT SAT SAT | DEF DEF DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane Too shallow Too deep |
| NSERTION SITE NJECTION ANGLE NJECTION DEPTH | SAT DEF | Too superior Too inferior Too lateral Too medial Barrel too mesial Barrel too distal Occlusal plane angle too high or too low Too shallow Too deep Too fast Expelling more than 2 stopper's width | SAT SAT SAT SAT SAT SAT | DEF DEF DEF DEF DEF DEF | Too anterior Too posterior Erroneous insertion of needle into any tissue other than muco-buccal fold Not 45° to midsagittal plane Not 45° to maxillary occlusal plane Too shallow Too deep Too fast Expelling more than 2 stopper's width |