

**NATIONAL REGISTRY OF EMERGENCY MEDICAL  
TECHNICIANS®**

**ADVANCED LEVEL  
EXAMINATION  
COORDINATOR MANUAL**

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**by the  
NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS, INC.**

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## Welcome

Dear Examination Coordinator:

Thank you for your interest in hosting an Advanced Level NREMT examination. We are pleased to provide you with this copy of the [Advanced Level Examination Coordinator Manual](#). This comprehensive manual details all aspects of coordinating an Advanced Level NREMT psychomotor examination and is designed to assist you in planning for all related aspects of the examination. Detailed information describing the process for obtaining approval as an examination host is located at <http://www.nremt.org>.

The following information reflects years of experience in examination administration. The quality of the examination process is due in part to feedback we have received from Examination Coordinators such as you in the past. As a result of our continuous efforts to improve the examination process and keep it current with out-of-hospital medical care, we proudly present the NREMT Advanced Level Examination as implemented effective June 1, 2011. The revised Advanced Level Psychomotor Examination consists of skills presented in a scenario-type format to approximate the abilities of the Advanced Emergency Medical Technician (NRAEMT), Intermediate/99, and Paramedic to function in the out-of-hospital setting. All skills have been developed in accordance with the 2009 Education Standards and Instructional Guidelines for the EMT; the behavioral and skill objectives of the 1999 EMT-Intermediate National Standard Curricula; the 2009 Education Standards and Instructional Guidelines for the Advanced Emergency Medical Technician and the Paramedic; the National Trauma Triage Protocol published by the U.S. Department of Health and Human Services Centers for Disease Control and Prevention; and current American Heart Association guidelines for Basic Cardiac Life Support (BCLS), Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) that are updated as necessary. The process is a formal verification of the candidate's "hands-on" abilities and knowledge, rather than a teaching, coaching, or remedial training session. The NREMT will not explain specific errors in any performance as this is not a responsibility or function of a certification process. A candidate's attendance at a scheduled examination does not guarantee eligibility for National EMS Certification. Candidates should also be warned that they assume all risks and consequences of testing inappropriate skills if testing at a site where their name was not read as part of the official examination roster.

This manual describes all aspects related to requesting and coordinating Advanced Level NREMT psychomotor examinations. As an Examination Coordinator, you assume many responsibilities that are vital to the success of the psychomotor examination process. The quality of your experience with this certification process is directly dependent upon your thorough familiarization with all of the material contained herein. We are committed to assist you to help ensure that all candidates who attend your examination site will be tested in a fair, consistent, objective, and impartial manner in accordance with all policies and procedures of the National Registry of Emergency Medical Technicians® (NREMT®) outlined in this manual. Please contact us immediately if we can clarify or answer any questions concerning this process.

The NREMT has copyrighted this material. Only non-commercial reproduction of this material for educational purposes or the advancement of medical science is permitted. All other unauthorized reproductions of this material for any reason whatsoever is subject to penalties in accordance with all copyright laws of the United States of America. We encourage you to distribute copies of all skill evaluation instruments (available at <http://www.nremt.org>) to your students prior to the examination so they may become familiar with the expectations of the NREMT well in advance of the actual

examination. Likewise, you should forward a copy of the skill evaluation instrument and essay (included in this document) to the respective Skill Examiner one (1) week prior to the examination to give him/her ample time for familiarization prior to the examination.

Thank you again for your interest in hosting an Advanced Level NREMT psychomotor examination. We look forward to receiving your electronic examination request within the appropriate time frame and are committed to assisting you with the process. We hope your examination is a successful endeavor for all involved.

Sincerely,

*Rob Wagoner*

Rob Wagoner, Associate Director

## Examination Coordinator Responsibilities

**The Examination Coordinator is responsible for the following upon approval by the NREMT or its agents:**

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Examination Coordinator must help ensure that each Skill Examiner conducts himself/herself in a similar manner throughout the examination.
- Securing a National Registry Representative to administer the psychomotor examination.
- Submitting the electronic request to NREMT to host the psychomotor examination.
- Maintaining a reservation list of candidates who will be attending the psychomotor examination. The reservation list must include name, social security number, call-back phone number, and level of examination (Advanced Emergency Medical Technician, Intermediate/99, or Paramedic). If the examination is postponed or canceled, the Examination Coordinator is responsible for the immediate notification of all candidates, Skill Examiners, EMT Assistants, Simulated Patients, National Registry Representative, and the NREMT.
- Submission of a final reservation list of candidates registered for the psychomotor examination to the NREMT by the cut-off date listed in the examination confirmation notice.
- Ensuring that the facilities for the psychomotor examinations meet the NREMT and acceptable educational standards.
- Selection of qualified Skill Examiners. At a minimum, each examiner must be certified or licensed to perform the skill that he/she is to evaluate.
- Selection of qualified EMT Assistants.
- Selection of appropriate individuals of average adult height and weight to serve as Simulated Patients. Simulated Patients must be adults or adolescents who are at least sixteen (16) years of age. **Candidates who are registered to take the examination may not serve as patients or assistants for any skill.** A high fidelity simulation manikin capable of responding as a real patient given the approved scenario(s) may be used as the Simulated Patient.
- Obtaining all clean, functional, and required equipment for each skill and ensuring that all equipment is operational (See Appendix A).
- Overseeing the timely flow of all candidates through the skills in conjunction with the NREMT Representative.
- Ensuring that excessive "hall talk" between candidates or discussing specific examination scenarios or questions does not occur throughout the examination.

**The Examination Coordinator must be present at the site during the examination. The Examination Coordinator may not serve as a Skill Examiner during the examination.** If the Examination Coordinator is also taking the examination, the coordinator is responsible for assigning a competent, informed, and capable person to coordinate all examination activities during the examination. In such a case, this person shall serve as and assume all responsibilities of the "Examination Coordinator" throughout the examination.

## Examination Coordinator's Timeline

The following timeline has been developed to assist the Examination Coordinator with planning the examination:

## TIMELINE TO COORDINATE EXAMINATION

Exam Location: \_\_\_\_\_ Exam Date: \_\_\_\_\_

Time Frame Prior to Exam	Action
6 to 8 weeks minimum	<ul style="list-style-type: none"> <li><input type="checkbox"/> Secure commitment from a National Registry Representative to administer the psychomotor examination</li> <li><input type="checkbox"/> Submit electronic official request to NREMT to host the psychomotor examination</li> <li><input type="checkbox"/> Secure facilities to host psychomotor examination</li> </ul>
4 to 6 weeks	<ul style="list-style-type: none"> <li><input type="checkbox"/> Follow up with NREMT immediately if you have not yet received electronic confirmation of the examination</li> <li><input type="checkbox"/> Expect to receive initial contact from National Registry Representative assigned to administer your examination. If not, call him/her at the number listed in your confirmation notice.</li> </ul>
Receipt of confirmation notice to 3 ½ weeks	<ul style="list-style-type: none"> <li><input type="checkbox"/> Take reservations from all candidates</li> <li><input type="checkbox"/> Fill out reservation list completely</li> <li><input type="checkbox"/> Call NREMT when your exam is full so no additional candidates are referred to your site</li> </ul>
3 ½ weeks	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>STOP TAKING RESERVATIONS!!</b> You will know at this point if minimum numbers of candidates are registered for the examination.</li> <li><input type="checkbox"/> <b>Submit the completed electronic reservation list to NREMT</b></li> </ul>
3 weeks	<ul style="list-style-type: none"> <li><input type="checkbox"/> Secure commitments from all Skill Examiners, EMT Assistants, Simulated Patients, and Physician Medical Director. Be sure to plan on 1 or 2 extra Skill Examiners just in case of unexpected emergencies on examination day.</li> </ul>
2 weeks	<ul style="list-style-type: none"> <li><input type="checkbox"/> Gather all equipment and supplies</li> <li><input type="checkbox"/> Re-confirm facilities will be available for the psychomotor examination as previously planned</li> </ul>
1 week	<ul style="list-style-type: none"> <li><input type="checkbox"/> Send reminder letter to all Skill Examiners, EMT Assistants, Simulated Patients, and Physician Medical Director. Include a copy of the Skill Essay and Evaluation Instrument for each Skill Examiner, as well as a parking pass, map, etc.</li> <li><input type="checkbox"/> Expect to receive contact from National Registry Representative to confirm exam location(s), time(s), and exam material needs. If not, call him/her at number listed in your confirmation notice.</li> </ul>
1 day	<ul style="list-style-type: none"> <li><input type="checkbox"/> Set up all skills if possible</li> </ul>

## Requesting to Host an Examination

A formal request to schedule an examination must be submitted electronically to the NREMT office in Columbus, Ohio. It must be received from an approved official sponsoring institution or EMS agency (educational institution, hospital, EMS service) and be submitted by the Examination Coordinator or the National Registry Representative. For information concerning approval of an Examination Host, please visit <http://www.nremt.org> and review the “Examination Coordinators’ Step-by-Step Online Procedures – Advanced” document. **The formal examination request must be submitted six (6) to eight (8) weeks prior to the projected examination date(s) and include the following information in the format outlined:**

1. Level(s) of examination being offered (Advanced Emergency Medical Technician [NRAEMT], Intermediate/99, and/or Paramedic).
2. The date(s) and time(s) of the psychomotor examination(s).
3. The exact location(s) of the psychomotor examination(s), including the name of the institution, exact street address, building and room numbers, city, state, and ZIP code.
4. Information relative to the person coordinating the examination, including the name, exact street mailing address, and phone number of the Examination Coordinator. It is helpful to also include alternate contact information, such as e-mail address, pager number, cell phone number, etc.
5. Name of the approved National Registry Representative who has agreed to administer the examination.
6. Information concerning the availability of the examination. This refers to the options of coordinating either a "closed" or "open" examination. A "closed" examination is held for a specific group of candidates, provided at least twenty (20) qualified candidates\* are registered for the psychomotor examination by the cut-off date established for the examination. An "open" examination is coordinated when candidates from any geographic region may attend the site and must be coordinated if less than twenty (20) qualified candidates are expected for the examination.
7. The name and phone number of the person candidates should contact when making reservations for an "open" examination (if someone other than the Examination Coordinator). The contact person must be accessible and is required to maintain the reservation listing for the examination.
8. Name of the Physician Medical Director for the examination.

\* Generally, 20 candidates are necessary to justify the expense of examination administration. More may be required if expenses are high.

This electronic request is also forwarded from “DoNotReply@nremt.org” as an email notice with the subject identified as “Exam request # \_\_\_\_\_ has been created” to the respective State EMS Office and the identified National Registry Representative. Unless there is a legitimate reason that would result in immediate withdrawal of the request, such as education from an unapproved course or the identified Representative has not agreed to administer the examination, the examination will usually be scheduled after a brief period.

Page 9 is an example of an official request from an approved entity to host an Advanced Level NREMT Psychomotor Examination.

## Sample Request to Host Advanced Level NREMT Psychomotor Examination

**From:** DoNotReply@nremt.org  
**Sent:** June 1, 2013  
**To:** Examination Department; curley@acmeparau.edu; imagoodwin@nremt.org  
**Subject:** Exam request #2013000601 has been created.

Examination ID: 2013000601

Exam Information:

Level: Advanced (Paramedic)  
Type: Practical  
Schedule Type: Open  
Exam Host: Acme Paramedicine University  
Practical Exam Date: 8/31/2013 8:00  
Cut Off Date: 8/17/2013

Exam Requester Information:

Name: Howard, Jerome

NREMT Rep Information:

Name: Goodwin, Ima  
Phone Number: (614)888-4484

Physician Medical Director Information:

Name: Lawrence Fines, MD

Reservation Coordinator Information:

Horowitz, Jennie  
15½ Maple Avenue  
Pieland, OH 44444

Exam Coordinator Information:

Howard, Jerome L.  
15 ½ Maple Avenue  
Pieland, OH 44444  
(614)102-1903

## **Confirmation of the Examination**

If there are no legitimate reasons to deny the examination request, a confirmation notice will be sent electronically from “DoNotReply@nremt.org” to the requesting party, with copies also sent to the respective state EMS office and the designated National Registry Representative. The email subject is identified as “Exam request # \_\_\_\_\_ has been approved.” Shortly after receiving this confirmation, the National Registry Representative should contact the Examination Coordinator to introduce him/herself and verify the Examination Coordinator’s familiarity with the examination process. A sample of the official confirmation notice forwarded by the NREMT is listed on page 11.

## Sample Confirmation Notice for Advanced Level NREMT Psychomotor Examination

**From:** DoNotReply@nremt.org  
**Sent:** June 3, 2013  
**To:** Examination Department; curley@acmeparau.edu; imagoodwin@nremt.org;  
bigdog@ohioems.gov  
**Subject:** Exam request #2013000601 has been approved.

Examination ID: 2013000601

### Exam Information:

Level: Advanced (Paramedic)  
Type: Practical  
Schedule Type: Open  
Exam Host: Acme Paramedicine University  
Practical Exam Date: 8/31/2013 8:00  
Cut Off Date: 8/17/2013

### Exam Requester Information:

Name: Howard, Jerome

### NREMT Rep Information:

Name: Goodwin, Ima  
Phone Number: (614)888-4484

### Physician Medical Director Information:

Name: Lawrence Fines, MD

### Reservation Coordinator Information:

Horowitz, Jennie  
15½ Maple Avenue  
Pieland, OH 44444

### Exam Coordinator Information:

Howard, Jerome L.  
15 ½ Maple Avenue  
Pieland, OH 44444  
(614)102-1903

## Maintaining a Reservation List of Candidates

The Examination Coordinator is solely responsible for maintaining a reservation list of all candidates who will be attending the examination. Every candidate who is planning on attending the examination site must be listed on the electronic "Reservation List" that is made available to the Examination Coordinator when the examination is confirmed. The completed reservation list must be submitted electronically to the NREMT by the cut-off date listed in the confirmation notice, usually two to three (2 – 3) weeks in advance of the examination date. All examination materials for that particular exam are prepared and shipped directly to the National Registry Representative **based solely upon the submitted Reservation List. The NREMT will not be responsible for candidates who must be dismissed from an examination site due to a lack of examination materials when the Examination Coordinator did not submit that candidate's correct information on the reservation list by the deadline for the examination.** It is imperative that the completed and final reservation list is forwarded by the due date or the examination will be subject to postponement.

Many Examination Coordinators cannot resist the temptation to add several people after the deadline has passed, especially for those candidates who only need to test a portion of the psychomotor examination. Although the Examination Coordinator's intentions may be good, the result is often chaotic and most adversely affects the candidate whom the Examination Coordinator was trying to help in the first place. All candidates must meet specific eligibility requirements, retesting requirements, and so forth that usually cannot be verified with the NREMT office from the examination site. Therefore, if a candidate is not listed on the official roster for the examination that was shipped to the National Registry Representative, the candidate may be at risk for dismissal from the examination site. **In any case, the NREMT will not be responsible for any candidate who does not complete the appropriate portion(s) of the examination if he/she was not listed on the official roster for that examination.** The candidate bears full responsibility for completing all appropriate portions of the examination in accordance with NREMT policies and procedures.

If the site is willing to accept additional candidates for testing and has scheduled an "open" examination, all candidates wishing to attend the exam site will be contacting the Examination Coordinator or Reservation Coordinator at the phone number listed in the request letter to make reservations. "Open" examinations may also be displayed on our web site to assist candidates in finding examination sites (<http://www.nremt.org>). If the examination was scheduled as "closed," at least twenty (20) qualified candidates\* must be registered for the examination by the cut-off date. The NREMT will not refer outside candidates to "closed" sites or post "closed examination" information on our web site. In all cases, a completed reservation list that identifies all candidates scheduled to attend the examination must be forwarded electronically to the NREMT by the cut-off date listed in the confirmation notice. The following procedures should be utilized when maintaining examination reservations:

1. Examination Coordinator completes the reservation form listing each candidate scheduled to attend the examination site. This form must be completed to include the candidate's name, social security number, phone number, and level at which he/she will be testing (Advanced Emergency Medical Technician [AEMT], Intermediate/99, or Paramedic). The candidate's phone number should be recorded so that the Examination Coordinator may contact the candidate in case of postponement or as other last minute changes occur with the examination. The NREMT office should be notified as soon as the examination fills so that the listing may be removed from our website.
2. Examination Coordinator directs all candidates to establish their personal account with NREMT for the level at which they will be testing. The NREMT cannot report results until the candidate

establishes an account at the appropriate level with NREMT. All candidates should also be reminded to bring official photo identification, a #2 pencil, and all previous results letters he/she has received from the NREMT.

3. At the cut-off date, the Examination Coordinator forwards the completed electronic examination reservation list to the NREMT.
4. The NREMT will review the submitted reservation list, prepare the appropriate examination materials for all candidates listed on the reservation list, and forward all examination materials to the designated National Registry Representative, provided at least twenty (20) qualified candidates\* are registered for the examination by the deadline. Candidates may not be added to the examination reservation list after the deadline unless extenuating circumstances dictate this action. After the deadline, candidates may only be added to the reservation list by personal contact from the Examination Coordinator to the NREMT. Candidates applying late will only be added to a reservation list at the sole discretion and approval of the NREMT.

If this is the first NREMT examination being coordinated, we recommend that no more than thirty (30) candidates be tested. If an "open" examination is being coordinated to achieve the minimum of twenty (20) qualified candidates, we suggest taking reservations for twenty-five (25) candidates at a minimum and expect a 15% no-show rate. Up to fifty (50) candidates can be tested on the same day but skills must be duplicated in order to accommodate this number within a reasonable time period. Unless there is ample experience in coordinating NREMT examinations, we do not recommend testing one hundred (100) or more candidates on a single day.

The Examination Coordinator is responsible for notifying the NREMT when the examination is full and no more reservations are being taken. Upon notification, the NREMT will remove the examination from the NREMT website. This will help prevent candidates from contacting the Examination Coordinator after the examination has been fully booked. In the event of postponement due to the lack of adequate minimum numbers of candidates or cancellation for other reasons, the Examination Coordinator is solely responsible for immediate notification of all candidates, Skill Examiners, EMT Assistants, Simulated Patients, National Registry Representative, and the NREMT.

## **Reservation List**

The Advanced Level Examination Reservation List has been developed to assist in gathering information from all candidates who will be attending the examination. After the examination is confirmed, the Advanced Level Examination Reservation List is available electronically on-line after logging into the appropriate account (sample listed in Appendix B). It is imperative that all information obtained from every candidate who contacts the Examination Coordinator to test at the site is entered on the reservation list completely. Without a name, social security number, and identifying the level at which each candidate will be testing on the day of the examination, the NREMT has no way to confirm a candidate's previous testing history and ship all appropriate materials for the examination. The level and portion(s) of the examination that each candidate will need to complete as listed on the official roster we provide to the National Registry Representative may not be what the candidate expects to test on the day of the examination if any of this vital information is not provided on the Reservation List.

Examination materials will be shipped from the NREMT office to reach the designated National Registry Representative at least five (5) working days before the examination. It is imperative to submit the final reservation listing by the cut-off date so that records may be researched and sufficient examination materials may reach the National Registry Representative in time to administer the examination.

After materials are received, the National Registry Representative will be contacting the Examination Coordinator to confirm that he/she will show up “at the right place at the right time with the right stuff” to administer the examination. This is a final “safety check” to ensure that the Representative has received all necessary materials to administer your examination. Be sure to verify the total quantity of examination materials for each level with the National Registry Representative several days before the examination.

