



**NATIONAL BOARD
OF EXAMINERS IN OPTOMETRY**

National Center of Clinical Testing in Optometry®

STAND-ALONE Injections Skill Exam® CANDIDATE GUIDE

Part III – Injections Skill Examination

August 2016 - July 2017

This guide is to be used for preparation of the ISE stand-alone exams only.

Candidates taking ISE WITH CSE should review the CSE Candidate Guide for specific instructions and policies.

Described in this document are the stand-alone ISE clinical assessments that are to be performed. The Candidate Instructions included at the end of this document will be posted in the appropriate examination rooms for review during the examination. The **Station Evaluation Form** is also provided for review.

Candidates are expected to thoroughly review this manual in preparation for the ISE stand-alone. This manual contains all relative information a Candidate would need to adequately prepare for the injections skills exam.

Candidates should be aware that the majority of the information in this manual will not be reviewed again during the Candidate Orientation process.

The Evaluation Forms, Candidate Guides, Equipment Lists and other helpful resources are available on the NBEO's website at: www.optometry.org/nccto

August 2016 - July 2017 Stand-Alone ISE Candidate Guide

STAND-ALONE ISE OVERVIEW

This Guide is for Candidates who have registered to take ISE only, without taking the Part III Clinical Skills Examination.

Candidates who are preparing to take ISE WITH the CSE Exam should review the CSE Candidate Guide for information and procedures relating to those processes.

The stand-alone Injections Skill Examination is composed of one clinical skill, which Candidates will demonstrate in a 15 minute time period. The clinical skill to be assessed is the same for all ISE test sessions and utilizes the same scoring criteria.

ISE will be audio and video recorded for review during the scoring process by a Remote Examiner.

The ISE evaluation forms contain the criteria Examiners use to assess Candidate performance. The exam criteria are in the form of yes-no checklists and items must be completed in their entirety to receive credit.

The following are the required ISE Procedures, to be completed within the Skill:

Skill: Injections Skill Examination

Procedure 1: **Preparation for Intravenous (IV) Injection for Fluorescein Angiography**

Procedure 2: **Preparation for Intramuscular (IM) Injection of Epinephrine**

Procedure 3: **Performing an Intravenous Injection for Fluorescein Angiography**

Procedure 4: **Performing an Intramuscular Injection of Epinephrine**

OVERVIEW OF EXAMINATION STRUCTURE AND TERMS

- **Candidate:** an individual taking the Injections Skill Exam
- **NCCTO Staff:** the (full-time) personnel responsible for executing the exam and serving as a Candidate advocate and liaison to the NBEO. Referred to as “Staff” throughout this guide.
- **Remote Examiner:** the individual responsible for scoring the Candidate’s performance
- **Proctor:** the individual who will interact with the Candidate during the Injections Exam
- **Station:** an exam room that contains required skills to be assessed during a delineated time period; ISE has one Station.
- **Examination Cycle:** the 15-minute time allocation for the exam
- **Observation Time:** the time before the exam when Candidates can familiarize themselves with the Station
- **Skill:** a substantive component of a patient examination related to a particular technique or well defined process
- **Procedure:** The individual procedures within the Injections Skill. ISE has 4 separate procedures that make up the overall Skill.
- **Item:** a numbered procedural element within each procedure/skill
- **Evaluation Form:** the yes-no checklist an Examiner uses to evaluate the Candidate
- **Candidate Performance:** when Candidate is actually performing the procedures/skills
- **STOP:** When a Candidate’s performance is stopped for either safety purposes or because they have used all available attempts to complete a procedure. See Procedure Attempts information in guide.
- **Repeat:** When a Candidate wishes to repeat a Procedure or Item. See Repeat Information in guide.
- **Finished:** When a Candidate has completed their performance and will no longer be scored on any exam items. See Candidate completion of a Station information in guide.

EXAM PREPARATION

Candidates are expected to thoroughly review this manual in preparation for the Injections Skill Exam. This manual contains all relative information a Candidate would need to adequately prepare for ISE.

Candidates should be aware that the majority of the information in this manual will not be reviewed again during the Candidate Orientation process.

PREPARATION:

- In addition to reviewing this Candidate Guide, the following information should be reviewed by Candidates in preparing for their exam:
 - Evaluation Forms
 - Candidate Orientation Video
 - NCCTO Site Information and Equipment List
 - Information regarding traveling to Charlotte, hotels, etc.

These resources can be found at: www.optometry.org/nccto

EQUIPMENT:

- All necessary equipment used during the exam will be provided by the NCCTO.
- **Candidates should not bring any equipment with them to the test center.** Any equipment a Candidate attempts to bring with them through the exam will be confiscated until the end of the exam.
- The NCCTO provides a *Site Information and Equipment List* on our website that all Candidates should review prior to arriving for their test date.