## **Equipment List**

The Examination Coordinator is responsible for obtaining and setting up the various skills on the day prior to the scheduled psychomotor examination if possible. If it is not possible to set up all skills the day before the psychomotor examination, the Examination Coordinator must at least verify the availability of all equipment that is considered to be the minimal essential equipment needed. An equipment list for the psychomotor examination is included in Appendix A of this manual to help you coordinate your psychomotor examination.

## **Facilities for the Psychomotor Examination**

The Examination Coordinator is responsible for securing a facility large enough to accommodate the number of candidates scheduled to attend the psychomotor examination. Each facility utilized for the psychomotor examination must provide:

1. Adequate space to offer a minimum of 100 square feet for each of the skills. Each area shall be partitioned in such a manner to allow easy entrance and exit by the candidates and prohibit observation by other candidates and non-involved personnel. Entrance to, and exit from, all skills must not disturb other candidates who are testing.
2. A comfortable testing environment free of undue noise and distraction.
3. Ample gathering space for candidates during the Candidate Orientation to the Psychomotor Examination.
4. Adequate and effective heating, cooling, ventilation, and lighting.
5. A waiting area adjacent to the skills for candidates to assemble while waiting for skills to open.
6. Adequate restroom facilities, a drinking fountain, and adequate parking with reasonable access to the examination site.
7. Adequate space for the Skill Examiners Orientation to the Psychomotor Examination, including EMT Assistants and Simulated Patients. This space must visually and audibly prohibit observation by the candidates.
8. Adequate security of all examination materials during the examination.
9. Skills must be appropriately posted or marked. One set of signs to post at each skill is provided in Appendix C of this manual.
10. A table and chair in each room for Skill Examiners. The Examination Coordinator may also want to provide each Skill Examiner with a clipboard and a pen to assist with documenting all performances.
11. A secure room adjacent to the skills with one or several large tables for the National Registry Representative to compile psychomotor examination results.

The following chart should assist you in identifying the psychomotor skills to be tested, retest eligibility for Advanced Level NREMT examination candidates, and exam staff needs:

NREMT LEVEL				SKILLS	EXAM STAFF			
Advanced EMT	Intermediate/99	Paramedic	Applying I/99 Results to Paramedic Practical		Skill Examiner	EMT Assistant	Simulated Patient	
✓	✓	✓	✓	1. Patient Assessment – Trauma	1		1	
✓	✓			2. Patient Assessment – Medical	1		1	
				3. Ventilatory Management				
	✓	✓	✓	a. Adult	1			
✓	✓	✓	✓	b. Supraglottic Airway Device				
				4. Cardiac Management Skills				
	✓	✓	✓	a. Dynamic Cardiology	1			
	✓	✓	✓	b. Static Cardiology				
✓				c. Cardiac Arrest Management/AED	1			
				5. Oral Station				
		✓	✓	a. Case A	1			
		✓	✓	b. Case B	1			
				6. IV and Medication Skills				
✓	✓	✓		a. Intravenous Therapy	1			
✓	✓	✓		b. Intravenous Bolus Medications				
				7. Pediatric Skills				
	✓	✓	✓	a. Pediatric Ventilatory Management	1			
✓	✓	✓		b. Pediatric Intraosseous Infusion				
✓				c. Pediatric Respiratory Compromise				
				8. Random EMT Skills (test one [1] of the following chosen at random:)				
✓*	✓*	✓*		Spinal Immobilization (Seated Patient)	1	1	1	
	✓*	✓*		Spinal Immobilization (Supine Patient)				
✓*	✓*	✓*		Bleeding Control/Shock Management				
✓*				Long Bone Immobilization				
✓*				Joint Immobilization				
✓* = Must test one (1) of the skills marked “✓*” chosen at random								
✓				9. Spinal Immobilization (Supine Patient)				

MAXIMUM # OF SKILLS FAILED FOR RETEST					TOTAL STAFF REQUIRED		
4	5	5	5	You are eligible for retesting just the skill(s) failed as long as you don't fail more than the number of skills noted to the left and you meet all other requirements for National EMS Certification. Failing more than this number of skills will require remedial training and repeating the entire psychomotor examination on another date.	10	1	3

## Staffing for the Advanced Level Psychomotor Examination

An examination for twenty (20) candidates requires the minimum staffing as previously outlined to complete the examination within four (4) to five (5) hours. If all skills are duplicated, the psychomotor examination should be completed in half the projected time or twice the number of candidates can be expected to complete the examination in the same amount of time.

The Examination Coordinator should note that instead of setting up a separate Pediatric Skills area, the Pediatric Skills might be incorporated into other related skill areas, thus reducing the total number of Skill Examiners to nine (9). If necessary, the Pediatric Ventilatory Management and Pediatric Respiratory Compromise skills may be included in the Ventilatory Management Skills but this will noticeably decrease the flow of candidates through the skills. Likewise, the Pediatric Intraosseous Infusion skill may be included in the IV and Medication Skills but will also noticeably decrease the flow of candidates through the skills. Assigning a helper to clean up after each skill is completed will greatly assist the Skill Examiner and improve the flow of candidates when the IV and Medication and Pediatric Intraosseous skills are combined.

The following chart should assist the Examination Coordinator in staffing to administer the psychomotor examination for 20 candidates:

# SKILLS

NREMT LEVEL					EXAM STAFF			FLOW
Advanced EMT	Intermediate/99	Paramedic	Applying I/99 Results to Paramedic Practical		Skill Examiner	EMT Assistant	Simulated Patient	Average # of Candidates Evaluated per Hour
✓	✓	✓	✓	1. Patient Assessment – Trauma	1		1	4
✓	✓			2. Patient Assessment – Medical	1		1	3 to 4
				3. Ventilatory Management				
		✓	✓	a. Adult	1			6
✓	✓	✓	✓	b. Supraglottic Airway Device				
				4. Cardiac Management Skills				
	✓	✓	✓	a. Dynamic Cardiology	1			4
	✓	✓	✓	b. Static Cardiology				
✓				c. Cardiac Arrest Management/AED	1			4
				5. Oral Station				
		✓	✓	a. Case A	1			3 to 4
		✓	✓	b. Case B	1			3 to 4
				6. IV and Medication Skills				
✓	✓	✓		a. Intravenous Therapy	1			4 to 5
✓	✓	✓		b. Intravenous Bolus Medications				
				7. Pediatric Skills				
	✓	✓	✓	a. Pediatric Ventilatory Management	1			4
✓	✓	✓		b. Pediatric Intraosseous Infusion				
✓				c. Pediatric Respiratory Compromise				
				8. Random EMT Skills (test one [1] of the following chosen at random:)				
✓*	✓*	✓*		Spinal Immobilization (Seated Patient)				
	✓*	✓*		Spinal Immobilization (Supine Patient)				
✓*	✓*	✓*		Bleeding Control/Shock Management	1	1	1	4
✓*				Long Bone Immobilization				
✓*				Joint Immobilization				
✓* = Must test one (1) of the skills marked "✓*" chosen at random.								
✓				9. Spinal Immobilization (Supine Patient)				

AVERAGE FLOW:

4 CANDIDATES PER HOUR

## **EMT Assistants**

One (1) person must be selected to serve as the EMT Assistant for the Random Basic Skills. The selected individual must be a licensed EMT at a minimum and will serve as the trained partner for all candidates testing. The EMT Assistant cannot be a relative of any candidate or be biased towards any candidate being examined. Candidates may not be tested in pairs to eliminate the necessity of selecting an EMT Assistant for the psychomotor examination.

## **Simulated Patients**

Three (3) persons must be selected to serve as Simulated Patients for the psychomotor examination. One person will be assigned to the Patient Assessment – Trauma skill; one to the Patient Assessment – Medical skill (if testing Advanced Emergency Medical Technician [NRAEMT] and/or Intermediate/99 candidates); and the third Simulated Patient is required in the Random EMT Skills. If any of these skills are duplicated, you will need additional Simulated Patients (and additional assistants as required). A high fidelity simulation manikin capable of responding as a real patient given the approved scenario(s) may be used as the Simulated Patient in the Patient Assessment – Trauma and Patient Assessment – Medical skills.

All Simulated Patients should be EMS-related personnel and we suggest using EMTs, at a minimum, for all Simulated Patients. If the patient is familiar with EMS procedures, he/she can assist the Skill Examiner when reviewing the candidate's performance and can verify completion of a procedure or treatment. The Simulated Patient must also be familiar with the typical presentation of symptoms the usual patient would complain given the testing scenario utilized. The Simulated Patient should be capable of being programmed to effectively act out the role of a real patient in a similar out-of-hospital situation, such as simulating sonorous respirations, withdrawing to painful stimuli, moaning to palpation over injuries, and so on. Keep in mind that the more realistic the Simulated Patient presents, the fairer the evaluation process.

All Simulated Patients must be adults or adolescents who are at least sixteen (16) years of age. All Simulated Patients must also be of average adult height and weight. Small children may not serve as patients in any skill. The equipment provided for the skills must appropriately fit the respective Simulated Patient. In the Patient Assessment – Trauma and Patient Assessment – Medical skills, the Simulated Patients must wear appropriate undergarments (shorts or swimsuit) and cut-away clothing must be provided. If prepared cut-away clothing is not available (Velcro sewn into the seams of pants and shirt), one set of clothing must be cut along the seams and taped closed before any candidate begins testing. It is not necessary to have enough clothing for each candidate to actually cut away.

Please be aware of Simulated Patient fatigue throughout the examination. If a large number of candidates are anticipated, you may also want to consider securing additional Simulated Patients for the examination even if skills have not been duplicated.

## **Roster for Skill Examiners, EMT Assistants, and Simulated Patients**

A roster to keep track of Skill Examiners, EMT Assistants, and Simulated Patients is included in Appendix D of this manual to help you coordinate your psychomotor examination.

## Running an Efficient Psychomotor Examination

The Examination Coordinator, in conjunction with the National Registry Representative, is responsible for the timely flow of candidates through all skills. It is imperative to ***promptly*** begin the psychomotor examination at the scheduled time or you will add unnecessary stress to the candidates.

The NREMT strongly advises you to schedule the Skill Examiners Orientation (including all Simulated Patients and EMT Assistants) one-half (½) to one (1) hour, at a minimum, before scheduling candidates to arrive at the examination site. This should permit ample opportunity for the National Registry Representative to orient all examiners; time for each examiner to thoroughly re-read the specific skill essay, instructions, and review the specific skill evaluation form; briefing of EMT Assistants and Simulated Patients; applying moulage to the Simulated Patients where required; programming high fidelity simulation manikins (if used); checking all equipment for the examination; and time for the National Registry Representative to individually address any areas in question before actual evaluation of any candidate begins. **If this is the first Advanced Level NREMT examination you have coordinated, we strongly advise permitting one (1) full hour for the Skill Examiners Orientation before requiring candidates to arrive at the examination site.**

After the Skill Examiners have been oriented, the National Registry Representative must meet with all candidates registered for the examination, call the roll, and provide the candidates with an orientation to the psychomotor examination. All candidates must complete an NREMT Advanced Level Psychomotor Report Form before beginning the examination. The candidate orientation process to the psychomotor examination should take approximately twenty (20) to thirty (30) minutes.

At this point, actual evaluation of the candidates can begin. We have found that a grid and pass card system is perhaps the easiest and most effective method of controlling the timely flow of all candidates through the skills. This system helps minimize excessive noise which may affect skill performances, requires all candidates to assemble in one waiting area between skills, controls the candidates from discussing specific examination-related information, and provides the Examination Coordinator and National Registry Representative with immediate feedback on the progress of the examination at any time. The National Registry Representative will be visiting all skills as the psychomotor examination begins to ensure fairness, consistency, and adherence to all requirements for NREMT examinations. The National Registry Representative will observe the interaction between all Skill Examiners and candidates during actual evaluation to help ensure the evaluations are in accordance with NREMT criteria. The Examination Coordinator or his/her designee must ensure that candidates do not discuss specific examination questions or scenarios throughout the examination. The National Registry Representative is responsible for reporting to the NREMT any discussions that may have occurred between candidates if these discussions are believed to have resulted in an unfair advantage or inequality among the candidates.

Candidates perhaps understand the flow through the psychomotor examination if it is explained that the psychomotor examination will be conducted like a mass casualty incident exercise. There is a staging area in which all candidates must wait. A single staging officer is responsible for directing all candidates to treat various patients. The candidate is dispatched and handed a pass card to permit him/her to test that skill. As soon as the patient is treated, the candidate must report back to the staging area, turn in the pass card, and wait to be dispatched before reporting to the next skill. By using a copy of the official roster for the examination, the staging officer can check off and keep a running tally of skills completed by each candidate.

## **Physician Medical Director Responsibilities**

At a minimum, the Physician Medical Director for the examination (MD or DO) must be available by phone or pager throughout the examination. If the Physician Medical Director identified in the examination request letter is not available on the day of the examination, the Examination Coordinator must obtain a replacement Physician Medical Director (MD or DO) who will at least be available by phone or pager throughout the examination.

The Physician Medical Director, along with the Examination Coordinator and National Registry Representative, serves as one (1) of the three (3) members of the Quality Assurance Committee for the psychomotor examination. This Committee is responsible for:

1. Reviewing and rendering official and final decisions for all candidate complaints in the psychomotor examination.
2. Reviewing and rendering official and final decisions in cases where a specific performance, treatment protocol, or other situations arise in which the National Registry Representative needs assistance to objectively make a final determination.

The NREMT encourages physician involvement with the NREMT Advanced Level certification process. The physician may serve as an excellent resource throughout the examination. His/her involvement increases the credibility of the certification process as well as providing an opportunity to observe the abilities of those who may soon be functioning under his/her medical oversight. Most Physician Medical Directors are qualified to serve as a Skill Examiner in any skill. In particular, a physician certified by the American Board of Emergency Medicine should serve well as the Oral Station Skill Examiner, having completed a similar certification process.

## Skill Examiner Responsibilities

Skill Examiners are responsible for the following:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the NREMT. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

## Skill Examiner Qualifications

Skill Examiners should be recruited from the local EMS community. You can only consider people who are currently certified or licensed to perform the skill you wish them to evaluate. In addition, careful attention must be paid to avoid possible conflicts of interest, local political disputes, or any additional pre-existing conditions that could potentially bias the Skill Examiner towards a particular group or the entire group of candidates. **In no case should a primary instructor serve as a Skill Examiner for any of his/her own students.** Casual instructor staff may be utilized if necessary so long as they are not biased and do not evaluate any skill for which they served as the primary instructor. For example, the local PHTLS or ITLS instructor who taught the trauma portion of the candidates' class may not serve as the Patient Assessment-Trauma Skill Examiner but can be utilized to evaluate another skill so long as you feel he/she is not biased and is qualified to perform the skill to be evaluated.

Every effort should be made to select Skill Examiners who are fair, consistent, objective, respectful, reliable, and impartial in his/her conduct and evaluation. Skill Examiners should be selected based upon their expertise and understanding that there is more than one acceptable way to perform all skills. You should work to obtain Skill Examiners who are not acquainted with the candidates if possible. All Skill Examiners are responsible for the overall conduct of his/her skill evaluation area, ensuring the integrity and reliability of the examination and his/her skill, and for maintaining strict security of all examination-related items throughout the examination.

The selected examination team should represent a combination of physicians, nurses, and EMS

professionals. You should not select Skill Examiners from only one specific medical discipline. All examiners should have experience in working with EMTs, teaching, or formal evaluation of psychomotor skills. The Skill Examiner must possess local credibility in the field of out-of-hospital care. We encourage recruitment of currently Nationally Registered EMTs to serve as Skill Examiners as they are already familiar with the examination process and possess a previously demonstrated expertise in the skill. If Nationally Registered EMTs are not available to staff all skills, you must select suitable personnel as outlined.

Examples and guidelines for qualifications of each Skill Examiner are explained in the following. The NREMT office should be consulted if you are unable to locate persons that satisfy the qualifications for Skill Examiners. Ultimate approval for assuring that examiners meet these minimum qualifications is at the discretion of the designated National Registry Representative. The NREMT and its agents reserve the right to dismiss any Skill Examiner for due cause at any point during the psychomotor examination.

### **Patient Assessment –Trauma**

The Patient Assessment – Trauma Skill Examiner can be a physician or nurse familiar with current out-of-hospital care. A Nationally Registered Paramedic may also serve as an examiner for this skill. The examiner should have previously completed an ATLS, PHTLS, or ITLS course and should hold instructor credentials in any of these areas. The Skill Examiner should also be familiar with the National Trauma Triage Protocol published by the U.S. Department of Health and Human Services Centers for Disease Control and Prevention. A similarly prepared and certified Advanced Emergency Medical Technician (NRAEMT) could possibly be qualified to test Advanced Emergency Medical Technician and lower level candidates in this skill.

### **Patient Assessment – Medical**

The Patient Assessment – Medical Skill Examiner can be a physician or nurse familiar with current out-of-hospital care. A Nationally Registered Paramedic may also serve as an examiner for this skill. The examiner should have ample experience in providing patient care at the Paramedic level and previously completed an AMLS course or equivalent. A similarly prepared and certified Advanced Emergency Medical Technician (NRAEMT) with ample patient care experience as an AEMT could possibly be qualified to test only Advanced Emergency Medical Technician candidates in this skill.

### **Ventilatory Management**

The Ventilatory Management Skill Examiner can be a physician, nurse, or Nationally Registered Paramedic who is familiar with the various types of common airway adjuncts and out-of-hospital care protocols for immediate ventilation of apneic adult and pediatric patients. A current American Heart Association Advanced Cardiac Life Support Instructor is recommended. The examiner must be licensed to perform bag-valve-mask ventilation, operate various oxygen adjuncts and equipment, insert supraglottic airway devices (such as Combitube<sup>®</sup>, PTL<sup>®</sup>, or King LT<sup>®</sup>) and perform endotracheal intubation in adults and pediatric patients. A similarly prepared and certified Advanced Emergency Medical Technician (NRAEMT) could possibly be qualified to test only Advanced Emergency Medical Technician candidates in the related AEMT skills.

## **Cardiac Management Skills**

The Cardiac Management Skills Examiner can be a physician, critical care nurse, or Nationally Registered Paramedic who holds current credentials as an American Heart Association Advanced Cardiac Life Support Instructor. This examiner must evaluate both Dynamic and Static skills and personally hold current licensure to run codes and interpret ECG tracings. The Skill Examiner for the Cardiac Arrest Management/AED skill can be an American Heart Association BLS Instructor for Healthcare Providers or equivalent.

## **Oral Station**

The Oral Station Skill Examiner must be a physician or nurse familiar with current out-of-hospital care. A physician certified by the American Board of Emergency Medicine would serve as an excellent examiner in this station because of his/her familiarity with this type of testing format. A Nationally Registered Paramedic may also serve as an examiner in this station. The examiner should have ample experience in providing patient care at the Paramedic level and possess a thorough command of the 2009 Education Standards and Instructional Guidelines for the Paramedic. The examiner should be experienced in evaluating candidates in this format. If not, he/she must be willing to spend a significant amount of time (30 minutes or more) reviewing the case provided and thoroughly preparing before evaluating any candidate.

## **IV and Medication Skills**

The IV and Medication Skills Examiner must be a physician, nurse, or Nationally Registered Paramedic who is familiar with American Heart Association ACLS guidelines and local protocols. The examiner must be licensed to establish peripheral IVs and administer intravenous bolus medications. A similarly prepared and certified Advanced Emergency Medical Technician (NRAEMT) could possibly be qualified to test Advanced Emergency Medical Technician and lower level candidates in the related skills.