ATTIRE:

- Candidates are expected to wear professional attire and are encouraged to use “**business casual**” as a reference.
 - The NBEO interprets business casual as attire that **EXCLUDES** jeans, shorts, t-shirts, scrubs, garments that could be viewed to be immodest (e.g. tank tops, sheer clothing), tennis shoes, sneakers, and/or flip flops.
- Candidates must bring and wear white lab coats throughout the exam (see lab coats for additional information).
- Candidates reporting to the test center in attire deemed to be inappropriate will be addressed by NCCTO Staff **and may not be permitted to take the exam.**

NBEO ACCOUNT INFORMATION:

- Candidates must know their NBEO website User ID and Password, which will be used to complete a required Incident Report and optional Survey at the end of your exam. This is the same User ID and Password the Candidate created and used to register for NBEO exams and/or view scores on the NBEO website.

PHOTO IDENTIFICATION:

- To be admitted to the test center, you must present an acceptable form of photo identification that includes **both an embedded photograph and signature**. ID Forms from membership organizations, clubs, banking facilities, or other non-government or non-school related resources are not permissible for admission to a NBEO exam.
- The **only** acceptable forms of identification are:
 - A valid driver's license or an official photo ID issued by the government of the state or province where you reside.
 - A valid passport.

- A valid student identification card from an accredited school or college of optometry is acceptable, provided this ID card includes **both a photograph and signature embedded in the card**.
- In order to be considered valid, **the ID must:**
 - Match the name listed on your NBEO Profile (<https://www.optometry.org/profile/>)
 - If the name does not match, a Candidate may be denied access to the exam.
 - To submit a name change, click here: <https://www.optometry.org/pdf/namechange.pdf>.
Your online profile will be updated once the NBEO records are updated internally.
 - Be current and not expired (if the ID is expired, a Candidate may be denied access to the exam).

ON-SITE TIME

- Candidates should expect to be on-site for approximately an hour and a half (90 minutes) to complete the Injections Skill Exam. This timeframe includes registration, orientation, exam process, and check-out.

EXAM REGISTRATION & ORIENTATION

CANDIDATE REGISTRATION

- **ISE begins with registration and orientation which all Candidates are required to attend.**
- **Candidates must report to the test center on the date and time for which they registered online.**
 - The Registration process begins at the time reflected on the registration. You can review your registration here: [check registration time](#).
- In the event a Candidate finds they have arrived to the BB&T center early, the 3rd floor of the building contains an indoor mall with various restaurants, shops and cafes. **Candidates are welcome to spend time on the 3rd floor while waiting for their registration time.**
- Candidates who are late for registration may be disqualified from the examination session.
- Space and time constraints may prevent a Candidate from being rescheduled to a later session, and, in that event, the Candidate then forfeits his/her right to being tested (and his/her examination fee) for that date's administration of ISE.

LAB COATS

- Candidates are required to bring and wear a white lab coat during the exam.
- If a lab coat has identifying information displayed such as a Candidate name or school name, white tape will be provided on-site by Staff to cover this information, ensuring anonymity.

ARM BANDS / CANDIDATE IDENTIFICATION

- All Candidates will be provided with two arm bands. These arm bands should be worn at all times during the exam. In the event a Candidate removes their arm bands during the exam, Staff may advise the Candidate to reattach their arm bands. If at any point an arm band cannot be clearly seen, Staff may ask Candidates to turn the arm band so the band is more prominently displayed.
- The front of the Arm Bands identifies a Candidate's ID number, which is randomly assigned and may be any number between 1 and 20.
- All other information noted on the arm bands can be disregarded as this is information that relates to the Clinical Skills Exam.

PHOTOGRAPH

- A staff member will be taking a picture of each Candidate during the registration process to assist in ensuring the correct Candidate is being evaluated in the correct Station.
- For identification purposes, you should appear in the photo as you will during the exam. For instance, if you plan to wear glasses during the exam, you should have your glasses on during the photo; if you plan on having your hair pulled up in a ponytail, you should do so in your photo.

PERSONAL ITEMS & LOCKER USE

- Lockers will be provided for Candidates to store all personal items.
- Personal belongings including cell phones, watches, wallets, purses, etc, must be stored during the exam.
- In the event you have an oversized bag, there is a non-secure area in the lobby where Candidates can store luggage.
 - Candidates are welcome to leave items outside of a locker, but should be aware that the area is accessible by others, and, while it is under video surveillance, it is not locked or secured.
 - While this area is under video surveillance, Candidates may use this space at their own discretion as the NBEO will not be responsible for items that are lost and/or damaged.
- Non-compliance with any aspect of this policy is an irregularity, which will be reported to the NBEO, and may be subject to the consequences associated with cheating.