## **Pediatric Skills**

The Pediatric Skills Examiner must be a physician, nurse, or Nationally Registered Paramedic who is familiar with ventilatory management and intraosseous infusion techniques in the pediatric patient. A current American Heart Association Pediatric Advanced Life Support Instructor or similar is recommended. The examiner must be licensed to perform bag-valve-mask ventilation, operate various oxygen adjuncts and equipment, and perform endotracheal intubation in pediatric patients. The examiner must also be licensed to establish intraosseous lines in pediatric patients. A similarly prepared and certified Advanced Emergency Medical Technician (NRAEMT) could possibly be qualified to test only Advanced Emergency Medical Technician candidates in the related AEMT skills.

## **Random EMT Skills and Spinal Immobilization (Supine Patient) Skill**

The Random EMT Skills Examiner must be an EMT (Nationally Registered or state-certified) who is licensed to perform the following skills in the out-of-hospital setting:

1. Spinal Immobilization (Seated Patient)
2. Spinal Immobilization (Supine Patient) (*mandatory for all NRAEMT candidates*)
3. Bleeding Control/Shock Management
4. Long Bone Immobilization
5. Joint Immobilization

A reputable, impartial EMT Instructor or certified Advanced Level Provider (Intermediate, AEMT or Paramedic) who thoroughly understands the principles and various acceptable practices of completing all the above-listed skills is recommended to serve as a Skill Examiner for the Random EMT Skills.

## **Essays to Skill Examiners**

Essays similar to those that follow will be used during the actual psychomotor examination. The National Registry Representative will supply all necessary skill evaluation instruments, essays, and related scenarios for use during the scheduled examination.

## **Patient Assessment – Trauma Essay to Skill Examiners**

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

This skill is designed to evaluate the candidate's ability to integrate patient assessment and management skills on a moulaged patient with multiple systems trauma. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized today may also be used as the Simulated Patient. Since this is a scenario-based skill, it will require dialogue between the Skill Examiner and the candidate. The candidate will be required to physically perform all assessment steps listed on the evaluation instrument. However, all interventions should be verbalized instead of physically performed.

As you welcome a candidate into the room and read the "Instructions to the Psychomotor Skills Candidate" and scenario information, be sure to do this in such a manner which does not permit the candidate to view the Simulated Patient. Other candidates waiting to test the skill must not be able to overhear any specific scenario information. It is easiest to have the candidate enter the room and turn his/her back to the Simulated Patient. A partition set up just inside of the entrance to your room that screens the Simulated Patient from view also works well. After all instructions and scenario information is read, the time limit would start when the candidate turns around and begins to approach the Simulated Patient.

Today you could be evaluating candidates who were trained over several different curricula and have different scopes of practice. You should determine the level at which each candidate is testing before beginning his/her actual evaluation so that you do not mistakenly hold a candidate responsible for a level of care which he/she may not have been trained. The instructions you read to the candidate will assist you in

determining his/her level of training.

Candidates are required to perform a scene size-up just as he/she would in a field setting. When asked about the safety of the scene, you must indicate the scene is safe to enter. If the candidate does not assess the safety of the scene before beginning patient assessment or care, no points should be awarded for the step, “Determines the scene/situation is safe” and the related “Critical Criteria” statement must be checked and documented as required. Because of the limitations of moulage, you must establish a dialogue with the candidate throughout this skill. If a candidate quickly inspects, assesses or touches the Simulated Patient in a manner in which you are uncertain of the areas or functions being assessed, you must immediately ask the candidate to explain his/her actions. For example, if the candidate stares at the Simulated Patient's face, you must ask what he/she is checking to precisely determine if he/she was checking the eyes, facial injuries, or skin color. Any information pertaining to sight, sound, touch, smell, or any injury which cannot be realistically moulaged but would be immediately evident in a real patient (sucking chest wound, paradoxical chest movement, etc.) must be supplied by the Skill Examiner as soon as the candidate exposes or examines that area of the Simulated Patient. Your responses must not be leading but should factually state what the candidate would normally see, hear, or feel on a similar patient in the out-of-hospital setting. For example, upon exposure of a sucking chest wound, your response should immediately be, "You see frothy blood bubbling from that wound and you hear noises coming from the wound site." You have provided an accurate and immediate description of the exposed wound by supplying the visual and auditory information normally present with this type of injury. An unacceptable response would be merely stating, "The injury you just exposed is a sucking chest wound."

Because of the dynamic nature of this scenario-based evaluation, you will need to supply logical vital signs and update the candidate on the Simulated Patient's condition in accordance with the treatments he/she has provided. Clinical information not obtainable by inspection or palpation, such as a blood pressure or breath sounds, should be supplied immediately after the candidate properly demonstrates how this information would normally be obtained in the field. The vital signs listed with the scenario have been provided as a sample of acceptable changes in the Simulated Patient's vital signs based upon the candidate's treatment. They are not comprehensive and we depend upon your expertise in presenting vital information that would reflect an appropriate response, either positive or negative, to the treatment(s) provided. The step “Obtains, or directs assistant to obtain, baseline vital signs” has been placed in the “History Taking” section of the skill sheet. This should not be construed as the only place that vital signs may be assessed. It is merely the earliest point in the out-of-hospital assessment where vital signs may be accomplished. It is acceptable for the candidate to call for immediate evacuation of the Simulated Patient based upon the absence of distal pulses without obtaining an accurate BP measurement by sphygmomanometer. If this occurs, please direct the candidate to complete his/her assessment and treatment en route. All vital signs should be periodically reassessed and an accurate BP could be obtained by sphygmomanometer during transport of the Simulated Patient.

You should continue providing a clinical presentation of shock (hypotension, tachycardia, delayed capillary refill, etc.) until the candidate initiates appropriate shock management. It is essential that you do not present a "physiological miracle" by improving the Simulated Patient too much at too early a step. If on the other hand no treatments or inappropriate treatments are rendered, you should supply clinical information representing a deteriorating patient. However, do not deteriorate the Simulated Patient to the point where the candidate elects to initiate CPR.

Currently, there are many appropriate and acceptable out-of-hospital treatment protocols for hypovolemic shock. There is still debate about fluid resuscitation and the use of the pneumatic anti-shock garment (PASG). In general, the PASG should be applied and inflated to stabilize the pelvis. Fluid resuscitation should not delay transport of the patient to the nearest appropriate facility. Generally, out-of-hospital

treatment for hypovolemia is initiated with one (1) large-bore IV and a fluid bolus of 10-20 mL/kg of isotonic crystalloid solution. The patient's vital signs should be rechecked every five (5) minutes and additional boluses of fluid might be administered based upon the patient's response. Aggressive out-of-hospital resuscitation of patients with intrathoracic pathologies may be detrimental. You must be mindful of these variations when awarding the point for "Initiates shock management" and reviewing the critical statement, "Failure to find or appropriately manage problems associated with airway, breathing, hemorrhage or shock (hypoperfusion)."

Because all treatments are voiced, a candidate may forget what he/she has already done to the Simulated Patient. This may result in the candidate attempting to do assessment/treatment steps on the Simulated Patient that are physically impossible. For example, a candidate may attempt to assess the posterior thorax of the Simulated Patient after the Simulated Patient was log rolled and secured to a long backboard. Your appropriate response in this instance would be, "You have secured the Simulated Patient to the long backboard. How would you assess the posterior thorax?" This also points out the need for you to ensure the Simulated Patient is actually rolling or moving as the candidate conducts his/her assessment just like a real patient would be moved during an actual assessment.

The evaluation form should be reviewed prior to testing any candidate. You should direct any specific questions to the National Registry Representative for clarification prior to beginning any evaluation. As you look at the evaluation form, its format implies a linear, top-to-bottom progression in which the candidate completes four distinct categories of assessment, namely the "Scene Size-Up," "Primary Survey/Resuscitation," "History Taking," and "Secondary Assessment." However, as you will recall, the goal of appropriate out-of-hospital trauma care is the rapid and sequential assessment, evaluation, and treatment of life-threatening conditions to the airway, breathing, and circulation (ABCs) of the patient with rapid transport to proper definitive care. In accordance with the National Trauma Triage Protocol published by the U.S. Department of Health and Human Services Centers for Disease Control and Prevention, the most seriously injured patients should be rapidly identified based upon an assessment of the anatomy of injury and measured vital signs, including a calculated Glasgow Coma Score. Perhaps the most appropriate assessment occurs when the candidate integrates portions of the "Secondary Assessment" when appropriate within the sequence of the "Primary Survey/Resuscitation." For example, it is acceptable for the candidate who, after appropriately opening and evaluating the Simulated Patient's airway, assesses breathing by exposing, palpating, and auscultating the chest and quickly checks for tracheal deviation. With this in mind, you can see how it is acceptable to integrate assessment of the neck, chest, abdomen/pelvis, lower extremities, and posterior thorax/lumbar area into the "Primary Survey/Resuscitation" portion as outlined on the evaluation form. This integration should not occur in a haphazard manner but must fall in the appropriate sequence and category of airway, breathing, or circulatory assessment of the "Primary Survey/Resuscitation." However, if the mechanism of injury suggests potential spinal compromise, cervical spine precautions may not be disregarded at any point. If this action occurs, deduct the point for the step, "Considers stabilization of spine," mark the appropriate statement under "Critical Criteria" and document your rationale as required.

We strongly recommend that you concisely document the entire performance on the backside of the evaluation form, especially if you find yourself too involved with the form in finding the appropriate sections to note and mark during any performance. It is easier to complete the evaluation form with all performances documented in this fashion rather than visually missing a physical portion of the candidate's assessment due to your involvement with the evaluation form. This documentation may also be used to help validate a particular performance if questions should arise later.

Immediately upon determining the severity of the Simulated Patient's injuries, the candidate should call for immediate packaging and transport of the Simulated Patient. Transport to the nearest appropriate facility should not be delayed for establishment of peripheral IVs or detailed physical examination if prolonged

extrication is not a consideration. You must inform the candidate to continue his/her assessment and treatment while transporting the Simulated Patient. Be sure to remind the candidate that both "partners" are available during transport. You must stop the candidate promptly when the ten (10) minute time limit has elapsed. Some candidates may finish early and have been instructed to inform you when he/she completes the skill. If the candidate has not voiced transport of the Simulated Patient within this time limit, mark the appropriate statement under "Critical Criteria" on the evaluation form and document this omission.

You should review the scenario and instructions with your Simulated Patient to assist in his/her role as a programmed patient. **You are not permitted to alter any patient information provided in the scenario other than age and gender to coincide with today's Simulated Patient.** Be sure to program your Simulated Patient to respond as a real patient would given all injuries listed in the scenario. Also make sure the Simulated Patient logrolls, moves, or responds appropriately given the scenario just as a real patient would. All Simulated Patients must be adults or adolescents who are at least sixteen (16) years of age. All Simulated Patients must also be of average adult height and weight. The use of very small children as Simulated Patients is not permitted in this skill. All Simulated Patients must wear shorts or a swimsuit, as he/she will be exposed down to the shorts or swimsuit. Outer garments must be provided which the candidate should remove to expose the Simulated Patient. If prepared garments are not available, you must pre-cut all outer garments along the seams and tape them together before any candidate enters your room. This will help ensure that all candidates are evaluated fairly in his/her ability to expose and examine the Simulated Patient. Pay particular attention to your moulage and make it as realistic as you would expect in a similar out-of-hospital situation. For example, artificial blood should be soaked into the garments worn over any soft tissue injury that would normally bleed in the field. Remember, realistic and accurate moulage improves the quality of the examination by providing for more fair and accurate evaluation of the candidates. Please be conscientious of your Simulated Patient's fatigue throughout the examination. Give him/her appropriate breaks and be certain to wrap a blanket around your Simulated Patient to cover any moulaged injuries before dismissing him/her for a break. Also keep in mind that your Simulated Patient may become uncomfortably cold during the examination from laying on the floor and being disrobed throughout the day. A blanket is required equipment in this skill to help keep your Simulated Patient warm throughout the examination.

### **Information for the Simulated Patient**

Thank you for serving as the Simulated Patient at today's examination. Please be consistent in presenting this scenario to every candidate who tests in your room today. It is important to respond as a real patient of a similar multiple trauma situation would. The Skill Examiner will help you understand your appropriate responses for today's scenario. For example, the level of respiratory distress that you must act out and the degree of pain that you exhibit as the candidate palpates those areas must be consistent throughout the examination. As each candidate progresses through the skill, please be aware of any time that he/she touches you in such a way that would cause a painful response in the real patient. If the scenario indicates you are to respond to deep, painful stimuli and the candidate only lightly touches the area, do not respond. Do not give the candidate any clues while you are acting as a Simulated Patient. It is inappropriate to moan that your wrist hurts after you become aware that the candidate has missed that injury. Be sure to move with the candidate as he/she moves you to assess various areas of your body. For example, after the candidate calls for you to be log rolled, please log roll towards the candidate unless he/she orders you to be moved in a different direction. Please remember what areas have been assessed and treated because you and the Skill Examiner may need to discuss the candidate's performance after he/she leaves the room.

When you need to leave the examination room for a break, be sure to wrap a blanket around you so that other candidates do not see any of your moulaged injuries. A blanket will be provided for you to keep warm

throughout the examination. We suggest you wrap the blanket around you to conserve body heat while the Skill Examiner is completing the evaluation form.

## **Equipment List**

Do not open this skill for testing until the National Registry Representative has provided you with a trauma scenario. You must also have a live Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight and dressed in appropriate attire (shorts or swimsuit) down to which he/she will be exposed. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized today may also be used as the Simulated Patient. The following equipment must also be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Moulage kit or similar substitute
- Outer garments to be cut away
- Penlight
- Blood pressure cuff
- Stethoscope
- Scissors
- Blanket
- Tape (for outer garments)

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PATIENT ASSESSMENT – TRAUMA**

Welcome to the Patient Assessment – Trauma skill. Before we begin, I need to know the level of testing that you need to complete today. Are you testing at the Advanced Emergency Medical Technician level, Intermediate/99 level, or Paramedic level today?

This is the Patient Assessment – Trauma skill. In this skill, you will have ten (10) minutes to perform your assessment and "voice" treat all conditions and injuries discovered. You must conduct your assessment as you would in the field, including communicating with your Simulated Patient. You may remove the Simulated Patient's clothing down to his/her shorts or swimsuit if you feel it is necessary. As you progress through this skill, you should state everything you are assessing. Specific clinical information not obtainable by visual or physical inspection, for example blood pressure, will be given to you only when you ask following demonstration of how you would normally obtain that information in the field. You may assume you have two (2) partners working with you who are trained to your level of care. They will correctly perform the verbal treatments you indicate necessary. I will acknowledge your treatments and may ask you for additional information if clarification is needed. Do you have any questions?

[Skill Examiner now reads "Mechanism of Injury" from prepared scenario and begins 10 minute time limit.]

## **Patient Assessment – Medical Essay to Skill Examiners**

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

This skill is designed to evaluate the candidate's ability to use appropriate interviewing techniques and assessment skills for a conscious patient whose chief complaint is of a medical nature. **Advanced Emergency Medical Technician and Intermediate/99 candidates are required to complete this skill.** Since this is a scenario-based skill using a live, programmed, Simulated Patient, it will require extensive dialogue between the candidate, the Simulated Patient, and the Skill Examiner if necessary. The Simulated Patient will answer the candidate's questions based on the scenario(s) being utilized today. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized today may also be used as the Simulated Patient. The candidate will be required to physically perform all assessment steps listed on the evaluation instrument. However, all interventions should be verbalized instead of physically performed. You must also establish a dialogue with the candidate throughout this skill. You may ask questions for clarification purposes and should also provide any information pertaining to sight, sound, touch, or smell that cannot be realistically moulaged but would be immediately evident in a real patient encounter of a similar nature. You must also ensure the accuracy of the information the Simulated Patient is providing and must immediately correct any erroneous information the Simulated Patient may accidentally provide.

This skill requires the presence of a live, programmed, Simulated Patient or a high fidelity simulation manikin capable of responding as a real patient. The scenario the National Registry Representative provided will contain enough information for the candidate to form a general impression of the Simulated Patient's

condition. Additionally, the Simulated Patient must remain awake and able to communicate with the candidate throughout the scenario. Please moulage the Simulated Patient and thoroughly brief him/her over his/her roles for the examination. You must ensure the Simulated Patient reads the “Information for the Simulated Patient” provided at the end of this essay. You should also role-play the scenario with him/her prior to evaluating the first candidate to ensure familiarization with today’s scenario. **You are not permitted to alter any patient information provided in the scenario other than age and gender to coincide with today’s Simulated Patient.** Provide any specific information the candidate asks for as listed in the scenario. If the candidate asks for information not listed in the scenario, you should provide an appropriate response based on your expertise and understanding of the patient’s condition. Information pertaining to vital signs should not be provided until the candidate actually performs the steps necessary to obtain such information.

As you welcome a candidate into the room and read the “Instructions to the Psychomotor Skills Candidate” and scenario information, be sure to do this in such a manner which does not permit the candidate to view the Simulated Patient. Other candidates waiting to test the skill must not be able to overhear any specific scenario information. It is easiest to have the candidate enter the room and turn his/her back to the Simulated Patient. A partition set up just inside of the entrance to your room that screens the Simulated Patient from view also works well. After all instructions and scenario information is read, the time limit would start when the candidate turns around and begins to approach the Simulated Patient. The instructions are also written to help ensure that only Advanced Emergency Medical Technician and Intermediate/99 candidates complete this skill.

Candidates are required to perform a scene size-up just as he/she would in a field setting. When asked about the safety of the scene, you must indicate the scene is safe to enter. If the candidate does not assess the safety of the scene before beginning patient assessment or care, no points should be awarded for the step, “Determines the scene/situation is safe” and the related “Critical Criteria” statement must be checked and documented as required.

Because of the limitations of moulage and the ability of the Simulated Patient, you must establish a dialogue with the candidate throughout this skill. If a candidate quickly inspects, assesses or touches the Simulated Patient in a manner in which you are uncertain of the areas or functions being assessed, you must immediately ask the candidate to explain his/her actions. For example, if the candidate stares at the Simulated Patient's face, you must ask what he/she is checking to precisely determine if he/she was checking the eyes, facial injuries, or skin color. Any information pertaining to sight, sound, touch, smell, or any condition that cannot be realistically moulaged but would be immediately evident in a real patient must be supplied by the Skill Examiner as soon as the candidate exposes or examines that area of the Simulated Patient. Your responses must not be leading but should factually state what the candidate would normally see, hear, or feel on a similar patient in the out-of-hospital setting. For example, you should state, "You see pink, frothy sputum coming from the patient’s mouth as he/she coughs." You have provided an accurate and immediate description of the condition by supplying a factual description of the visual information normally present with this type of condition that is difficult to moulage. An unacceptable response would be merely stating, "The patient is experiencing acute left ventricular failure."

Because of the dynamic nature of this scenario-based evaluation, you will need to supply logical vital signs and update the candidate on the Simulated Patient's condition in accordance with the treatments he/she has provided. Clinical information not obtainable by inspection or palpation, such as a blood pressure or breath sounds, should be supplied immediately after the candidate properly demonstrates how this information would normally be obtained in the field. The vital signs listed with the scenario have been provided as a guide for the Simulated Patient's initial vital signs. They are not comprehensive and we depend upon your expertise in presenting vital information that would reflect an appropriate patient response, either positive or negative, to the treatment(s) provided. You should continue providing a clinical presentation of a patient

with a significant medical complaint as outlined in the scenario until the candidate initiates appropriate management. It is essential that you do not present a "physiological miracle" by improving the Simulated Patient too much at too early a step. If on the other hand no or inappropriate interventions are rendered, you should supply clinical information representing a patient who does not improve. However, do not deteriorate the Simulated Patient to the point where he/she can no longer communicate with the candidate.