CANDIDATE ORIENTATION

- During Candidate Orientation, a presentation will be shown, which Candidates are required to attend. This presentation is only intended to provide a brief overview of the expectations of the exam, as well as to remind Candidates about the highlights of the exam process.

- During Candidate Orientation and during the Exam, Staff members will serve as the Candidate advocate to assist with any problems that may arise.
- Following Orientation, Staff will be available to address any questions Candidates may have.
- Candidates can view the Orientation video online at www.optometry.org/nccto

EQUIPMENT OVERVIEW

- Following Candidate Orientation, Candidates will be provided with ample time to view all of the individual Station equipment and supplies.
- During this time, Candidates are encouraged to become familiar with the equipment.
- Candidates are requested to treat the equipment with care and if there are any issues with equipment to please inform a Staff member.
- The injections arms will not have fluid.
- Candidates are encouraged to spend time with the simulated arm to familiarize themselves with the layout in preparation for the injections portion of the exam.
- Information regarding specific equipment and supplies can also be reviewed online in the NCCTO Site Information and Equipment Guide at www.optometry.org/nccto

PERSONAL NOTES, EVALUATION FORMS, ETC.

- Candidates may keep personal notes during the Orientation time only.
- **No notes or other written materials may be taken into any examination room at any time.**
- All notes and written materials must be left in the Candidate locker or the lobby area.
- Any notes and written materials discovered during the exam will be subject to confiscation.
- All notes taken during the exam on NCCTO provided materials must remain in the exam room.
- **Violation of these policies may be cause for disqualification from, dismissal from, and/or failure of the examination.**

DURING THE EXAM

REASONABLE ITEMS:

- Candidates are allowed to take “reasonable” items through the exam.
- All items must be provided to Staff for inspection and approval
- Examples of reasonable items are:
 - Bottles of water/Gatorade/etc (any labels must be removed, must contain a lid)
 - Tissues
 - Cough Drops, Mints, Gum
 - Granola Bar, Other individual wrapped snack item
 - Chap Stick, Hair Ties/Hair Clips, Sanitary items, etc.
- Pens and Pencils will be provided in each Station for Candidate use.

CANDIDATE IDENTIFICATION & INTRODUCTION

- During the exam, do not refer to yourself by name, but by the Candidate number you have been assigned on your arm band.
- For instance, if your arm band says “7” you may introduce yourself as: **“I am Candidate 7”** or **“I am Dr. 7”**

CLOCKS & TIME KEEPING

- Candidates are responsible for monitoring their time.
- No watches are allowed in the exam rooms.
- There are synchronized clocks provided in each exam room, to the right of the Exam Chair.
- Proctors will not remind Candidates of the remaining time.
- If time expires before a Candidate completes the Station, the items not performed will be scored as “no”. Because of this, Candidates are urged to carefully monitor their time.
- Additionally, Candidates should carefully consider repeating any Procedures at the end of the Station if they are unaware of the remaining time.

ANNOUNCEMENTS

There are four announcements that play throughout an exam session:

- #1: The first announcement “**Patients and Examiners, please report to your designated exam rooms**” signals test center personnel to prepare for the exam to start. *This announcement is not relative to Candidates.*
- #2: Once Candidates are in the hallway, the second announcement “**Candidates please enter the exam room**” signals Candidates to enter their Station and begin their observation time.
- #3: The third announcement “**The exam cycle has begun**” signals the official start of the first 15-minute exam cycle.
 - The Proctor will enter the room at this point.
- #4: The fourth announcement “**The Exam cycle has ended, please proceed to your next exam room**” will indicate the official end of the examination cycle, at which point the Candidate will exit the exam room.

EXAM STRUCTURE

- Following Orientation and Equipment Review, Candidates will be escorted to the test center and will stand outside of their assigned Station.
- Once Announcement #2 plays, Candidates may enter the exam room and begin their observation time.

CANDIDATE OBSERVATION TIME:

- Candidates are provided with observation time in the Station before the exam cycle begins.
- ISE observation time is approximately 5 minutes long.
- During the observation time, Candidates should familiarize themselves with the Station equipment, room layout, Station supplies, etc.
- Information for the specific Station is posted on the computer monitors for Candidates to review.
- Any scorable actions taken before the exam begins (washing hands, focusing the slit lamp) will not be scored during the observation time and must be repeated once the exam begins.
- During the Observation Time, Candidates are encouraged to:
 - Become familiar with the layout of the Station
 - Set-out supplies that will be used (do not open packages)
 - Review Station Instructions on the computer monitor
 - Review Repeat Policies (posted on back of the exam room door)
- During the Observation Time, Candidates cannot:
 - Perform an injection on the simulated arms
 - Write on any pieces of paper
 - Open any sealed packages