For the purposes of this skill, the candidate must verbalize his/her "General Impression" of the patient after hearing the scenario and completing the Scene Size-Up phase. Two imaginary assistants trained to the candidate's level (Advanced Emergency Medical Technician or Intermediate/99) are available only to provide treatments as ordered by the candidate. Because all treatments are voiced, a candidate may forget what he/she has already done to the Simulated Patient. This may result in the candidate attempting to do assessment/treatment steps on the Simulated Patient that are physically impossible. For example, a candidate may attempt to auscultate the posterior thorax of a Simulated Patient who was found supine in bed. Your appropriate response in this instance would be, "Please auscultate this Simulated Patient's chest as you would a real patient in the out-of-hospital setting." This also points out the need for you to ensure the Simulated Patient is actually presenting and moving upon the candidate's directions just like a real patient would during an actual call.

The evaluation form should be reviewed prior to evaluating any candidate. You should direct any specific questions to the National Registry Representative for clarification prior to opening your skill. As you look at the evaluation form, its format implies a linear, top-to-bottom progression in which the candidate completes four distinct categories of assessment, namely the "Scene Size-Up," "Primary Survey," "History Taking and Secondary Assessment," and "Reassessment." However, as you will recall, after completing the "Primary Survey," and determining that the patient does not require immediate and rapid transport, the steps listed in "History Taking and Secondary Assessment" section may be completed in any number of acceptable sequences. If the mechanism of injury suggests potential spinal compromise, immediate and continuous cervical spine precautions must be taken. If not, deduct the point for the step, "Considers stabilization of spine," mark the appropriate statement under "Critical Criteria" and document your rationale as required.

We strongly recommend that you concisely document the entire performance on the backside of the evaluation form, especially if you find yourself too involved with the form in finding the appropriate sections to note and mark during any performance. It is easier to complete the evaluation form with all performances documented in this fashion rather than visually missing a physical portion of the candidate's assessment due to your involvement with the evaluation form. This documentation may also be used to help validate a particular performance if questions should arise later.

Immediately after completing the "Primary Survey," the candidate should make the appropriate decision to continue assessment and treatment at the scene or call for immediate transport of the patient. In the critical patient, transport to the nearest appropriate facility should not be significantly delayed for providing interventions, establishing peripheral IVs, or performing other detailed physical assessments if prolonged extrication or removal is not a consideration. You must inform the candidate who chooses to immediately transport the critical patient to continue his/her focused history/ physical examination and on-going reassessment during transport of the patient. Be sure to remind the candidate that both "partners" are available during transport. You must stop the candidate promptly when the fifteen (15) minute time limit has elapsed. Some candidates may finish early and have been instructed to inform you when he/she completes the skill. If the candidate has not voiced transport of the Simulated Patient within this time limit, mark the appropriate statement under "Critical Criteria" on the evaluation form and document this omission.

You should review the scenario and instructions with your Simulated Patient to assist in his/her role as a programmed patient. **You may not alter any patient information provided in the scenario other than**

**age and gender to coincide with today's Simulated Patient.** Be sure to program your Simulated Patient to respond as a real patient would given all conditions listed in the scenario. Also make sure the Simulated Patient acts, moves, and responds appropriately given the scenario just as a real patient would. You may need to confirm a portion of the candidate's performance with the Simulated Patient to help ensure a thorough and complete evaluation. All Simulated Patients must be adults or adolescents who are at least sixteen (16) years of age. All Simulated Patients must also be of average adult height and weight. The use of very small children as Simulated Patients is not permitted in this skill. The Simulated Patient must also be wearing shorts or a swimsuit, as he/she will be exposed down to the shorts or swimsuit. Outer garments must be provided which the candidate should remove to expose the Simulated Patient. If prepared garments are not available, you must pre-cut all outer garments along the seams and tape them together before any candidate enters your room. This will help ensure that all candidates are evaluated fairly in his/her ability to expose and examine the Simulated Patient. Pay particular attention to your moulage and make it as realistic as you would expect in a similar out-of-hospital situation. For example, the shirt should be soaked with water if the scenario notes the patient is diaphoretic. Remember, realistic and accurate moulage improves the quality of the examination by providing for more fair and accurate evaluation of the candidates.

### **Information for the Simulated Patient**

Thank you for serving as the Simulated Patient at today's examination. In this examination, you will be required to role-play a patient experiencing an acute medical condition. Please be consistent in presenting this scenario to every candidate who tests in your room today. The level of responsiveness, anxiety, respiratory distress, etc., which you act out must be the same for all candidates. It is important to respond as a real patient with a similar medical complaint would. The Skill Examiner will help you understand your appropriate responses for today's scenario. For example, the level of respiratory distress that you must act out must be consistently displayed throughout the examination.

As each candidate progresses through the skill, please be aware of any questions you are asked and respond appropriately given the information in the scenario. Do not overact or provide additional signs or symptoms not listed in the scenario. It is very important to be completely familiar with all of the information in today's scenario before any candidate enters your room for testing. The Skill Examiner will be role-playing several practice sessions with you to help you become comfortable with your roles today as a programmed patient. If any candidate asks for information not contained in the scenario, the Skill Examiner will supply appropriate responses to questions if you are unsure of how to respond. Do not give the candidate any clues while you are acting as a patient. It is inappropriate to moan that your belly really hurts after you become aware that the candidate has not assessed your abdomen. Be sure to move as the candidate directs you to move so he/she may assess various areas of your body. For example, if the candidate asks you to sit up so he/she may auscultate posterior breath sounds, sit up as a cooperative patient would. Please remember what areas have been assessed and treated because you may need to discuss the candidate's performance after he/she leaves the room with the Skill Examiner.

When you need to leave the examination room for a break, be sure to wrap a blanket around you so that other candidates do not see any of your moulage. A blanket will be provided for you to keep warm throughout the examination. We suggest you wrap the blanket around you to conserve body heat while the Skill Examiner is completing the evaluation form.

## Equipment List

Do not open this skill for testing until the National Registry Representative has provided you with a medical patient assessment scenario. You must also have a live Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight and dressed in appropriate attire (shorts or swimsuit) down to which he/she will be exposed. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized today may also be used as the Simulated Patient. The following equipment must also be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Moulage kit or similar substitute
- Outer garments to be cut away
- Penlight
- Blood pressure cuff
- Stethoscope
- Scissors
- Blanket
- Tape (for outer garments)

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PATIENT ASSESSMENT – MEDICAL**

This is the Patient Assessment – Medical skill. If you are not a candidate for Advanced Emergency Medical Technician or Intermediate/99 certification, please leave this room now as you are not required to complete this skill for any other level of National EMS Certification.

In this skill, you will have fifteen (15) minutes to perform your assessment, patient interview, and "voice" treat all conditions discovered. You must conduct your assessment as you would in the field, including communicating with your Simulated Patient. You may remove the Simulated Patient's clothing down to his/her shorts or swimsuit if you feel it is necessary. As you progress through this skill, you should state everything you are assessing. Specific clinical information not obtainable by visual or physical inspection, for example blood pressure, must be obtained from the Simulated Patient just as you would in the out-of-hospital setting. You may assume you have two (2) partners working with you who are trained to your level of care. They can only perform the interventions you indicate necessary and I will acknowledge all interventions you order. I may also supply additional information and ask questions for clarification purposes. Do you have any questions?

[Skill Examiner now reads "Entry Information" from prepared scenario and begins 15 minute time limit.]

## **Ventilatory Management (Adult, Supraglottic Airway Device and Pediatric) Essay to Skill Examiners**

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

These sequential skills are designed to evaluate a candidate's ability to provide ventilatory assistance to an apneic patient with a palpable central pulse and no other associated injuries. Today you could be evaluating candidates who were trained over several different education standards and have different scopes of practice. You must determine the level at which each candidate is testing before beginning his/her actual evaluation so that you do not mistakenly evaluate a candidate over a skill that he/she may not have been trained. The instructions you read to the candidate will assist you in determining his/her level of training and which skills to evaluate today. The evaluations you conduct today may include:

1. **Advanced Emergency Medical Technician (AEMT) candidates** only complete one (1) adult scenario and are only authorized to place a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>).
2. **Intermediate/99 and Paramedic (NRP) candidates** must complete two (2) separate adult scenarios:
  - a. Endotracheal intubation of the apneic adult patient
  - b. Insertion of a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>) into an apneic adult patient
3. **Intermediate/99 and Paramedic (NRP) candidates** also complete a Pediatric Ventilatory Management scenario which also includes endotracheal intubation that the Examination Coordinator may or may not have chosen to set up in your room today.

4. **Advanced Emergency Medical Technician (AEMT) candidates** also complete a Pediatric Respiratory Compromise scenario that the Examination Coordinator may or may not have chosen to set up in your room today.

For the purposes of this evaluation, the cervical spine is intact and cervical precautions are **not** necessary. These skills were developed to simulate a realistic situation where an apneic patient with a palpable pulse is found supine on the floor. **The adult manikin must be placed and left on the floor for these skills.** Bystander ventilations have not been initiated. A two (2) minute time period is provided for the candidate to check and prepare any equipment he/she feels necessary before the actual timed evaluation begins. When the actual timed evaluation begins, the candidate must immediately open the patient's airway and initiate ventilation using a bag-valve-mask device unattached to supplemental oxygen. If a candidate chooses to set up the reservoir and attach supplemental oxygen to the BVM device prior to establishing a patent airway and ventilating the patient, it must be accomplished within thirty (30) seconds of beginning his/her performance. **Regardless of the candidate's initial ventilatory assistance (either with room air or supplemental oxygen attached), it must be accomplished after body substance isolation precautions have been taken and within the initial thirty (30) seconds after taking body substance isolation precautions or the candidate has failed to ventilate an apneic patient immediately.** It is acceptable to insert a simple airway adjunct prior to ventilating the patient with either room air or supplemental oxygen. You must inform the candidate that no gag reflex is present when he/she inserts the oropharyngeal airway.

After the candidate ventilates the patient for a minimum of thirty (30) seconds, you must inform the candidate that ventilation is being performed without difficulty and that pulse oximetry indicates the patient's blood oxygen saturation is 85%. The candidate should call for integration of supplemental oxygen at this point in the procedure if it was not attached to the BVM initially. You should now take over BVM ventilation while the candidate gathers and assembles the adjunctive equipment and attaches the reservoir to supplemental oxygen if non-disposable equipment is being used. If two or more testing rooms are set up and one is using a disposable BVM, be sure to leave the mask and reservoir attached to all the non-disposable BVMs throughout the examination. To assist in containing costs of the practical examination, the oxygen tank used may be empty. The candidate must be advised to act as if the oxygen tank were full. However, the supplemental oxygen tubing, regulator, BVM, and reservoir should be in working order.

After supplemental oxygen has been attached, the candidate must pre-oxygenate the patient by ventilating at a rate of 10 – 12 ventilations/minute with adequate volumes of oxygen-enriched air. It is required that an oxygen reservoir (or collector) be attached. Should the candidate connect the oxygen without such a reservoir or in such a way as to bypass its function, he/she will have failed to provide a high percentage (at least 85%) of supplemental oxygen. You must mark the related statement under "Critical Criteria" and document his/her actions. Determination of ventilation volumes is dependent upon your observations of technique and the manikin's response to ventilation attempts. Ideally, these volumes range between 500 – 600 mL (6 – 7 mL/kg), but specific and accurate measurements of these volumes are quite difficult with the intubation manikins currently available.

After the candidate ventilates the patient with supplemental oxygen for at least thirty (30) seconds, you must automatically auscultate breath sounds. Inform the candidate that breath sounds are present and equal bilaterally and medical control has ordered:

- 1) Placement of a supraglottic airway device (either Combitube<sup>®</sup>, PTL<sup>®</sup>, or King LT<sup>®</sup>) of the candidate's choosing or as mandated for state licensure
- 2) Endotracheal intubation

Therefore, each Intermediate/99 and Paramedic candidate will complete the adult scenario twice as if treating two separate patients, once using a supraglottic airway device of the candidate's choosing or as mandated for state licensure (either Combitube<sup>®</sup>, PTL<sup>®</sup>, or King LT<sup>®</sup>) and the second time performing endotracheal intubation (ET). Advanced Emergency Medical Technician candidates will only complete the adult scenario once using a supraglottic airway device of the candidate's choosing or as mandated for state licensure (either Combitube<sup>®</sup>, PTL<sup>®</sup>, or King LT<sup>®</sup>). Be sure to document the supraglottic airway utilized by noting the specific device the candidate chooses on the evaluation form. This will also help clarify any performance documentation at a later time if necessary.

You must then take over ventilation while the candidate prepares all intubation or other supraglottic airway device equipment. When the candidate is prepared to insert the airway and instructs you to move, you must also remove the oropharyngeal airway (nasopharyngeal airways may be left in place). The candidate has only three (3) attempts to successfully intubate the patient (ET) or place the supraglottic airway device. An "attempt" for this examination is defined as introduction of the laryngoscope blade or the supraglottic airway device into the manikin's mouth regardless of trying to pass the tube or not. Throughout these attempts, ventilation may **not** be interrupted for more than thirty (30) seconds. The candidate must recognize the need for re-oxygenation of the patient and order you to re-oxygenate the patient. At this point, you may only ventilate the patient upon the candidate's command and must document any interruption in ventilation for more than thirty (30) seconds under "Critical Criteria" on the evaluation form. Do not stop the candidate's performance if he/she exceeds this 30 second maximum time limit on any attempt but document the ventilation delay as required.

Verification of endotracheal tube placement must be performed immediately after the cuff is inflated and the syringe is removed from the pilot bulb. The supraglottic airway devices will be discussed later in this essay. As soon as the candidate verifies tube placement, you must verify his/her knowledge of proper tube placement by asking, "How would you confirm that the tube has been correctly placed?" The candidate's response must include chest rise and auscultation over both the epigastrium and lungs bilaterally. Ask what the candidate should expect to hear over each if placement is correct. The candidate should also state that he/she would be checking for condensation to periodically collect inside of the endotracheal tube. Other secondary methods of confirming proper endotracheal tube placement, such as capnometry, esophageal detection device (EDD), or a colorimetric device may also be utilized. However, continuous quantitative waveform capnography is now recommended for intubated patients as it serves as the most reliable method of confirming and monitoring correct placement of an endotracheal tube. It is clearly superior to all other secondary means of endotracheal tube placement confirmation. Any omitted or inappropriate response to the related questions concerning endotracheal tube placement verification must be documented under "Critical Criteria" and the point for verifying proper placement must be deducted. To assist in controlling costs of the practical examination, it is acceptable to have the candidate explain how he/she would secure the ET tube rather than actually taping and securing the tube to the manikin. You must also ask the candidate, "How would you know if you are delivering appropriate volumes with each ventilation?" If not already accomplished, at that point the candidate should attach waveform capnography and verbalize what he/she would observe to verify proper tube placement and adequate ventilation. If the candidate attaches a colorimetric device, ask him/her to describe the color changes of the indicator that would represent proper tube placement and adequate ventilation.

Each candidate who places an endotracheal tube will also have to demonstrate tracheal suctioning. After the endotracheal tube has been secured and its placement confirmed, you should state, "You see secretions in the tube and hear gurgling sounds with the patient's exhalation." The candidate should then prepare the suction equipment. The candidate should estimate and mark the maximum insertion length of the catheter and direct you to stop ventilation of the patient. The candidate should insert the catheter to

the correct depth with the whistle stop port open and suction not being applied. The port should then be occluded and the catheter withdrawn slowly as suction is applied. The patient should not be suctioned for more than ten (10) seconds and should be immediately ventilated after being suctioned. Before suctioning the patient again, the catheter should be flushed with sterile water or saline. Please recall that endotracheal suctioning should be a sterile technique and the candidate should state that as he/she performs the skill. To help contain costs of the examination, though, the actual use of sterile gloves and actual performance of the skill in a sterile field is not required. Likewise, a container of tap water may be used to simulate the use of sterile water or saline during this procedure.

Throughout these skills, the candidate should take or verbalize body substance isolation precautions. At a minimum, examination gloves must be provided as part of the equipment available in the room. Masks, gowns, and eyewear may be added to the equipment for these skills but are not required for evaluation purposes. If the candidate does not protect himself/herself with at least gloves or attempts direct mouth-to-mouth ventilation, body substance isolation precautions have not been taken. Should this occur, mark the appropriate statement under "Critical Criteria" and document the candidate's actions as required.

### **Key Information on Supraglottic Airway Devices**

Proper evaluation requires that the Skill Examiner be fluent in the proper use of each piece of equipment that could be used in these skills. Due to the likelihood that the Skill Examiner may be more knowledgeable in the use of one of supraglottic airway devices, we have included a more detailed review than customary in the following guidelines. Be sure that you review all related information for these devices before you begin evaluation of the candidates and insert each device to help ensure that all equipment is in proper working order, the manikin is compatible with insertion of each device, and you are familiar with the appropriate use of each device.

#### **Combitube<sup>®</sup> and PTL<sup>®</sup>**

The Combitube<sup>®</sup> and PTL<sup>®</sup> are similar airway devices that are blindly inserted so that the distal tip of the tube becomes placed in either the esophagus or trachea outside of the operator's control. The tube contains two separate lumens, one of which is used for ventilation if the tip becomes placed in the esophagus and the other if in the trachea. Both the Combitube<sup>®</sup> and PTL<sup>®</sup> contain two inflatable cuffs which surround the tube. Once the device has been inserted to the proper depth, the proximal cuff is positioned so it is inflated in the pharynx to seal the mouth and nose, thereby replacing the need for a mask and maintenance of a mask seal. The second cuff provides a seal around the distal end of the tube and isolates either the esophagus or trachea depending on where the distal tip has become placed. The tip should be lubricated with a water soluble lubricant prior to insertion in a patient.

Placement in the midline and to the proper depth is a critical factor with the insertion of both devices. The Combitube<sup>®</sup> is placed to the proper depth when the ring printed on the tube is at the level of the teeth or gum line in toothless patients. The PTL<sup>®</sup> is placed to the proper depth when the flange of the bite block is at the level of the teeth. After insertion of the PTL<sup>®</sup> to the proper depth, it is critical that the head strap be secured before the cuffs are inflated to prevent movement and displacement of the device. Once the Combitube<sup>®</sup> has been inserted to the proper depth, it is manually held in place until the pharyngeal and distal cuffs are separately inflated using the two differently sized syringes provided by the manufacturer. The pharyngeal cuff is inflated by connecting the 140 mL syringe to the one-way valve on the blue pilot bulb and injecting 100 mL of air (80 mL in the Small Adult SA Size Combitube<sup>®</sup>). The distal cuff is inflated by connecting the smaller syringe to the one-way valve on the white pilot bulb and injecting 15 mL of air (12 mL in the Small Adult SA Size Combitube<sup>®</sup>). If the candidate does not immediately remove either syringe after inflating the cuff, the Skill Examiner must check and document

this action listed in the "Critical Criteria" section of the evaluation instrument.

The PTL<sup>®</sup> contains a single one-way valve and mouthpiece into which the operator blows (by mouth or BVM device) to inflate both cuffs simultaneously. **For the purposes of evaluation, no candidate is permitted to inflate the cuffs of the PTL<sup>®</sup> by mouth but should inflate them by using the BVM.** Proper cuff pressure is determined by feeling the resistance produced and confirmed by palpation of the pilot bulb. Should the candidate state that the cuffs are sufficiently inflated, the Skill Examiner should ask the candidate to clarify how that determination was made. Remember that the head strap must be secured before inflation of the cuffs is attempted when using the PTL<sup>®</sup>.