CANDIDATE COMPLETION OF A STATION

- The examination ends, with Announcement #4, or by the Candidate stating they are finished, whichever occurs first.
- Candidates who finish the exam before the ending announcement plays and wish to end the scoring portion of the Station may make the following statement to the Proctor: “I am finished with this Station”. At this time the Candidate **will not be allowed to perform any additional items** and will be escorted out of the exam room. It is up to the Candidate whether or not to make this statement.
- If a Candidate begins any casual conversation after completing the Station skills, staff may remind the Candidate that it is the Candidates’ responsibility to let them know if they are finished with the Station, but again making the “I am finished” statement it is not required.
- In the event a Candidate appears to have finished, but has not stated such and the Proctor and Candidate find themselves sitting, uncomfortably staring at each other, the Proctor may then remind the Candidate of their responsibility to state whether they are finished.

END OF EXAM

- After the Candidate states they are finished or announcement #4 plays, whichever is first, the Candidate will exit the room and sit at the computer desk to the left of the exam room where they will fill out an Incident Report and complete a Survey.
- If Candidates state they are finished before the announcement plays, Proctors may remind the Candidates that they can exit the room and sit at the computer Station.
- Candidates should remain at the workstation until dismissed by Staff.

PERFORMANCE OF PROCEDURES/ITEMS

- Items are sequenced in the order in which they should be optimally conducted.
- Candidates may alter the sequencing of certain items performed within a procedure without loss of credit, **as long as the Candidate's sequence makes logical sense**. However, Candidates are discouraged from doing so and encouraged to follow the sequence of items on the evaluation forms. Following the evaluation form outline helps ensure Candidates will not forget to perform any required item, facilitates the scoring.
- Examiners have been instructed to ignore any Candidate procedures that precede the announcement, including general Station items such as greeting the SP. Candidates who begin performing items before the exam time begins, must repeat any item that was previously performed in order to be scored appropriately for the item(s).

REPEATING ITEMS / PROCEDURES

All repeat information is posted in each Exam Room for Candidate review during the exam.

Repeating ITEMS

- Candidates who wish to repeat items within a Procedure may do so at their discretion, **if** they have not begun the next Procedure.
 - For instance, if during Procedure 1, a Candidate was not confident in the amount of medication they withdrew from the vial, they could draw additional medication.

Repeating PROCEDURES

- While items can be repeated *within* a Procedure, once a Candidate begins the next Procedure, **they cannot complete items from a prior Procedure**. In this scenario they would be required to repeat the **entire** Procedure.
 - For instance, if a Candidate had completed Procedure 1, but realized their volume of medication in the syringe was not correct after they had already started Procedure 3, they could not stop Procedure 3 and add additional fluid to the syringe for scoring purposes. They would be required to complete Procedure 1 from the beginning if they wished to receive credit for the volume of medication because they had left the Procedure and started a new Procedure.
- Candidates **must announce** their intention to repeat a Procedure and include the Procedure number by stating, for example, "I am going to repeat Procedure 3, IV Injection." At this point the Candidate should return to the first item in the Procedure and continue on.
- Once a Candidate makes the repeat statement, all scores recorded by the Examiner are erased, and the Candidate proceeds and is evaluated as if performing the entire Procedure for the first time.

REPEAT CAUTIONS

- While repeating can be a positive option, Candidates are strongly encouraged to ensure they can repeat the procedure within the time limitation and that they are confident they can repeat all of the items within the procedure. It has been noted that Candidates who have not monitored their time sufficiently and try to repeat an entire procedure for one missed item, often run out of time.
- Additionally, it has often been noted that Candidates repeating a procedure tend to focus so much on the missed items, that they ultimately miss other items overall, resulting in a lower score than initially obtained.

STATION REVIEW

- There is a computer monitor in the Station with a brief overview of instructions pertaining to ISE.
- Candidates may read the instructions before the rotation begins and also at anytime throughout the exam.
- Candidates should not use the computers in the exam rooms for any other purpose than to review the ISE Instructions.