After the cuffs have been inflated, it is critical that the patient be ventilated to determine which lumen should be used to deliver ventilation. For the purposes of evaluation, the Skill Examiner must always respond with clinical signs that indicate ventilation is not occurring when the candidate directs you to ventilate through the initial lumen. Your initial response should be:

- There appears to be no chest rise when the patient is ventilated.

Then if/as each is auscultated or verbalized, you should respond as follows:

- Air and gurgling sounds are heard over the epigastrium.
- No sounds are heard over either lung.

The candidate should then instruct the Skill Examiner to remove the BVM from the adaptor on the initial lumen (esophageal placement), attach it to the adaptor on the second lumen (endotracheal placement), and ventilate the patient. If the PTL<sup>®</sup> was used, the candidate must remove the stylette from the second lumen before you attach the BVM. If the candidate does not remove the stylette, you should inform the candidate that you cannot attach the BVM properly to the second lumen. You should continue to present this finding until the stylette is removed.

Once you have re-instituted ventilation through the second lumen (endotracheal placement), it is critical that the candidate determines if the correct lumen is being used to ventilate the patient. You should now respond with clinical signs that indicate ventilation is now occurring by stating:

- You observe adequate chest rise and fall.

Then if/as each is auscultated or verbalized, you should respond as follows:

- No air or gurgling sounds are heard over the epigastrium.
- Good and equal breath sounds are heard over each lung.

Should auscultation either over the epigastrium or lungs bilaterally be omitted, the candidate has failed to confirm that the proper lumen is being used. If the candidate meets all other critical criteria and successfully works through the sequence until the alternate lumen is confirmed as the appropriate route to provide ventilation of the patient, it is not critical if the candidate directs ventilation attempts to occur in an order different from that which the manufacturer recommends.

Lastly, the candidate should secure the Combitube<sup>®</sup> with a strap or tape. When using the PTL<sup>®</sup>, the candidate should confirm that the device has remained properly secured.

## **King LT<sup>®</sup> Oropharyngeal Airway**

The King LT<sup>®</sup> Oropharyngeal Airway (and other related devices) consists of a curved tube with several ventilation outlets located between two high volume, low pressure inflatable cuffs. When properly inserted, these ventilation outlets align with the patient's laryngeal inlet, allowing for adequate oxygenation and ventilation to occur. Both cuffs are inflated using a single pilot balloon. The distal cuff is designed to seal the esophagus and reduce the possibility of gastric insufflation. The proximal cuff is intended to stabilize the tube by anchoring at the base of the tongue after it is inflated, thereby blocking the nasopharynx and the oropharynx. A pressure gauge or syringe is used to attach to the single pilot balloon and inflate both cuffs simultaneously. Inflation volumes typically range between 60 – 90 mL of air depending on the size of the King LT<sup>®</sup> Oropharyngeal Airway device. A standard 15 mm connector is attached to the proximal end of the tube for attachment to a bag-valve-mask or other ventilation device. Several reference markings are also located on the proximal tube to assist in determining the proper depth of insertion of the device.

Prior to insertion, the King LT<sup>®</sup> Oropharyngeal Airway device should be inspected for visible damage. The Valve Actuator is then disconnected from the Inflation Valve, and both cuffs are inflated simultaneously by injecting the maximum recommended volume of air into the cuffs depending on the size of the device being used (Size 3 – 60 mL; size 4 – 80 mL; size 5 – 90 mL). After assuring that no leaks are present, the Valve Actuator is disconnected from the Inflation Valve and all air is removed from both cuffs. A water-based lubricant should be applied to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of lubricant in or near the ventilatory openings.

After the patient is pre-oxygenated, the patient's head should be placed in the sniffing position. If necessary, the head can also be left in the neutral position during insertion and use of the device. The device should be grasped at the connector while the patient's mouth is held open using a tongue-jaw lift if possible. A tongue depressor can also be used to lift the tongue anteriorly to facilitate easy advancement. The device should be rotated laterally 45 – 90° while the tip is introduced into the mouth and advanced behind the base of the tongue. The device should then be rotated back to midline as the tip reaches the posterior wall of the pharynx. Insertion can also be accomplished by a midline approach. A tongue-jaw lift is performed, the distal tip is inserted on a midline and slid along the palate until properly positioned in the hypopharynx. In either case, the device should then be advanced until the base of the connector is aligned with the teeth or gums, making sure that excessive force is not exerted during insertion.

If a proprietary pressure gauge is available, the cuffs should be inflated to a maximum pressure of 60 cm H<sub>2</sub>O. If a cuff pressure gauge is not available, a syringe should be used to inflate the cuffs with the minimum volume necessary to seal the airway at peak ventilatory pressure. Typically, these volumes are as follows:

- Size 3: 45 – 60 mL
- Size 4: 60 – 80 mL
- Size 5: 70 – 90 mL

The breathing circuit is then attached to the 15 mm connector of the device. While the patient is gently ventilated, the device should be withdrawn while the patient is assessed until ventilation is easy and free-flowing (large tidal volume with minimal resistance felt on insufflation). In this manner, ventilation can be optimized and usually results in the best depth of insertion. Proper position should then be further confirmed by auscultation, chest movement and verification by waveform capnography. The cuff inflation pressure should be readjusted to 60 cm H<sub>2</sub>O if a pressure gauge is available. Finally, the device should be secured using tape or other acceptable means while noting the depth of insertion as indicated on the proximal reference marks. A bite block can also be inserted if desired.

You should then dismiss the candidate from this skill and disconnect all equipment to reset your room. Be certain to evacuate all air from the cuffs before attempting to remove the airway device utilized. You should re-package all equipment as supplied from the manufacturer before permitting another candidate to enter your room. Also, be sure to organize the equipment in an orderly fashion to minimize potential confusion.

## **Pediatric Ventilatory Management**

**Only Intermediate/99 and Paramedic candidates complete this skill.** This skill may be set up and tested in a separate Pediatric Skills area or incorporated into the other Ventilatory Management skills as the Examination Coordinator chooses. These sequential skills are designed to test a candidate's ability to provide ventilatory assistance to an apneic infant with a palpable brachial pulse and no other associated injuries. For the purposes of these testing skills, the cervical spine is intact and cervical precautions are **not** necessary. This skill was developed to simulate a realistic situation where an apneic infant with a palpable pulse is found. Bystander ventilations have not been initiated. A two (2) minute time period is provided for the candidate to check and prepare any equipment he/she feels necessary before the actual timed evaluation begins. An array of appropriate equipment is essential for these skills. You must ensure that pediatric bag-valve-mask devices, oropharyngeal and nasopharyngeal airways, laryngoscope blades, and uncuffed endotracheal tubes (sizes 3.0 – 5.0) are available and work adequately throughout the examination. The choice of appropriate equipment is essential when assisting ventilation in the infant. Using an oropharyngeal airway that is too large may obstruct the airway or displace the tongue in the pharynx, resulting in obstruction. The bag-valve-mask device must be of appropriate size to provide an adequate mask seal and not over-inflate the lungs.

When the actual timed evaluation begins, the candidate must immediately open the patient's airway and initiate ventilation using a bag-valve-mask device unattached to supplemental oxygen. If a candidate chooses to set up the reservoir and attach supplemental oxygen to the BVM device prior to establishing a patent airway and ventilating the patient, it must be accomplished within thirty (30) seconds of beginning his/her performance. **Regardless of the candidate's initial ventilatory assistance (either with room air or supplemental oxygen attached), it must be accomplished after body substance isolation precautions have been taken and within the initial thirty (30) seconds after taking body substance isolation precautions or the candidate has failed to ventilate an apneic patient immediately.** In children less than two (2) years of age, padding must be placed under the scapulae to properly position the head in a neutral or sniffing position. If you are using a manikin where it is not possible to demonstrate elevation of the upper torso, simply ask the candidate to describe how he/she would place a live infant in a neutral or sniffing position. It is acceptable to insert a simple airway adjunct prior to ventilating the patient with either room air or supplemental oxygen. **[It is currently acceptable to insert the oropharyngeal airway using a tongue blade and following the natural curvature of the oropharynx. If a tongue blade is not available, it is acceptable to insert the oropharyngeal airway with the tip toward the roof of the mouth and curve of the adjunct pressing on the tongue, then rotating the adjunct 180 ° into the correct position. The adjunct should not scrape the palate (see PEPP).]** You must inform the candidate that no gag reflex is present when he/she inserts the oropharyngeal airway.

After the candidate ventilates the patient for a minimum of thirty (30) seconds, you must inform the candidate that ventilation is being performed without difficulty. The candidate should call for integration of supplemental oxygen at this point in the procedure if it was not attached to the BVM initially. You should now take over BVM ventilation while the candidate gathers and assembles the adjunctive equipment and attaches the reservoir to supplemental oxygen if non-disposable equipment is being used.

If two or more rooms are set up and one is using a disposable BVM, be sure to leave the mask and reservoir attached to all the non-disposable BVMs throughout the examination. To assist in containing costs of the practical examination, the oxygen tank used may be empty. The candidate must be advised to act as if the oxygen tank were full. However, the supplemental oxygen tubing, regulator, BVM, and reservoir should be in working order.

After supplemental oxygen has been attached, the candidate must pre-oxygenate the patient at a rate of 12 – 20 ventilations/minute with adequate volumes of oxygen-enriched air. It is required that an oxygen reservoir (or collector) be attached. Should the candidate connect the oxygen without such a reservoir or in such a way as to bypass its function, he/she will have failed to provide a high percentage (at least 85%) of supplemental oxygen. You must mark the related statement under "Critical Criteria" and document his/her actions. Determination of ventilation volumes is dependent upon your observations of technique and the manikin's response to ventilation attempts. Ideally, these volumes should be sufficient to cause visible chest expansion and air movement in and out of the lungs. Specific and accurate measurements of these volumes are quite difficult with the intubation manikins currently available.

After the candidate ventilates the patient with supplemental oxygen for at least thirty (30) seconds, you must automatically auscultate breath sounds. Inform the candidate that breath sounds are present and equal bilaterally and medical control has ordered endotracheal intubation. You must then take over ventilation while the candidate prepares all intubation equipment. When the candidate is prepared to insert the airway and instructs you to move, you must also remove the oropharyngeal airway (nasopharyngeal airways may be left in place). The candidate has only three (3) attempts to successfully intubate the infant. An "attempt" for this examination is defined as introduction of the laryngoscope blade into the manikin's mouth regardless of trying to pass the tube or not. Throughout these attempts, ventilation may **not** be interrupted for more than thirty (30) seconds. The candidate must recognize the need for re-oxygenation of the patient and order you to re-oxygenate the patient. At this point, you may only ventilate the patient upon the candidate's command and must document any interruption in ventilation for more than thirty (30) seconds under "Critical Criteria" on the evaluation form. Do not stop the candidate's performance if he/she exceeds this 30 second maximum time limit on any attempt but document the ventilation delay as required.

The infant's head should not be excessively flexed during intubation, but rather placed in a neutral or sniffing position by placing padding under the scapulae. The straight laryngoscope blade (No. 1 Miller blade) may be preferred for infant intubation over the curved (Macintosh) blade. Uncuffed endotracheal tubes must be used in the infant. Once inserted, the uncuffed tube seals in the narrowing trachea just distal to the cricoid cartilage.

It is essential that tube placement be confirmed immediately after the tube is inserted. As soon as the candidate verifies tube placement, you must verify his/her knowledge of proper tube placement by asking, "How would you confirm that the tube has been correctly placed?" The candidate's response must include visualizing chest rise and auscultation over both the epigastrium and lungs bilaterally. Breath sounds should be assessed in upper and lower fields as well as auscultation over the epigastrium. The candidate should also observe the rise and fall of the chest with each ventilation and look for condensation in the tube. Any omitted or inappropriate response to these questions must be documented under "Critical Criteria" and the point for confirming proper placement must be deducted. The use of an end-tidal CO<sub>2</sub> detection device is not required in the infant portion of these skills. To assist in controlling costs of the practical examination, it is acceptable to have the candidate explain how he/she would secure the ET tube rather than actually taping and securing the tube to the manikin.

Throughout these skills, the candidate should take or verbalize body substance isolation precautions. At a minimum, examination gloves must be provided as part of the equipment available in these skills. If the

candidate does not protect himself/herself with at least gloves or attempts direct mouth-to-mouth ventilation, body substance isolation precautions have not been taken. Should this occur, mark the appropriate statement under "Critical Criteria" and document the candidate's actions as required.

### **Pediatric Respiratory Compromise**

**Only Advanced Emergency Medical Technician candidates complete this skill.** This skill may be set up and tested in a separate Pediatric Skills area or incorporated into the other Ventilatory Management skills as the Examination Coordinator chooses. These sequential skills are designed to test a candidate's ability to provide ventilatory assistance to a 1 year old child who progresses from respiratory distress to respiratory failure. For the purposes of these testing skills, no spinal injury is suspected and spinal immobilization precautions are **not** necessary. This skill was developed to simulate a realistic situation where a 1 year old child in respiratory distress is found sitting in his mother's lap. No bystander interventions have been initiated. An array of appropriate equipment is essential for these skills. You must ensure that an appropriate volume/size pediatric bag-valve-mask device, oropharyngeal and nasopharyngeal airways, pediatric oxygen adjuncts (simple face mask, non-rebreather face mask), pulse oximeter, and capnography/capnometry (waveform or colorimetric) are available and work adequately throughout the examination. The choice of appropriate equipment is essential when assisting ventilation in the pediatric patient who is experiencing respiratory distress or failure. Using an oropharyngeal airway that is too large may obstruct the airway or displace the tongue in the pharynx, resulting in obstruction. The bag-valve-mask device must be of appropriate size to provide an adequate mask seal and not over-inflate the lungs. If two or more rooms are set up and one is using a disposable BVM, be sure to leave the mask and reservoir attached to all the non-disposable BVMs throughout the examination. To assist in containing costs of the practical examination, the oxygen tank used may be empty. The candidate must be advised to act as if the oxygen tank were full. However, the supplemental oxygen tubing, regulator, BVM, and reservoir should be in working order.

When the actual timed evaluation begins, the candidate must begin to assess the patient who initially presents sitting upright in his mother's lap with signs of respiratory distress. The candidate should form a general impression of the patient's condition by observing the patient and his interaction with the mother and the environment. These assessments should be accomplished without approaching or touching the patient to avoid upsetting the child which could worsen respiratory distress and hasten the progression to respiratory failure. You should inform the candidate that the child is alert but anxious and is being consoled by his mother. The child should present with a 2 – 3 day history of recent upper respiratory infection and low-grade fever. The symptoms have worsened over the past 4 hours which caused the parents to call 9-1-1. The candidate should continue to assess the child from a distance, looking for secretions, drooling, and signs of foreign body airway obstruction as well as listening for audible noises. The candidate should be informed that he/she observes increased work of breathing with retractions and hears audible grunting. The initial respiratory rate is 60 breaths/minute.

As the candidate begins his/her primary survey and initial treatment with supplemental oxygen, you should report that the initial SpO<sub>2</sub> is 82% on room air. The candidate should leave the child in his mother's lap while coaching the mother to assist with administration of blow-by oxygen for her child. At this point, you should provide signs of a patient who is progressing from respiratory distress to respiratory failure. The child should become drowsy and the head should begin bobbing. Despite a few minutes of supplemental oxygen administration, the hemoglobin saturation does not increase appreciably. The candidate should observe see-saw respirations and the pulse rate begins to decrease. You should also describe signs of a decreasing level of responsiveness, such as drowsiness, lethargy and eventually unresponsiveness.

It is imperative that the candidate recognizes the signs of a worsening patient and immediately begins effective ventilation of the child. Supplemental oxygen delivery should be discontinued at this point and the patient should be removed from his mother's lap and placed in the supine position. Padding must be placed under the scapulae to properly position the head in a neutral or sniffing position in children less than two (2) years of age. If you are using an intubation manikin where it is not possible to demonstrate elevation of the upper torso, simply ask the candidate to describe how he/she would place a 1 year old child in a neutral or sniffing position. The candidate should assess the child's airway and consider insertion of a nasopharyngeal or oropharyngeal airway. **[It is currently acceptable to insert the oropharyngeal airway using a tongue blade and following the natural curvature of the oropharynx. If a tongue blade is not available, it is acceptable to insert the oropharyngeal airway with the tip toward the roof of the mouth and curve of the adjunct pressing on the tongue, then rotating the adjunct 180 ° into the correct position. The adjunct should not scrape the palate (see PEPP).]** After advising the candidate that the adjunct was accepted without difficulty, you should inform the candidate that the patient is breathing at a rate of 20/minute. An appropriately sized bag-valve-mask device should be chosen and immediately attached to the oxygen regulator flowing at 12 – 15 L/minute. While maintaining the head in a neutral or sniffing position, a tight mask seal should be obtained and assisted ventilations should be initiated. Be sure to time the candidate for at least 1 minute and count the ventilations delivered. If the candidate does not ventilate the manikin at a rate of 20/minute (1 ventilation every 3 seconds), be sure to mark the related "Critical Criteria" and document the exact rate that you observed. Determination of ventilation volumes is dependent upon your observations of technique and the manikin's response to ventilation attempts. Remember that each ventilation should be sufficient to cause visible chest rise in a real patient. If the candidate does not explain how he/she would assess the effectiveness of ventilations, you should ask him/her, "How would you know if you are ventilating the patient properly?" No more than 2 ventilatory volume errors in a 1 minute time period are acceptable. You should document any incorrect responses concerning the ventilatory rate and/or tidal volume and check any related "Critical Criteria" statements if necessary.

Throughout these skills, the candidate should take or verbalize body substance isolation precautions. At a minimum, examination gloves must be provided as part of the equipment available in these skills. If the candidate does not protect himself/herself with at least gloves or attempts direct mouth-to-mouth ventilation, body substance isolation precautions have not been taken. Should this occur, mark the appropriate statement under "Critical Criteria" and document the candidate's actions as required.

### **Equipment List**

Do not open these skills for testing until the following equipment is available. If the Pediatric Ventilatory Management skill is being evaluated in a separate Pediatric Skills area, disregard all pediatric equipment in the following list. You must ensure that all equipment is working adequately throughout the examination. All equipment must be disassembled (reservoir disconnected and oxygen supply tubing disconnected when using only non-disposable equipment, regulator turned off, laryngoscope disassembled, cuffs deflated with syringes disconnected, etc.) before accepting a candidate for evaluation:

- Examination gloves (may also add masks, gowns, and eyewear)
- Intubation manikins (infant and adult)
- Pediatric/infant manikin (approximate size of a 1 year old child)
- Laryngoscope handle and blades (straight and curved – infant and adult)
- Endotracheal tubes (3.0 - 8.5 mm)
- End-tidal CO<sub>2</sub> detector and/or esophageal detector device (EDD)

- Syringes (10 mL, 20 mL, 35 mL, etc.)
- Stylette
- Bag-valve-mask device with reservoir (infant and adult)
- Oxygen cylinder with regulator (may be empty)
- Oxygen connecting tubing
- Selection of oropharyngeal airways (infant and adult)
- Selection of nasopharyngeal airways (infant and adult)
- Various supplemental oxygen devices (nasal cannula, non-rebreather mask with reservoir, etc. for infant and adult)
- Suction device with rigid and flexible catheters and appropriate suction tubing
- Sterile water or saline
- Supraglottic airway device to include at least one (1) of the following:
  - Combitube<sup>®</sup>
  - PTL<sup>®</sup>
  - King LT<sup>®</sup> Oropharyngeal Airway or similar
- Stethoscope
- Lubricant (silicone spray)
- 1/2" tape
- Spare batteries
- Tongue blade
- Towel or other appropriate padding

The Skill Examiner reads the following instructions to all Intermediate/99 and Paramedic candidates:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR VENTILATORY MANAGEMENT – ADULT**

Welcome to the Ventilatory Management skills. These progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to an apneic adult patient who has no other associated injuries. This is a non-trauma situation and cervical precautions are not necessary. You are required to demonstrate sequentially all procedures you would perform, from simple maneuvers and adjuncts to endotracheal intubation. You will have three (3) attempts to successfully intubate the manikin. You must actually ventilate the manikin for at least thirty (30) seconds with each adjunct and procedure utilized. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carry-out your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

Upon your arrival to the scene, you observe the patient as he/she goes into respiratory arrest and becomes unresponsive. A palpable carotid pulse is still present. Bystander ventilations have **not** been initiated. The scene is safe and no hemorrhage or other immediate problem is found.