NOTE-TAKING

- During the exam, Candidates will be provided with a ½ sheet of blank green paper.
- This green paper is provided **once the exam cycle begins (when announcement #3 plays)**.
- The green paper **should not be used or written on during the observation time** since Proctors and Staff may be unable to distinguish notes created in the room from notes inappropriately brought into the room.
- If for some reason a Candidate does not receive a piece of green paper, simply ask the Proctor in the Station and they will provide it to you.
- The green paper may be used to write down the start time of the exam cycle, to record data, or to make general notes, if desired, by the Candidate.
- Candidates should keep in mind that nothing written on this green paper will be scored or maintained for scoring purposes.
- At the conclusion of the exam, Candidates must leave behind this green paper with the Proctor in the Station.
- **Writing notes before announcement #3 plays may be cause for disqualification from, dismissal from, and/or failure of the exam.**

EXAMINERS/PROCTORS

- Proctors are present during ISE and will respond to all questions relating to the exam.
- Proctors are not responsible for scoring the exam.
- Proctors will not enter the examination room until announcement #3 plays, signifying the start of the rotation.
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OBSERVERS & VISITORS

- Occasionally, additional personnel may be on-site observing the exam. Observers and/or Visitors will not have any effect on a Candidate's score and should be ignored by the Candidate. These personnel have been instructed not to converse with Candidates, Examiners and/or Proctors in the examination rooms.

CANDIDATE QUESTIONS DURING THE EXAM:

- Outside of regular exam questions (e.g., asking about allergies, etc), during the exam Proctors will only answer "where" questions, such as where equipment switches are located, where the room lighting control is, or where supplies/clinical materials are located.
- Candidates may ask "where" questions at any time during the observation time or the exam time.
- Questions on **how** to do things, **how** to use the equipment or other instructional questions are not appropriate and will **not** be answered.
- **No additional examination time will be provided for any time used to ask and answer Candidate questions.**

STATING FINDINGS

- Candidates are strongly encouraged to talk through their exam process.
- Candidates are reminded that specific performance items, as indicated on the evaluation forms, require that the obtained findings be **stated** verbally in the same manner as they would be entered into a patient's medical record.
- Speaking clearly and audibly is important for these performance items, since these items also test communication skills.

SAFETY and PROCEDURE ATTEMPTS

Hand-Washing

- The NBEO has adopted the CDC's guideline for hand washing, which includes the specified timeframe of washing hands for at least 15 seconds. Candidates are expected to follow this guideline for credit. For further information about hand-washing, Candidates should view the recommended CDC guidelines on their website.

Procedure Attempts

- Candidates are only scored on the first 4 attempts at obtaining blood in Procedure 3 of ISE. Any further attempts will not be scored and it will be treated as a stop, however the Proctors will not verbally stop a Candidate as it is up to the Candidate to **monitor their own attempts during ISE**.

STAFF INTERACTIONS:

Neutrality:

- Proctors and Staff may appear to be neutral or show little emotion during the exam. Candidates should not regard this as a personal dislike or an indication of performance quality.
- Proctors and Staff are instructed to conduct the examination in a personally neutral manner to promote uniform, standardized, equal treatment of Candidates.
- This neutrality produces a more objective, impartial evaluation of the exam.

Staff Interaction during Exam:

- During the Exam, Proctors are allowed to say very little other than what has been scripted.
- If a Candidate asks a question that cannot be answered, Proctors or Staff may respond with "I do not have that information," "I can't answer that," or "It is up to you."
- These comments are not indicators of a Candidate's performance or decisions, but simply an answer for a situation where there is not a standardized response.

PROCTOR INTERACTIONS:

PROCTOR/SP TITLES:

- Candidates may refer to the SPs as "Mr. or Ms. Lee."
- "Lee" is the fictitious family name assigned to all SPs.

PROCTOR/SP FAMILIARIZATION

- In order to be evaluated objectively and uniformly, Candidates must **not** have any prior knowledge of a Proctor. During the course of the examination, if Candidates realize that they are acquainted with a Proctor they are **required** to notify Staff of this familiarity immediately. An alternate Proctor will be provided for examination at that time.
- **Failure to disclose familiarity with a Proctor may result in a score of zero for the affected Station.**

CANDIDATE WOUNDS / INJURIES / MEDICAL EMERGENCIES

- Any open wounds on a Candidate's finger or hand must be covered during the examination. This applies to pre-existing wounds and those that may develop during the examination. In the instance of the latter, band-aids and gloves will be provided to protect the Candidate and SP.
- If you have questions or concerns about whether a potential wound needs to be covered, you can show the wound to Staff during the registration process and a recommendation will be made as to whether or not a bandage will be required.
- Should a Candidate become injured during the exam (e.g.: a needle prick during Injections), a band-aid and glove will be provided.
 - If a Candidate believes they have injured themselves, they should notify personnel in the exam room.
 - Candidates should not assume that they are not bleeding. Often an incident like a needle prick will take several minutes to produce any blood.