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technician candidates and to all Intermediate/99 and Paramedic candidates who must also complete the Supraglottic Airway Device Skill:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR VENTILATORY MANAGEMENT –SUPRAGLOTTIC AIRWAY DEVICE**

These progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to an apneic adult patient who has no other associated injuries. This is a non-trauma situation and cervical precautions are not necessary. You are required to demonstrate sequentially all procedures you would perform, from simple maneuvers and adjuncts to placement of a supraglottic airway device of your choosing.

[NOTE: Skill Examiner now begins to fill out appropriate form and documents which supraglottic airway device the candidate chooses. If the PTL<sup>®</sup> was selected, you must inform the candidate that the cuffs may not be inflated by mouth. The candidate must inflate the PTL<sup>®</sup> cuffs by using the BVM.]

You will have three (3) attempts to successfully place the supraglottic airway device. You must actually ventilate the manikin for at least thirty (30) seconds with each adjunct and procedure utilized. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carry-out your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

Upon your arrival to the scene, you observe the patient as he/she goes into respiratory arrest and becomes unresponsive. A palpable carotid pulse is still present. Bystander ventilations have **not** been initiated. The scene is safe and no hemorrhage or other immediate problem is found.

The Skill Examiner reads the following instructions to all Intermediate/99 and Paramedic candidates who must complete the Pediatric Ventilatory Management Skill if it has been set up in your room and not in a separate Pediatric Skills area:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PEDIATRIC VENTILATORY MANAGEMENT**

Since you are testing at the [Intermediate/99, Paramedic] level today, these progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to an apneic infant who has no other associated injuries. This is a non-trauma situation and cervical precautions are not necessary. You are required to demonstrate sequentially all procedures you would perform, from simple maneuvers and adjuncts to endotracheal intubation. You will have three (3) attempts to successfully intubate the manikin. You must actually ventilate the manikin for at least thirty (30) seconds with each adjunct and procedure utilized. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carryout your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

Upon your arrival to the scene, you observe the infant as he/she goes into respiratory arrest and becomes unresponsive. A palpable brachial pulse of 106 is still present. Bystander ventilations have **not** been initiated. The scene is safe and no hemorrhage or other immediate problem is found.

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technician (NRAEMT) candidates who must also complete the Pediatric Respiratory Compromise Skill if it has been set up in your room and not in a separate Pediatric Skills area:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PEDIATRIC RESPIRATORY COMPROMISE**

**Since you are testing at the Advanced Emergency Medical Technician level today**, these progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to a one (1) year old child in respiratory distress. No other associated injuries are present. This is a non-trauma situation and cervical precautions are not necessary. You must actually perform all assessments and interventions that you feel are necessary. If you choose to ventilate the manikin with a bag-valve-mask device, you must do so for at least one (1) minute. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carryout your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

You respond to a residence for a sick child who is having difficulty breathing. The scene is safe and no hemorrhage or other immediate problem is found. As you enter the residence, you see a 1 year old child sitting on his mother's lap.

## **Cardiac Management (Dynamic Cardiology, Static Cardiology, and Cardiac Arrest Management/AED) Skills Essay to Skill Examiners**

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

**Both Intermediate/99 and Paramedic candidates** complete both Dynamic and Static Cardiology Skills. Therefore, you should ask the candidate at which level he/she is testing and record the level on the evaluation sheet by checking the appropriate block on the evaluation form. Be sure to stop the scenario at the appropriate point for Intermediate/99 candidates so that you are not evaluating them to a standard outside the scope of his/her education.

**Advanced Emergency Medical Technician (NRAEMT)** candidates only complete the Cardiac Arrest Management/AED portion of these skills.

These skills are designed to verify a candidate's competence in recognition and treatment of cardiac arrhythmias in accordance with American Heart Association guidelines for Advanced Cardiac Life Support. There are two (2) separate and distinct parts tested in different manners, namely a dynamic, scenario-based portion and a static portion. Either of these two parts may be presented first. You should read the specific instructions for each portion just prior to evaluation of that portion. If multiple Cardiac Management Skills are set up and divided into separate Dynamic and Static portions, you must help ensure that each candidate is evaluated over the material from the same testing scenario in both parts. For example, a candidate who completes the Dynamic Cardiology portion using Set #106 testing materials must complete the Static Cardiology portion using Set #106 testing materials as well.

## Dynamic Cardiology

The dynamic portion evaluates the candidate's ability to deliver sequential care given prepared patient presentations, including proper setup and use of the manual ECG monitor and defibrillator (no automated, semi-automated or interpreting machines permitted). In this portion, the candidate will be evaluated utilizing a defibrillation manikin and ECG monitor/defibrillator. **The manikin must be placed and left on the floor for this skill.** Each candidate must physically demonstrate and actually perform all electrical interventions necessary. Prepared dynamic sequences will be provided; each candidate must be evaluated over one (1) complete sequence. You can alternate scenarios between candidates at random throughout the examination if the National Registry Representative has provided more than one scenario. Each scenario contains four separate and sequential arrhythmias that **must** be presented in order and treated in accordance with the "Suggested Interventions" as noted in the scenario. **You are not permitted to alter any arrhythmia or sequence as outlined.**

Several important aspects of this evaluation format must be clarified. The progression of arrhythmias in all scenarios must be strictly followed. The progression of this skill is quite similar to a "megacode." However, you may not include additional arrhythmias, drugs, or introduce any problem-solving situations. Each candidate must "voice" his/her interpretation of each arrhythmia as well as all treatments and interventions (medications, IVs, intubation, etc.) he/she would provide for the patient. You will need to develop a dialogue with each candidate and should ask questions for clarification purposes. For example, if a candidate states, "I'd give a dose of atropine," you should ask him/her to explain how much atropine he/she would administer and by what route. You must also acknowledge that the treatments or interventions have been completed without difficulty immediately after the order has been given. If a candidate calls for, performs, or administers an inappropriate treatment or intervention at a point where the arrhythmia is to change, you must change to the next arrhythmia listed in the scenario even if a real patient would convert to some other arrhythmia or respond in another fashion. It is important to remember that the patient's response in these prepared scenarios is NOT INDICATIVE OF THE APPROPRIATENESS OF A CANDIDATE'S INTERPRETATIONS AND/OR TREATMENTS. Be sure to emphasize this point in the instructions to each candidate. Any incorrect or inappropriate interpretation, treatment, or intervention must be documented in the space provided on the evaluation form.

Safety is an important consideration in this skill. Either hands-on or hands-off delivery of shocks is acceptable. **However, live shocks must be delivered by each candidate for verification purposes.** You must advise each candidate to leave the defibrillator turned to its lowest energy setting and verbally state the energy level to be delivered to the patient (see "Instructions to the Psychomotor Skills Candidate"). If the monitor/defibrillator does not sense appropriate transthoracic resistance and will not deliver a shock, please operate the equipment to simulate actual delivery of a shock as best as possible. To contain costs and help ensure safety, conductive medium (gel, pads, etc.) does not actually need to be applied to the paddles or manikin but may be verbalized by the candidate.

Please realize the Dynamic Cardiology skill is device-dependent to a degree. Therefore, give each candidate time for familiarization with the equipment in the room before any evaluation begins. You may need to point out specific operational features of the monitor/defibrillator unit but are not permitted to discuss patient treatment protocols or algorithms with any candidate. The equipment must be assembled so that all arrhythmias may be read through the manikin. The candidate is permitted to run a recording strip of any arrhythmia during the evaluation but these tracings must be collected before permitting the candidate to leave the examination room.

## Static Cardiology

In this portion, the candidate will be evaluated in his/her ability to interpret ECGs and verbalize the appropriate treatment protocol in accordance with current American Heart Association guidelines and algorithms. The candidate will be required to interpret and verbally treat four (4) arrhythmias as presented on prepared tracings. A maximum time limit of six (6) minutes for completion of this portion is allowed. Vital patient information is printed on the front of each arrhythmia card and you are not permitted to supply additional information not contained on the cards. Any incorrect or inappropriate interpretation, treatment, or intervention must be concisely documented in the space provided on the evaluation form.

You should individually hand each arrhythmia card in numerical order to the candidate. Candidates may pass on any card and come back to it if time permits. The candidate may either read the information out loud or to him/herself. The candidate will need to verbalize his/her interpretation of the rhythm/condition. It is assumed that the rhythm you see continues in each patient and does not change. If the interpretation is incorrect, you may not award points for any treatment. Verbal treatments need not be in-depth but should include manual, mechanical, pharmacological, and electrical interventions. At the point in which the candidate has demonstrated an acceptable performance, you should instruct the candidate to move on to the next card. Remember that the answers provided are suggested guidelines for acceptable responses but are not all encompassing. We also depend on your expertise and ability to make reasonable and consistent judgments when evaluating this skill. You may award one (1) of the two (2) possible points for treatment if partial treatment was correctly provided. If more than one set of strips was provided, the ECG strips must not be interchanged between sets.

### Cardiac Arrest Management/AED

This station is designed to test the NRAEMT candidate's ability to effectively manage an unwitnessed out-of-hospital cardiac arrest by integrating scene management skills, CPR skills, and usage of the AED. The candidate arrives on scene to find an apneic and pulseless adult patient who is lying on the floor. **The manikin must be placed and left on the floor for this skill.** This is an unwitnessed cardiac arrest scenario and no bystander CPR has been initiated. After performing 5 cycles of 1-rescuer adult CPR, the candidate is required to utilize the AED as he/she would at the scene of an actual cardiac arrest. The scenario ends after the first shock is administered and CPR is resumed.

After arriving on the scene, the candidate should assess the patient and determine that the patient is unresponsive. The candidate should then assess the patient for signs of breathing. If it is determined that the patient is apneic or has signs of abnormal breathing, such as gasping or agonal respirations, the candidate should next assess the carotid pulse. This pulse check must take no more than 10 seconds. As soon as pulselessness is verified, the candidate should immediately begin chest compressions. The candidate should request additional EMS assistance after determining that the patient is in cardiac arrest and CPR has been initiated. All actions performed must be in accordance with the current AHA Guidelines for CPR and Emergency Cardiovascular Care. Any candidate who elects to perform any other intervention or assessment causing delay in chest compressions has not properly managed the situation. You should check the related "Critical Criteria" and document the delay.

Each candidate is required to perform 2 minutes of 1-rescuer CPR. Because high-quality CPR has been shown to improve patient outcomes from out-of-hospital cardiac arrest, you should watch closely as the candidate performs CPR to assure adherence to the current recommendations:

- Adequate compression depth and rate
- Allows the chest to recoil completely
- Correct compression-to-ventilation ratio
- Adequate volumes for each breath to cause visible chest rise
- No interruptions of more than 10 seconds at any point

After 5 cycles or 2 minutes of 1-rescuer CPR, the candidate should assess the patient for no more than 10 seconds. As soon as pulselessness is verified, the candidate should direct a second rescuer to resume chest compressions. The candidate then retrieves the AED, powers it on, follows all prompts and attaches it to the manikin. Even though an AED trainer should be used in this skill, safety should still be an important consideration. The candidate should make sure that no one is touching the patient while the AED analyzes the rhythm. The AED should then announce, “Shock advised” or some other similar command. Each candidate is required to operate the AED correctly so that it delivers one shock for verification purposes. As soon as the shock has been delivered, the candidate should direct a rescuer to immediately resume chest compressions. At that point, the scenario should end and the candidate should be directed to stop.

Please realize the Cardiac Arrest Management/AED Skill is device-dependent to a degree. Therefore, give each candidate time for familiarization with the equipment in the room before any evaluation begins. You may need to point out specific operational features of the AED, but are not permitted to discuss patient treatment protocols or algorithms with any candidate. Candidates are also permitted to bring their own equipment to the psychomotor examination. If any enter your skill carrying their own AED, be sure that the National Registry Representative has approved it for testing and you are familiar with its appropriate operation before evaluating the candidate with the device. You should also be certain that the device will safely interface with the manikin. The manikin must be placed on the floor in this skill. It is not permissible to move the manikin to a table, bed, etc. This presentation most closely approximates the usual EMS response to out-of-hospital cardiac arrest and will help standardize delivery of the psychomotor examination. If any candidate insists on moving the manikin to a location other than the floor, you should immediately request assistance from the National Registry Representative.

### **Equipment List**

These skills should be located in a quiet, isolated room with a desk or table and two comfortable chairs. Do not open these skills for testing until the National Registry Representative has provided you with prepared Dynamic Cardiology testing scenarios and Static Cardiology cards. The following equipment must also be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Monitor/defibrillator (no automated, semi-automated or interpreting machines permitted) with freshly charged batteries and spares
- Arrhythmia generator compatible with manikin and monitor/defibrillator
- Defibrillation manikin
- Conductive medium (gel, pads, etc.)
- ECG paper
- Automated External Defibrillator (trainer model) with freshly charged and spare batteries
- CPR manikin that can be defibrillated with an AED Trainer

The Skill Examiner reads the following instructions to all Intermediate/99 and Paramedic candidates who complete the Dynamic and Static Cardiology skills:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR DYNAMIC CARDIOLOGY**

This skill is designed to evaluate your ability to recognize and treat cardiac arrhythmias in accordance with current American Heart Association guidelines and algorithms. In this part, you will be evaluated utilizing the defibrillation manikin and ECG monitor/defibrillator. Four (4) separate arrhythmias will be presented in which you must act as the team leader and voice your interpretation of each arrhythmia as well as all basic and advanced life support and pharmacological interventions you wish to administer. You must physically demonstrate and actually perform all electrical interventions necessary throughout this skill. Please leave the defibrillator turned down to its lowest energy setting and verbally state the energy level you would be delivering to the patient prior to shocking the manikin. **JUST AS IT SOMETIMES OCCURS IN THE FIELD, SOME PATIENTS DO NOT RESPOND FAVORABLY DESPITE APPROPRIATE INTERPRETATION AND TREATMENT. THE PATIENT'S RESPONSE IN THESE PREPARED SCENARIOS IS NOT MEANT TO GIVE ANY INDICATION WHATSOEVER AS TO YOUR PERFORMANCE IN THIS SKILL.** Please take a few moments to familiarize yourself with the equipment before we begin and I will be happy to explain any of the specific operational features of the monitor/defibrillator.

[After an appropriate time period or when the candidate informs you he/she is familiar with the equipment, the Skill Examiner continues reading the following:]

You will have eight (8) minutes to complete this skill once we begin. I may ask questions for clarification and will acknowledge the verbal treatments you indicate are necessary. Do you have any questions?

You respond to a call and find this patient who is...

[The Skill Examiner must refer to the initial rhythm of the Dynamic Cardiology scenario provided to make the appropriate initial patient presentation.]

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR STATIC CARDIOLOGY**

This skill is designed to evaluate your ability to recognize and verbally treat cardiac arrhythmias in accordance with current American Heart Association guidelines and algorithms. Four (4) separate static ECG recordings with associated patient information will be presented. I am not permitted to supply any additional information not contained on the cards. I will individually hand you each of the four (4) cards. You may read the patient information out loud or to yourself. You will first need to verbally inform me of your interpretation of the rhythm or condition. Then you must tell me all treatments and interventions you would provide this patient in the field. Assume that the rhythm you see continues in each patient and does not change. You may pass on any card and come back to it if time permits. You will have a total of six (6) minutes to complete all four (4) of the patient encounters. Do you have any questions?

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technicians who must also complete the Cardiac Arrest Management/AED Skill:

### **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR CARDIAC ARREST MANAGEMENT/AED**

This skill is designed to evaluate your ability to manage an out-of-hospital cardiac arrest by integrating patient assessment and management skills, CPR skills, and usage of an AED. You arrive on scene by yourself and there are no bystanders present. You must begin resuscitation of the patient in accordance with American Heart Association Guidelines for CPR. You must physically perform 1-rescuer CPR and operate the AED, including delivery of a shock. The patient's response is not meant to give any indication whatsoever as to your performance in this skill. Please take a few moments to familiarize yourself with the equipment before we begin and I will be happy to explain any of the specific operational features of the AED. If you brought your own AED, I need to make sure it is approved for testing before we begin.

[After an appropriate time period or when the candidate informs you he/she is familiar with the equipment, the Skill Examiner continues reading the following:]

You will have ten (10) minutes to complete this skill once we begin. I may ask questions for clarification and will acknowledge the treatments you indicate are necessary. Do you have any questions?

You respond to a call and find this patient lying on the floor.

## Oral Station Essay to Skill Examiners

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

This skill is designed to assess the candidate's ability to critically think through and clinically manage two (2) specific patient presentations. Each candidate will be given a maximum of fifteen (15) minutes to complete each case that **two (2) separate Skill Examiners will evaluate**. Candidates are permitted to take notes but all recordings must be collected and secured before the candidate leaves the room. Before you open this skill for testing, you must spend a significant amount of time (1 hour or more) reviewing the case and preparing to evaluate the candidates.

As the candidate enters your room, introduce yourself. Be sure the candidate introduces him/herself so that you can accurately fill in the information on the evaluation form. Do not ask candidates other personal questions, including questions related to training or current practice location. Clarify any specific questions the candidate may ask about how to interact with you during this skill. Try to put them at ease before starting the evaluation while maintaining an appropriate professional Skill Examiner distance. Be sure to provide the candidate with one sheet of blank paper and a pen(cil) to record information throughout the case.

The fifteen (15) minute time limit will begin when you hand the candidate the "Background and Dispatch Information" provided with the testing case. Tell the candidate to read this information aloud. The candidate should verbally seek scene size-up information, request patient assessment findings including past medical history, indicate his/her patient management plan, transportation decisions, and how he/she

would conclude the call. Remember that candidates are told to assume the role of team leader and that no treatments or interventions will be performed unless he/she orders or directs the actions. If a candidate does not begin the case after 30 seconds, you should state, "What would you like to do now?" It is imperative to move candidates expeditiously through the case. It is your responsibility to provide the candidate with every reasonable opportunity to complete all required actions in the case. If the candidate hesitates or stalls during his/her performance, you should ask, "What would you do next?" to move him/her along. Some candidates may ask questions or give orders in rapid-fire sequence. This can make it difficult for you to give all needed information and may also lead to misunderstandings about what was ordered or performed. Please discourage any candidate from asking too many questions or ordering too many interventions at once by simply responding, "One thing at a time, please." Some candidates may get too involved with such a detailed physical examination of an area with no significant findings that time is unnecessarily spent in these non-significant areas. To move the candidate on in a timely fashion in this instance, you should provide a general response such as, "The HEENT is normal in this patient."