- Candidates should bandage any potential wounds that occur to ensure overall safety of personnel.
- Bandaging the wound early ultimately saves Candidates time during the process and prevents further issues from occurring in regards to blood contaminating materials and equipment.
- When a Candidate experiences a needle prick or any other injury in which the potential for blood borne pathogen exposure is possible candidates must use Universal Precautions. The CDC recommends **Universal Precautions** for the care of all patients, regardless of their diagnosis or presumed infection status.
 - **Universal Precautions** apply to 1) blood; 2) all body fluids, secretions, and excretions, *except sweat*, regardless of whether or not they contain visible blood; 3) non-intact skin; and 4) mucous membranes. Standard precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.
 - Universal Precautions include the use of: hand washing, appropriate personal protective equipment such as gloves, gowns, masks, whenever touching or exposure to patients' body fluids is anticipated.
- No additional time will be given during the exam for injuries that occur as a result of Candidate's error.
- In the event a medical emergency should occur during the exam, Candidates should remain calm and a Staff member will be there to assist and assess the situation.

RESTROOM / DRINKING FOUNTAIN USE

- It is advisable for Candidates to use the restroom before the examination begins. No time allowance is given for restroom use during the examination sessions. In the event a Candidate needs to use the restroom during the exam, they should inform the Proctor who will escort them to the restroom.
- If a Candidate is in the Observation Time and would like to use the restroom, they should notify Staff. Again, no additional time will be added to the Observation Time or to the Station time for restroom use.
- The same principals for restroom use apply to using the drinking fountain.

POST EXAM INFORMATION

CANDIDATE INCIDENT REPORTS & SURVEYS

- At the conclusion of the exam, all Candidates will sit at the workstation to the left of their final exam room.
- At the workstation will be a computer that will be used by Candidates to submit an incident report and to complete the optional survey.
- Candidates will log into the Incident Report using the same user name and password (created by the Candidate) used to register for the exam on the NBEO website. Additional instructions for logging into the database can be found in the Candidate Orientation Video.
- Candidates are encouraged to think through their exam and use this opportunity to document any irregularity that may have occurred in which a Candidate feels may negatively have impacted their performance. Incident Reports **will not be accepted** from Candidates once they have left the test center.
- Candidates can document any concerns involving the equipment, Proctors or the Candidate's individual performance.

- Once Candidates have completed the Incident Report, they will be offered the opportunity to complete an optional survey. The survey is a basic set of questions that allow you to review your experience at the test center.
- Once all Incident Reports have been submitted, they will be reviewed by Staff. **Staff will be reviewing videos and interviewing the proctor for more information regarding your Incident Report.** Additionally, staff will inspect any reported equipment malfunction. This process may take some time so completing the Candidate Survey will provide you with something to occupy your time
- During the Incident Reports Review, since videos are available to view any issues, Staff will only discuss incidents with Candidates if clarification or further information is needed.
- Once all Incident Reports have been reviewed and it is determined there are no administrative issues or all issues have been resolved, Staff will dismiss Candidates from the exam hall.

CANDIDATE DISMISSAL

- Once dismissed from the exam hall, Candidates will return to the lobby to sign out on the registration log, return the issued arm bands, and begin retrieving any personal belongings.
- Candidates must *not* leave the test center until dismissed or re-enter the test center after dismissal.

RETEST POLICY

- The NBEO retest policy dictates that repeat tests are provided only due to administrative irregularities (e.g., equipment failure, loss of electrical power, or an unacceptable patient).
- Staff are permitted to approve provisional retests on exam day because of the time-sensitive nature of the CSE process. However, only NBEO review of a retest and its accompanying documentation can determine if the retest was warranted or if the original test results should be accepted. This determination will be made by NBEO staff prior to scoring of the retest, to avoid any bias.

ADDITIONAL EXAM INFORMATION

CANDIDATE TO CANDIDATE INTERACTION

- Candidates may engage in conversation during the registration and orientation process.
- **Once Candidates are escorted to the test center hall, no communication should occur between Candidates at any time during the exam or post-exam process.**
- “Communication” includes conversation, verbal statements, non-verbal cues/expressions (e.g., thumbs up/down, shaking head, high-fives, etc.), and passing notes, as examples.
- Violation of this policy will not be tolerated and may be cause for disqualification from, dismissal from, and/or failure of the examination.

CODE OF CONDUCT

- All exams performed at the NCCTO are audio and video recorded. Candidates will be scored on what is seen on the recording. It is important to note that actions will be taken by the NBEO if it is determined that a Candidate has falsified data/findings during the examination or if a Candidate has abandoned a Patient during a skill.
- Below are excerpts from the Candidate Agreement/Ethics Policy all Candidates agreed to when registering for CSE:

A primary concern of the NBEO Ethics Policy is the confidentiality and security of exam items and materials. All NBEO exam items (such as questions, answers, case scenarios, images and Clinical Skills Examination (CSE) patient data, scripts, or other materials) contained in past, current, or future exams are strictly confidential and are the copyrighted property of the NBEO.

*Any verbal discussion or written disclosure of any aspect of the copyrighted exam items, clinical cases, **scripts, or standardized patient information** after the examination is strictly forbidden.*

...the NBEO has the right and sole discretion, exercised in good faith, to determine the appropriate penalty or sanction for any Improper Conduct or violation of NBEO proprietary rights, including without limitation any one or more of the following:

- *Disqualification from taking or continuing to sit for the current examination.*
- *Disqualification from taking any future NBEO examinations; such disqualification can be for any period of time that the NBEO determines is appropriate in the circumstances, perhaps even for multiple years, or permanently.*
- *Disqualification from reporting of examination scores.*
- *Cancellation of examination scores.*
- *Inclusion of a permanent score of "0F*" in a Candidate score report. This signifies a failing score of zero on the CSE. The licensing board, school, or other third party to whom such score is reported may contact the NBEO for more information including a summary of the findings regarding the Improper Conduct.*

APPEALS

- Once scores are released, if a Candidate believes their scores are not accurate, they may appeal their CSE results.
- All appeals should contain substantive issues to be considered and should be filed online at the NBEO website within 30 days from the date on which the CSE scores are posted.
- The appeals process takes approximately 6 to 8 weeks.
- If the initial appeal is denied, Candidates may appeal further to the Judicial Committee of the Board of Directors.
- Additional information regarding the appeals process can be found online.

SCORING PRACTICES

- The NBEO uses quantitative and qualitative data analysis to evaluate examination uniformity and fairness in order to identify potentially poor measurement. Candidates who achieve scores above the overall cut-off requirement receive a passing score. A CSE score below the cut-off requirement will result in a failing score.
- Additional information regarding scoring practices, score breakdowns and reports is available online.

Station 4 – Injection Skills Exam Overview

During the Injection Skills Exam, the Proctor will serve as the “Patient.”
All questions and inquiries should be directed to the Proctor for confirmation.

The Injections Skill is comprised of 4 distinct procedures that must be performed in order:

- Procedure 1 - preparation for intravenous (IV) injection for fluorescein angiography,
- Procedure 2 - preparation for intramuscular (IM) injection of epinephrine,
- Procedure 3 - performing an intravenous injection for fluorescein angiography, and
- Procedure 4 - performing an intramuscular injection of epinephrine.

This Station integrates IV injection, as would be done for fluorescein angiography, with the intramuscular injection of epinephrine. This is clinically realistic since a needle/syringe filled with 1:1000 epinephrine could be prepared prior to performing fluorescein angiography in the event the patient experiences an anaphylactic reaction due to the injection of fluorescein sodium dye.

Given the nature and criticality of the injections to be performed, Candidates should assume that:

- an appropriate written Informed Consent has been discussed with and signed by the Patient prior to performing the injections.
- the Patient’s identity has been verified using 2 methods such as name, date of birth, last 4 digits of the SSN, and/or address prior to performing the injections.
- the nature of the injection procedure and the injection site have been verified by asking the Patient to verbalize his/her understanding of these issues.
- the Patient is male and has been found to have a normal BP measurement during the pre-procedure work-up.

Whatever materials are placed initially ON the drape will be considered aseptic. Materials NOT initially placed on the drape are not considered aseptic. Candidates are advised to be cautious and ensure they are maintaining aseptic technique throughout the injections exam.

The gloves that are donned in performing an intravenous injection for fluorescein angiography may be left on while performing an intramuscular injection of epinephrine. If desired, Candidates may wash their hands while wearing the protective gloves.

A standard multi-use medication vial will be provided and labeled “25% fluorescein sodium” with an expiration date; however, the solution in the vial will be clear as it is simulated medication and not actual medication.

Candidates are strongly encouraged to thoroughly palpate the arm and not to choose injections sites based on a visual inspection of the arm. **Palpation is essential.**

Regarding the 4 intravenous injection attempts, an “attempt” is viewed as piercing the skin of the arm and removing the needle from the skin or excessive manipulation of the needle within the simulated arm. After 4 instances of inserting and removing the needle, this is an automatic stop and **will not continue to be scored**. Candidates have 4 attempts total. Once the 4th attempt has been reached, no other attempts will be scored. This includes any repeats. For instance, if you complete two attempts and decide to repeat the Procedure, you would have two attempts remaining. The Proctor will not initiate any reminder of the number of attempts taken or remaining nor will the Proctor stop the Candidate after the 4th attempt.

It should also be noted that **excessive manipulation** of the needle within the arm is not acceptable. Excessive manipulation will be counted as an attempt or possibly multiple attempts if the manipulation of the needle within the arm is egregious. Candidates should treat the simulation arm as they would a human arm during the injections procedures.