As the Skill Examiner, you will need to provide appropriate scene size-up information as you are asked. Once contact is made with the patient, you should play the role of the patient, bystander, family member, etc., by providing answers to any questions you may be asked. When you are to respond as a patient or other party, primary responses are listed in the case within quotations, such as, "My chest really hurts." You should also act like a patient with chest pain when exhibiting these signs and symptoms. Please dramatize and role-play, within reason. Many candidates will ask for additional information not specifically provided in the case. Based on your expertise, you should respond appropriately just as a patient would in a real situation. Be sure to state your responses using typical layperson language and by responding in the first person. If there are unique role-playing responsibilities for you, they will be identified in the case. You must supply all physical examination information and other patient data which the candidate requests. Please acknowledge successful completion of any treatments ordered by the candidate. You should also play the role of any other professional caregiver by reporting any patient data or acknowledging successful completion of any assigned task throughout the skill. Remember to provide information on the patient's response to any interventions at the appropriate time the specific response would be observed in the typical field situation. You should continue providing an appropriate clinical presentation of the patient based on the information listed in the case until the candidate initiates appropriate management. We depend upon your expertise in presenting vital information at any point requested that would reflect an appropriate patient response, either positive or negative, to the treatment(s) the candidate has ordered and provided to that point. It is essential that you do not present a "physiological miracle" by improving the patient too much at too early a step. If on the other hand no or inappropriate treatments are rendered, you should supply clinical information representing a deteriorating patient. However, do not deteriorate the patient to the point where the candidate elects to initiate CPR.

The candidate is to be specific in his/her questions, orders, and procedures. If necessary, you should remind him/her of this requirement. For example, when a candidate inquires about pain, he/she must ask for characteristics, radiation, aggravation, etc., separately before you should answer with appropriate information. If the candidate requests information on an area that has no significance to the case, do not force the candidate to waste time with non-essential items. In this instance a simple response to a general question would be appropriate. Be specific when providing information but don't provide more information than the candidate asked for. Provide information that is a reasonable response to candidate-initiated requests. For example, if a candidate asks for the general impression of the patient, state what would be obvious to a medically trained observer. Do not make information difficult to obtain. Candidates should be given or allowed to easily obtain any information he/she would normally see in a real patient in the typical field setting.

All essential information has been provided in the case. Any unremarkable or normal findings in the

“Examination Findings” section of the prepared case has been identified with “---.“ However, it is possible for a candidate to ask for additional information not provided in the materials. In such cases, you should apply one of the following:

1. Supply your own information that would reasonably fit the case. Do not complicate or alter the case in any way.
2. If the request is for data which was not supplied, you can respond by either stating, “The order has been given” but assume the results won’t be available during the remainder of the case, or state, “The findings are normal” if appropriate.
3. As a last resort, simply state, “That information is not available at this time.”

Do not cue candidates that a response is incomplete or incorrect. For example, if a candidate has failed to completely investigate a past medical history, you should not respond by stating, “Is there anything else in the past medical history you would like to know?” Be careful not to lead the candidate with either verbal or non-verbal cues. Avoid phrases such as, “OK,” “Fine,” “Right,” “Oh, really?” or provide visual cues such as broad smiles, frowns, or other body language. Your most appropriate responses should be neutral when confirming that an action has been accomplished by replying, “That is done.” Candidates are advised that medical direction grants permission for any intervention requested throughout the case. If the candidate pauses or waits, simply ask, “What would you do next?” It is your responsibility as the Skill Examiner to ensure that the candidate has every opportunity to move through the case within the fifteen (15) minute time limit.

At the end of the case, you may need to ask the candidate, “Please state your field impression of this patient.” You will also need to ask a related pathophysiological question listed at the end of the case. These questions are designed to assist with your evaluation and rating of the candidate’s knowledge and are listed specifically in the case. The candidate must also make a verbal report to the receiving facility when transporting the patient. You should play the role of the receiving facility during this report but may not direct patient care or order additional treatments or interventions.

When the candidate has completed the case or the fifteen (15) minutes have expired, you should state, “That completes this Oral Case. Please leave all of your materials on the table in front of you. Report back to the staging area.” Be sure that all materials are left in the room and that no candidate leaves the examination room with any notes, copies, or recordings of your case. Be sure he/she returns the “Background and Dispatch Information” provided with the case. Complete your evaluation form and prepare the room to appear in a consistent fashion before accepting another candidate into your room for evaluation. Do not discuss any performance with anyone other than the National Registry Representative if you have questions.

As you review the evaluation form, there are five categories in which performances are evaluated. Each scoring category has four related statements with assigned point values to help you consistently award the appropriate points for each performance. In each category, a score of “2” represents the performance of a minimally competent entry level candidate who has demonstrated that he/she could safely and effectively provide care in a field situation. Scores of less than “2” in any category represent a marginal or seriously deficient performance. A score of greater than “2” should be awarded whenever outstanding or exemplary performance is observed in any category. Keep in mind that your judgment of performance should be based on the care that a recent graduate should be expected to provide rather than that of a “seasoned veteran” with many years of field experience and patient contact.

After all points have been awarded and totaled, please review the “Critical Criteria” statements printed at the bottom of the evaluation instrument. If the candidate failed to appropriately address any of the

“Mandatory Actions” listed in the case, you must document and factually describe the omission. You must also document any harmful or dangerous action that the candidate either performed or ordered to be performed. Some examples of potentially harmful/dangerous actions are listed in the case as a guideline to assist in your evaluation but are not all encompassing. We depend upon your expertise to make appropriate judgments based upon the actual patient care that would have been delivered. When in doubt, please consult the National Registry Representative for clarification or additional assistance.

### **Equipment List**

Do not open this skill for testing until the National Registry Representative has provided you with a case for the Oral Station and you are situated in a quiet, secure room. You must be able to sit directly across the table from the candidate with the provided divider separating you. In addition, the following supplies must be available:

- Tablet paper for candidate (All notes **must** be collected before dismissing the candidate from the room.)
- Pen or pencil for candidate
- Divider barrier (provided by National Registry) that prohibits candidate from observing any printed case materials or documentation
- Watch or visible clock with a second hand

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR THE ORAL STATION**

This is the Oral Station in which you are responsible for all aspects of scene management and patient care for a given case. You will have fifteen (15) minutes to verbally complete a simulated out-of-hospital patient encounter. Remember that since we cannot see the patient you must verbalize every action. I will provide assessment findings and other information only at your request. Conduct yourself as if I am the patient and ask me any questions you would normally ask a patient in this situation. I will also play the role of bystanders or other health care providers. Verbalize all interventions, ask any questions, and verbalize any orders you would normally give in the field just as if this were a real call. Throughout the case, assume that medical direction grants permission for you to perform any interventions you request.

The make-up of your crew will be explained as part of the background information you'll read in a few moments. You are the team leader and are responsible for directing the actions of your assistants. They will not do anything without your direction. I will acknowledge your interventions and may ask you for additional information if needed. You will also be required to complete a simulated radio report of this call just like you would in the field. I will act as the receiving facility whenever you are ready to contact them.

Throughout the case you may take notes. Paper and a pen(cil) are provided for this purpose. At the completion of this case, leave all of your notes in this room. Please remember that you are not permitted to discuss any specific details of this station with anyone at any time. Do you have any questions?

Your fifteen (15) minute time limit will begin as soon as I hand you the case. Please read this information out loud to me and be sure to return the case before leaving the room.

[The Skill Examiner now provides the candidate with the “Background and Dispatch Information” and begins the fifteen (15) minute time limit.]

## IV, IO and Medication Skills Essay to Skill Examiners

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor.
- Objectively observing and recording each candidate's performance.
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate.
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms.
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins.
- Checking all equipment, props, and moulage prior to and during the examination.
- Briefing any Simulated Patient and EMT Assistant for the assigned skill.
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination.
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative.

These skills are designed to verify a candidate's competency in establishing a peripheral IV on a manikin arm and administering an intravenous bolus injection of medication. These skills are scenario-based and the candidate must choose the appropriate IV solution and medication following the instructions and scenarios in accordance with American Heart Association guidelines and other accepted medical practice.

There is a potential for four (4) different levels of candidates to enter your skill today. Be sure to ask the candidate what level he/she is testing and check the related block on the skill evaluation form. Based on the U.S. Department of Transportation National EMS Education Standards, the following candidates should be tested over the following skills in accordance with their respective scopes of practice:

LEVEL	SKILL(S) TO TEST
Advanced Emergency Medical Technician	<ul style="list-style-type: none"> <li>▪ Intravenous Therapy</li> <li>▪ Intravenous Bolus Medications</li> </ul>
Intermediate/99	<ul style="list-style-type: none"> <li>▪ Intravenous Therapy</li> <li>▪ Intravenous Bolus Medications</li> </ul>
Paramedic	<ul style="list-style-type: none"> <li>▪ Intravenous Therapy</li> <li>▪ Intravenous Bolus Medications</li> </ul>

If any Advanced Level candidate (Advanced Emergency Medical Technician, Intermediate/99, or Paramedic) candidate is unsuccessful in establishing a patent IV within the criteria outlined, he/she will be unable to administer the IV bolus of medication in this skill just as it may occur in the field. Should this happen, a failure must be reported and documented for both the IV Therapy and IV Bolus Medications skills. Be sure to check the appropriate spaces on the form to document this situation. When any candidate (Advanced Emergency Medical Technician, Intermediate/99, or Paramedic) is unsuccessful in establishing a patent and flowing IV within six (6) minutes or three (3) attempts, you should check the appropriate statement under "Critical Criteria" on the Intravenous Therapy section of the evaluation form. You will also need to check the space on the "NOTE" which explains that the Advanced Emergency Medical Technician, Intermediate/99, or Paramedic candidate did not successfully establish an IV line. ***Dismiss the candidate from the room and do not evaluate him/her over the Intravenous Bolus Medications skill.***

### **Intravenous Therapy**

In this skill, you will evaluate the candidate's ability to establish a peripheral IV on a manikin arm. Several patient scenarios are provided for you to read to the candidates. **You must alternate these scenarios between candidates throughout the examination.** Respond to any of the candidate's questions as a patient would in the field, but do not provide any misleading or "tricky" responses.

You should prepare the equipment to include an assortment of catheters, IV solutions, and administration sets for representative purposes. If costs are a major consideration, it is acceptable for all candidates to infuse one specific solution with only one size of catheter and administration set. For example, if a large quantity of microdrip tubing is available and a large supply of any expired solution has been obtained from pharmacy services, it is acceptable to use these items in lieu of the supplies selected by the candidate from the representative supplies. If multiple skills are set up, be sure all equipment is identically labeled. As soon as the candidate chooses the solution from the representative sample of equipment assembled, you will need to hand him/her the expired solution and state, "For the purposes of this evaluation, we'll assume this is the solution you selected. You may continue." By the same token, you should replace large catheters (14-16 ga.) with smaller catheters (20-22 ga.) after they are chosen to prolong the useful life of the manikin arm skin. Likewise, total taping of the IV with immobilization of the limb is not mandatory and can be verbalized to assist in cost control.

Self-protecting catheters are common in practice. As the stylette is removed from the catheter, several different mechanisms are used to automatically shield the bevel of the contaminated sharp, thereby reducing the possibility of a needle stick injury with a contaminated sharp. However, these mechanisms may not be infallible. In accordance with current OSHA recommendations, any blood-contaminated sharp should be disposed of immediately into a proper container at the point of use. Be sure to uphold this standard for the examination, too.

Notoriously, manikin IV arms are perhaps best noted for malfunction of the "flashback" system during an examination. Should this occur during the exam, you should immediately attempt to correct the problem or replace the arm. If these efforts fail, you must explain the problem to each candidate before evaluation begins. At the point where a flashback would occur in his/her performance of the skill, simply state, "Blood is now seen in the flash chamber of the catheter." You may also need to supply other logical clinical information that cannot be simulated with the manikin arm. For example, if the tourniquet is left in place and the candidate turns the IV on, immediately report the IV won't run. If the candidate analyzes the problem and remediates the omission in a timely manner, credit should be awarded for this step.

At the conclusion of the performance, carefully review all "Critical Criteria" statements on the evaluation form and be sure to document your rationale for checking any of these statements. Be sure that all your paperwork is complete, totaled, signed, and your room has been prepared to appear in a consistent manner before accepting the next candidate for evaluation.

### **Intravenous Bolus Medications**

An array of commonly used medications packaged in prefilled syringes should be available on the testing table from which the candidate must select the appropriate medication (atropine, epinephrine 1:10,000, naloxone, and dextrose 50% at a minimum). These syringes can be filled with water, saline, or IV solution and must be refilled and repackaged before each candidate is permitted to enter the room.

After reading the prepared scenario, each candidate must select, prepare, and inject the correct amount of the appropriate drug into the IV line based on the given scenario. You should respond to the candidate's questions as a patient would in the field and should not provide any misleading or "tricky" responses. If asked, you should state your actual or imaginary weight in pounds only so the candidate may calculate the correct dosage based upon your weight. Do not let any candidate leave the room with any documentation of his/her calculation. The amount of drug dispelled from the syringe and injected into the medication port of the IV line verifies the dosage administered to the patient regardless of any verbally stated dosage. Therefore, take great care in refilling all syringes between candidates. Given the scenario, the administration of an incorrect drug or improper dosage must be noted in the "Critical Criteria" section on the evaluation form and your rationale for checking any of these statements must be documented.

You will need to know the level at which the candidate is testing so that an appropriate scenario for the Intravenous Bolus Medications skill can be read to the candidate. At the conclusion of the performance, carefully review all "Critical Criteria" statements on the evaluation form and be sure to document your rationale for checking any of these statements. Be sure that all your paperwork is complete, totaled, signed, and your room has been prepared to appear in a consistent manner before accepting the next candidate for evaluation.

### **Pediatric Intraosseous Infusion**

These skills are designed to evaluate a candidate's ability to establish an intraosseous infusion in the pediatric patient. An array of commonly used equipment to establish an intraosseous line in a pediatric patient should be available on the testing table from which the candidate must select the appropriate materials. Manual insertion of Jamshidi<sup>®</sup> needles as well as the use of electric, drill-type devices and spring-loaded devices such as the B.I.G. Bone Injection Gun<sup>®</sup> are permitted in this skill. To help control costs for the examination, expired solutions may be used. As soon as the candidate chooses the solution from the representative sample of equipment assembled, you will need to hand them the expired solution and state, "For the purposes of this evaluation, we'll assume this is the solution you selected. You may continue." In a similar way, any other equipment in this skill may be repackaged and reused. If multiple skills are set up, be sure all equipment is identically labeled.

After reading the prepared scenario, each candidate must select, prepare, and establish an intraosseous infusion in the pediatric intraosseous infusion manikin. **The use of wet tissue (chicken legs, etc.) for this skill is prohibited.** You should respond to the candidate's questions as the parent of this patient would in the field. Do not provide any misleading or "tricky" responses. If asked, you should answer any

questions about the patient and should state the weight of the patient in pounds only as listed in the scenario.

When preparing the solution, administration set, and syringe, some systems use a three-way stopcock valve instead of the additional extension tubing. The use of extension tubing is optional in this skill and subject to local practices. Please keep this in mind when reviewing the step that reads, “Attaches syringe and extension set to IO needle and aspirates; or attaches 3-way stopcock between administration set and IO needle and aspirates; or attaches extension set to IO needle.” Remember that many successful IO sticks are “dry sticks” that yield no marrow return upon aspirating the IO needle. It is acceptable for the candidate to immediately connect the infusion set to the IO needle and slowly infuse fluid while watching for early signs of infiltration. In this case, the candidate properly evaluated the patency of the IO line in an acceptable manner.

The candidate has a maximum of two (2) attempts to establish an intraosseous infusion within the six (6) minute time limit. You should immediately dismiss the candidate when the six (6) minute time limit expires or he/she is unsuccessful in placing the needle after two (2) attempts. It is imperative that the correct landmark be identified before insertion of the needle to avoid damage to the epiphyseal plate. The candidate should locate the tibial tuberosity and insert the needle 2 – 3 fingers’ width below this landmark on the anteromedial surface. After properly cleansing the site, the needle should be inserted at about a 90 degree angle or slightly directed away from the joint. The Jamshidi<sup>®</sup> needle should be inserted using firm pressure and in a twisting, back-and-forth, boring motion until penetration through the bone is noted by feeling a “pop” and the sensation of a sudden lack of resistance. When using an electric, drill-type device, the needle is advanced until there is a noticeable lack of resistance. When using the B.I.G. Bone Injection Gun<sup>®</sup>, the depth of insertion should be adjusted based upon the patient’s age. No matter what device is used, the site should also be stabilized in a safe manner while the puncture is being performed. If the candidate holds the leg in the palm of one hand while performing the puncture directly over top of his/her hand, you should mark the related “Critical Criteria” statement for this potentially dangerous action and document the candidate’s actions as required. Additionally, it is imperative that the safety device is only removed after firmly placing the B.I.G. Bone Injection Gun<sup>®</sup> on the leg and stabilizing the device before deploying the trochar. The Skill Examiner must be vigilant and immediately stop any dangerous act before actual harm may occur. Be sure to dismiss the candidate, check the Critical Criteria statement for “Uses or orders a dangerous or inappropriate intervention,” and specifically document the situation on the back side of the skill evaluation form.

After removing the trochar, the IO catheter should stand up unsupported if it has been properly placed in the bone. Extension tubing or a three-way stopcock valve with a syringe should be attached and aspiration of blood or bone marrow can be attempted to confirm proper placement or fluid can be injected slowly while watching for signs of infiltration. Remember that it is not always possible to aspirate cloudy marrow or blood from a properly placed intraosseous needle and you may wish to alter your response between candidates accordingly. The candidate should slowly inject fluid and observe for signs of infiltration around the injection site and then adjust the appropriate flow rate. Finally, the needle should be secured in place and stabilized with sterile gauze or other bulky dressings.

The scenario lists the weight of the patient and the amount of fluid to be administered. You may alter the weight of the patient throughout the examination as long as you note the weight on the candidate’s evaluation form. Given the scenario, the candidate should bolus an appropriate amount of fluid or calculate and set the appropriate drip rate as he/she would in the field. If the fluid is not administered appropriately, you should deduct the point for the step which reads, “Connects administration set and adjusts flow rate as appropriate,” check the related “Critical Criteria” statement, and completely document

the error as required on the back side of the evaluation form. Do not let any candidate leave the room with any documentation of his/her calculation.

At the conclusion of the performance, carefully review all "Critical Criteria" statements on the evaluation form and be sure to document your rationale for checking any of these statements. Be sure that all your paperwork is complete, totaled, signed, and your room has been prepared to appear in a consistent manner before accepting the next candidate for evaluation.

### **Equipment List**

Do not open these skills for testing until the following equipment is available. You must ensure that all equipment is working adequately throughout the examination:

- Examination gloves
- IV infusion arm
- Intraosseous infusion manikin with replacement tibias (6-8 sticks/tibia)
- IV solutions\*
- Administration sets\*\*
- IV extension tubing or 3-way stopcock
- IV catheters\*\*\*
- Intraosseous needles (either Jamshidi®; electric, drill-type; or spring-loaded device)
- IV push medications (prefilled syringes)\*\*\*\*
- Tape
- Gauze pads (2x2, 4x4, etc.)
- Bulky dressing
- Syringes (various sizes)
- Tourniquet
- Alcohol preps or similar substitute
- Approved sharps container

NOTE: Please refer to the essay for a detailed discussion of the following:

- \* Need a selection array but may be expired
- \*\* Need a selection array and must include microdrip tubing (60 gtt/cc)
- \*\*\* Need a selection array and can replace with small (20-22 ga.) catheters
- \*\*\*\* Must include atropine, epinephrine 1:10,000, naloxone, and dextrose 50% plus several others

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technician candidates who complete the Intravenous Therapy and Intravenous Bolus Medications Skills:

**INSTRUCTIONS TO THE ADVANCED EMERGENCY MEDICAL  
TECHNICIAN PSYCHOMOTOR SKILLS CANDIDATE FOR  
IV AND MEDICATION SKILLS**

Welcome to the IV and Medication Skills.