An IM injection of 1:1000 epinephrine solution is to be performed in the center of the deltoid muscle pad on the simulated arm. The NBEO recognizes that injection of epinephrine to treat an anaphylactic reaction is usually administered intramuscularly in the outer thigh of a patient. However, the NBEO views the skills needed to perform IM injection in the center of the deltoid muscle pad of the simulated arm to be similar to the administration of epinephrine by injection at another anatomical site as performed clinically.

To provide additional information regarding the simulated injections arm:

The simulated arms are designed to replicate an adult human arm. Veins that would be reasonable veins to draw blood from on a human arm are replicated in the simulated arm. When completing an IV injection, if the tubing is not filling **solidly** with blood, the Candidate is not appropriately in a vein. Any “splatter” of blood or intermittent blood flow is an indication that the Candidate has not appropriately entered a vein (see the Orientation video for pictures).

Often Candidates will assume that because they saw *some* blood, they are appropriately in a vein and will pull the plunger of their syringe back so far, that the plunger reaches the end of the syringe. Now the Candidate has no room to pull back on the syringe for “suction” on any other attempts. In these situations, due to the nature of the exam, before completing any additional attempts, it is to the Candidate’s benefit to safely express any air aspirated into the syringe, so there will be “suction” for the future attempts. Again, if a Candidate is putting light pressure on the plunger and the tubing is not filling **solidly** and **consistently** with blood, the Candidate is not appropriately in a vein.

WHEN REPEATING INJECTIONS:

In the event the Candidate wishes to repeat part of ISE, it is necessary to clearly announce which specific ISE procedure (Procedure 1, 2, 3 and/or 4) you wish to repeat. When a Candidate wishes to repeat either Procedure 3 (IV) or Procedure 4 (IM), a needle and syringe can be quickly assembled with fluid (not for scoring purposes) to complete the procedure. It is not necessary to repeat preparation items unless you are specifically repeating Procedures 1 and/or 2. Instead you are only obtaining the supplies you will need to perform Procedures 3 or 4.

Candidates who wish to repeat one or more items within a procedure may do so at their discretion, **if** they have not begun the next procedure. However, Candidates who have begun the next procedure and wish to return to a prior procedure to repeat items are expected to redo the **entire procedure**. Candidates must announce their intent to the Proctor and return to the first item in the procedure – not the first item of the Injections skill. In repeating the procedure, **all** of the prior scores recorded by the Examiner are erased, and the Candidate is evaluated as if performing the entire procedure for the first time. Specific Injections repeat policies are posted on the back of the exam room doors for reference during the exam.

As a reminder, a stopped procedure cannot be repeated. As such, if a Candidate has completed 4 attempts on the IV injection, it is considered a stop and should not be repeated.

AUGUST 2016-JULY 2017 CANDIDATE INSTRUCTIONS FOR ISE
(posted in exam room)

Skill 20: Injections Skill Examination

All Injections questions/communications should be directed to the Proctor.

Procedure 1: Preparation for Intravenous (IV) Injection for Fluorescein Angiography

Prepare a 5mL syringe and needle appropriately for intravenous injection with 3.0 mL 25% fluorescein sodium while maintaining aseptic technique.

Procedure 2: Preparation for Intramuscular (IM) Injection of Epinephrine

Prepare a 1mL syringe and needle appropriately for intramuscular injection with 0.4 mL 1:1000 epinephrine while maintaining aseptic technique.

Procedure 3: Performing an Intravenous Injection for Fluorescein Angiography

Perform an intravenous injection of fluorescein sodium into an appropriate venous site of the simulated arm (hand, antecubital, or other site in the lower arm). State the injection elements that should be documented in a patient record (drug, dose, delivery method, location). Discard all items into a wastebasket as non-biohazards except for needles, which should be discarded in the Sharps Container.

Procedure 4: Performing an Intramuscular Injection of Epinephrine

Perform an intramuscular injection of 1:1000 epinephrine into the **center** of the deltoid muscle on the simulated arm. State the injection elements that should be documented in a patient record (drug, dose, delivery method, location). Discard all items into a wastebasket as non-biohazards except for needles, which should be discarded in the Sharps Container.

WHEN REPEATING INJECTIONS:

- In the event the Candidate wishes to repeat part of ISE, it is absolutely necessary to clearly announce which specific ISE procedure (Procedure 1, 2, 3 and/or 4) you wish to repeat.
- When a Candidate wishes to repeat either Procedure 3 (IV) and/or Procedure 4 (IM), a needle and syringe can be quickly assembled with fluid (not for scoring purposes) to complete the procedure.
- It is not necessary to repeat preparation items unless you are specifically repeating Procedures 1 and/or 2.

Candidates are encouraged to review the ISE Evaluation Form for detailed information on the items required to be completed during the examination