[The Skill Examiner now marks the respective “Level of Testing” on the Intravenous Therapy and Intravenous Bolus Medications evaluation form. The following instructions are only for Advanced Emergency Medical Technician candidates. For other candidates, please turn the page and read the appropriate directions for Intermediate/99 and Paramedic candidates.]

**Since you are testing at the Advanced Emergency Medical Technician level today,** you will be given a patient scenario and will be required to establish an IV and administer an IV bolus of medication just as you would in the field. You will have three (3) attempts in a six (6) minute time limit to establish the IV. If you do not successfully establish the IV, you will not be able to administer the IV bolus of medication to the patient. Although we are using the manikin arm, you should conduct yourself as if this were a real patient. You should assume that I am the actual patient and may ask me any questions you would normally ask a patient in this situation. After you establish the IV, you will have three (3) minutes to begin IV administration of a bolus of medication. Do you have any questions?

The patient you are treating is...

The Skill Examiner reads the following instructions to all Intermediate/99 and Paramedic candidates who complete the Intravenous Therapy and Intravenous Bolus Medications Skills:

**INSTRUCTIONS TO THE INTERMEDIATE/99 AND PARAMEDIC  
PSYCHOMOTOR SKILLS CANDIDATE FOR  
IV AND MEDICATION SKILLS**

Welcome to the IV and Medication Skills. Are you testing at the Intermediate/99 or Paramedic level today?

[The Skill Examiner now marks the respective “Level of Testing” on the Intravenous Therapy evaluation form. The following instructions are only for Intermediate/99 and Paramedic candidates.]

**Since you are testing at the [Intermediate/99, Paramedic] level today**, these skills are designed to evaluate your ability to establish venous access in the adult patient and administer an IV bolus of medication. You will be given a patient scenario and will be required to establish an IV and administer an IV bolus of medication just as you would in the field. You will have three (3) attempts in a six (6) minute time limit to establish the IV. If you do not successfully establish the IV, you will not be able to administer the IV bolus of medication to the patient. Although we are using the manikin arm, you should conduct yourself as if this were a real patient. You should assume that I am the actual patient and may ask me any questions you would normally ask a patient in this situation. After you establish the IV, you will have three (3) minutes to begin IV administration of a bolus of medication. Do you have any questions?

The patient you are treating is...

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technician, Intermediate/99 and Paramedic candidates who complete the Pediatric Intraosseous Infusion Skill:

**INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR  
PEDIATRIC INTRAOSSEOUS INFUSION**

Welcome to the Pediatric Intraosseous Infusion skill. This skill is designed to test your ability to establish an intraosseous infusion in a pediatric patient just as you would in the field. You will have a maximum of two (2) attempts to establish a patent and flowing intraosseous infusion within a six (6) minute time limit. Within this time limit, you will be required to properly administer fluid to a pediatric patient just as you would in the field based on a given scenario. Although we are using the manikin, you should conduct yourself as if this were a real patient. You should assume that I am the parent of this patient and may ask me any questions you would normally ask in this situation. Do you have any questions?

The patient you are treating is...

## **Pediatric Skills (Pediatric Ventilatory Management, Pediatric Respiratory Compromise, Pediatric Intraosseous Infusion) Essay to Skill Examiners**

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay for the skill you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.
- Recording, totaling, and documenting all performances as required on all skill evaluation forms
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins
- Checking all equipment, props, and moulage prior to and during the examination
- Briefing any Simulated Patient and EMT Assistant for the assigned skill
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative

### **Pediatric Ventilatory Management**

**Only Intermediate/99 and Paramedic candidates complete this skill.** These sequential skills are designed to test a candidate's ability to provide ventilatory assistance to an apneic infant with a palpable brachial pulse and no other associated injuries. For the purposes of these testing skills, the cervical spine is intact and cervical precautions are **not** necessary. This skill was developed to simulate a realistic situation where an apneic infant with a palpable pulse is found. Bystander ventilations have not been initiated. A two (2) minute time period is provided for the candidate to check and prepare any equipment he/she feels necessary before the actual timed evaluation begins. An array of appropriate equipment is essential for these skills. You must ensure that pediatric bag-valve-mask devices, oropharyngeal and nasopharyngeal airways, laryngoscope blades, and uncuffed endotracheal tubes (sizes 3.0 – 5.0) are available and work adequately throughout the examination. The choice of appropriate equipment is essential when assisting ventilation in the infant. Using an oropharyngeal airway that is too large may obstruct the airway or displace the tongue in the pharynx, resulting in obstruction. The bag-valve-mask device must be of appropriate size to provide an adequate mask seal and not over-inflate the lungs.

When the actual timed evaluation begins, the candidate must immediately open the patient's airway and

initiate ventilation using a bag-valve-mask device unattached to supplemental oxygen. If a candidate chooses to set up the reservoir and attach supplemental oxygen to the BVM device prior to establishing a patent airway and ventilating the patient, it must be accomplished within thirty (30) seconds of beginning his/her performance. **Regardless of the candidate's initial ventilatory assistance (either with room air or supplemental oxygen attached), it must be accomplished after body substance isolation precautions have been taken and within the initial thirty (30) seconds after taking body substance isolation precautions or the candidate has failed to ventilate an apneic patient immediately.** In children less than two (2) years of age, padding must be placed under the scapulae to properly position the head in a neutral or sniffing position. If you are using a manikin where it is not possible to demonstrate elevation of the upper torso, simply ask the candidate to describe how he/she would place a live infant in a neutral or sniffing position. It is acceptable to insert a simple airway adjunct prior to ventilating the patient with either room air or supplemental oxygen. **[It is currently acceptable to insert the oropharyngeal airway using a tongue blade and following the natural curvature of the oropharynx. If a tongue blade is not available, it is acceptable to insert the oropharyngeal airway with the tip toward the roof of the mouth and curve of the adjunct pressing on the tongue, then rotating the adjunct 180 ° into the correct position. The adjunct should not scrape the palate (see PEPP).]** You must inform the candidate that no gag reflex is present when he/she inserts the oropharyngeal airway.

After the candidate ventilates the patient for a minimum of thirty (30) seconds, you must inform the candidate that ventilation is being performed without difficulty. The candidate should call for integration of supplemental oxygen at this point in the procedure if it was not attached to the BVM initially. You should now take over BVM ventilation while the candidate gathers and assembles the adjunctive equipment and attaches the reservoir to supplemental oxygen if non-disposable equipment is being used. If two or more rooms are set up and one is using a disposable BVM, be sure to leave the mask and reservoir attached to all the non-disposable BVMs throughout the examination. To assist in containing costs of the practical examination, the oxygen tank used may be empty. The candidate must be advised to act as if the oxygen tank were full. However, the supplemental oxygen tubing, regulator, BVM, and reservoir should be in working order.

After supplemental oxygen has been attached, the candidate must pre-oxygenate the patient at a rate of 12 – 20 ventilations/minute with adequate volumes of oxygen-enriched air. It is required that an oxygen reservoir (or collector) be attached. Should the candidate connect the oxygen without such a reservoir or in such a way as to bypass its function, he/she will have failed to provide a high percentage (at least 85%) of supplemental oxygen. You must mark the related statement under "Critical Criteria" and document his/her actions. Determination of ventilation volumes is dependent upon your observations of technique and the manikin's response to ventilation attempts. Ideally, these volumes should be sufficient to cause visible chest expansion and air movement in and out of the lungs. Specific and accurate measurements of these volumes are quite difficult with the intubation manikins currently available.

After the candidate ventilates the patient with supplemental oxygen for at least thirty (30) seconds, you must automatically auscultate breath sounds. Inform the candidate that breath sounds are present and equal bilaterally and medical control has ordered endotracheal intubation. You must then take over ventilation while the candidate prepares all intubation equipment. When the candidate is prepared to insert the airway and instructs you to move, you must also remove the oropharyngeal airway (nasopharyngeal airways may be left in place). The candidate has only three (3) attempts to successfully intubate the infant. An "attempt" for this examination is defined as introduction of the laryngoscope blade into the manikin's mouth regardless of trying to pass the tube or not. Throughout these attempts, ventilation may **not** be interrupted for more than thirty (30) seconds. The candidate must recognize the need for re-oxygenation of the patient and order you to re-oxygenate the patient. At this point, you may only ventilate the patient upon the candidate's command and must document any interruption in

ventilation for more than thirty (30) seconds under "Critical Criteria" on the evaluation form. Do not stop the candidate's performance if he/she exceeds this 30 second maximum time limit on any attempt but document the ventilation delay as required.

The infant's head should not be excessively flexed during intubation, but rather placed in a neutral or sniffing position by placing padding under the scapulae. The straight laryngoscope blade (No. 1 Miller blade) may be preferred for infant intubation over the curved (Macintosh) blade. Uncuffed endotracheal tubes must be used in the infant. Once inserted, the uncuffed tube seals in the narrowing trachea just distal to the cricoid cartilage.

It is essential that tube placement be confirmed immediately after the tube is inserted. As soon as the candidate verifies tube placement, you must verify his/her knowledge of proper tube placement by asking, "How would you confirm that the tube has been correctly placed?" The candidate's response must include visualizing chest rise and auscultation over both the epigastrium and lungs bilaterally. Breath sounds should be assessed in upper and lower fields as well as auscultation over the epigastrium. The candidate should also observe the rise and fall of the chest with each ventilation and look for condensation in the tube. Any omitted or inappropriate response to these questions must be documented under "Critical Criteria" and the point for confirming proper placement must be deducted. The use of an end-tidal CO<sub>2</sub> detection device is not required in the infant portion of these skills. To assist in controlling costs of the practical examination, it is acceptable to have the candidate explain how he/she would secure the ET tube rather than actually taping and securing the tube to the manikin.

Throughout these skills, the candidate should take or verbalize body substance isolation precautions. At a minimum, examination gloves must be provided as part of the equipment available in these skills. If the candidate does not protect himself/herself with at least gloves or attempts direct mouth-to-mouth ventilation, body substance isolation precautions have not been taken. Should this occur, mark the appropriate statement under "Critical Criteria" and document the candidate's actions as required.

### **Pediatric Respiratory Compromise**

**Only Advanced Emergency Medical Technician candidates complete this skill.** This skill may be set up and tested in a separate Pediatric Skills area or incorporated into the other Ventilatory Management skills as the Examination Coordinator chooses. These sequential skills are designed to test a candidate's ability to provide ventilatory assistance to a 1 year old child who progresses from respiratory distress to respiratory failure. For the purposes of these testing skills, no spinal injury is suspected and spinal immobilization precautions are **not** necessary. This skill was developed to simulate a realistic situation where a 1 year old child in respiratory distress is found sitting in his mother's lap. No bystander interventions have been initiated. An array of appropriate equipment is essential for these skills. You must ensure that an appropriate volume/size pediatric bag-valve-mask device, oropharyngeal and nasopharyngeal airways, pediatric oxygen adjuncts (simple face mask, non-rebreather face mask), pulse oximeter, and capnography/capnometry (waveform or colorimetric) are available and work adequately throughout the examination. The choice of appropriate equipment is essential when assisting ventilation in the pediatric patient who is experiencing respiratory distress or failure. Using an oropharyngeal airway that is too large may obstruct the airway or displace the tongue in the pharynx, resulting in obstruction. The bag-valve-mask device must be of appropriate size to provide an adequate mask seal and not over-inflate the lungs. If two or more rooms are set up and one is using a disposable BVM, be sure to leave the mask and reservoir attached to all the non-disposable BVMs throughout the examination. To assist in containing costs of the practical examination, the oxygen tank used may be empty. The candidate must be advised to act as if the oxygen tank were full. However, the supplemental oxygen tubing, regulator, BVM, and reservoir should be in working order.

When the actual timed evaluation begins, the candidate must begin to assess the patient who initially presents sitting upright in his mother's lap with signs of respiratory distress. The candidate should form a general impression of the patient's condition by observing the patient and his interaction with the mother and the environment. These assessments should be accomplished without approaching or touching the patient to avoid upsetting the child which could worsen respiratory distress and hasten the progression to respiratory failure. You should inform the candidate that the child is alert but anxious and is being consoled by his mother. The child should present with a 2 – 3 day history of recent upper respiratory infection and low-grade fever. The symptoms have worsened over the past 4 hours which caused the parents to call 9-1-1. The candidate should continue to assess the child from a distance, looking for secretions, drooling, and signs of foreign body airway obstruction as well as listening for audible noises. The candidate should be informed that he/she observes increased work of breathing with retractions and hears audible grunting. The initial respiratory rate is 60 breaths/minute.

As the candidate begins his/her primary assessment and initial treatment with supplemental oxygen, you should report that the initial SpO<sub>2</sub> is 82% on room air. The candidate should leave the child in his mother's lap while coaching the mother to assist with administration of blow-by oxygen for her child. At this point, you should provide signs of a patient who is progressing from respiratory distress to respiratory failure. The child should become drowsy and the head should begin bobbing. Despite a few minutes of supplemental oxygen administration, the hemoglobin saturation does not increase appreciably. The candidate should observe see-saw respirations and the pulse rate begins to decrease. You should also describe signs of a decreasing level of responsiveness, such as drowsiness, lethargy and eventually unresponsiveness.

It is imperative that the candidate recognizes the signs of a worsening patient and immediately begins effective ventilation of the child. Supplemental oxygen delivery should be discontinued at this point and the patient should be removed from his mother's lap and placed in the supine position. Padding must be placed under the scapulae to properly position the head in a neutral or sniffing position in children less than two (2) years of age. If you are using an intubation manikin where it is not possible to demonstrate elevation of the upper torso, simply ask the candidate to describe how he/she would place a 1 year old child in a neutral or sniffing position. The candidate should assess the child's airway and consider insertion of a nasopharyngeal or oropharyngeal airway. **[It is currently acceptable to insert the oropharyngeal airway using a tongue blade and following the natural curvature of the oropharynx. If a tongue blade is not available, it is acceptable to insert the oropharyngeal airway with the tip toward the roof of the mouth and curve of the adjunct pressing on the tongue, then rotating the adjunct 180 ° into the correct position. The adjunct should not scrape the palate (see PEPP).]** After advising the candidate that the adjunct was accepted without difficulty, you should inform the candidate that the patient is breathing at a rate of 20/minute. An appropriately sized bag-valve-mask device should be chosen and immediately attached to the oxygen regulator flowing at 12 – 15 L/minute. While maintaining the head in a neutral or sniffing position, a tight mask seal should be obtained and assisted ventilations should be initiated. Be sure to time the candidate for at least 1 minute and count the ventilations delivered. If the candidate does not ventilate the manikin at a rate of 20/minute (1 ventilation every 3 seconds), be sure to mark the related "Critical Criteria" and document the exact rate that you observed. Determination of ventilation volumes is dependent upon your observations of technique and the manikin's response to ventilation attempts. Remember that each ventilation should be sufficient to cause visible chest rise in a real patient. If the candidate does not explain how he/she would assess the effectiveness of ventilations, you should ask him/her, "How would you know if you are ventilating the patient properly?" No more than 2 ventilatory volume errors in a 1 minute time period are acceptable. You should document any incorrect responses concerning the ventilatory rate and/or tidal volume and check any related "Critical Criteria" statements if necessary.

Throughout these skills, the candidate should take or verbalize body substance isolation precautions. At a minimum, examination gloves must be provided as part of the equipment available in these skills. If the candidate does not protect himself/herself with at least gloves or attempts direct mouth-to-mouth ventilation, body substance isolation precautions have not been taken. Should this occur, mark the appropriate statement under "Critical Criteria" and document the candidate's actions as required.

### **Pediatric Intraosseous Infusion**

These skills are designed to evaluate a candidate's ability to establish an intraosseous infusion in the pediatric patient. An array of commonly used equipment to establish an intraosseous line in a pediatric patient should be available on the testing table from which the candidate must select the appropriate materials. Manual insertion of Jamshidi® needles as well as the use of electric, drill-type devices and spring-loaded devices such as the B.I.G. Bone Injection Gun® are permitted in this skill. To help control costs for the examination, expired solutions may be used. As soon as the candidate chooses the solution from the representative sample of equipment assembled, you will need to hand them the expired solution and state, "For the purposes of this evaluation, we'll assume this is the solution you selected. You may continue." In a similar way, any other equipment in this skill may be repackaged and reused. If multiple skills are set up, be sure all equipment is identically labeled.

After reading the prepared scenario, each candidate must select, prepare, and establish an intraosseous infusion in the pediatric intraosseous infusion manikin. **The use of wet tissue (chicken legs, etc.) for this skill is prohibited.** You should respond to the candidate's questions as the parent of this patient would in the field. Do not provide any misleading or "tricky" responses. If asked, you should answer any questions about the patient and should state the weight of the patient in pounds only as listed in the scenario.

When preparing the solution, administration set, and syringe, some systems use a three-way stopcock valve instead of the additional extension tubing. The use of extension tubing is optional in this skill and subject to local practices. Please keep this in mind when reviewing the step that reads, "Attaches syringe and extension set to IO needle and aspirates; or attaches 3-way stopcock between administration set and IO needle and aspirates; or attaches extension set to IO needle." Remember that many successful IO sticks are "dry sticks" that yield no marrow return upon aspirating the IO needle. It is acceptable for the candidate to immediately connect the infusion set to the IO needle and slowly infuse fluid while watching for early signs of infiltration. In this case, the candidate properly evaluated the patency of the IO line in an acceptable manner.

The candidate has a maximum of two (2) attempts to establish an intraosseous infusion within the six (6) minute time limit. You should immediately dismiss the candidate when the six (6) minute time limit expires or he/she is unsuccessful in placing the needle after two (2) attempts. It is imperative that the correct landmark be identified before insertion of the needle to avoid damage to the epiphyseal plate. The candidate should locate the tibial tuberosity and insert the needle 2 – 3 fingers' width below this landmark on the anteromedial surface. After properly cleansing the site, the needle should be inserted at about a 90 degree angle or slightly directed away from the joint. The Jamshidi® needle should be inserted using firm pressure and in a twisting, back-and-forth, boring motion until penetration through the bone is noted by feeling a "pop" and the sensation of a sudden lack of resistance. When using an electric, drill-type device, the needle is advanced until there is a noticeable lack of resistance. When using the B.I.G. Bone Injection Gun®, the depth of insertion should be adjusted based upon the patient's age. No matter what device is used, the site should also be stabilized in a safe manner while the puncture is being performed. If the

candidate holds the leg in the palm of one hand while performing the puncture directly over top of his/her hand, you should mark the related “Critical Criteria” statement for this potentially dangerous action and document the candidate’s actions as required. Additionally, it is imperative that the safety device is only removed after firmly placing the B.I.G. Bone Injection Gun<sup>®</sup> on the leg and stabilizing the device before deploying the trochar. The Skill Examiner must be vigilant and immediately stop any dangerous act before actual harm may occur. Be sure to dismiss the candidate, check the Critical Criteria statement for “Uses or orders a dangerous or inappropriate intervention,” and specifically document the situation on the back side of the skill evaluation form.

After removing the trochar, the IO catheter should stand up unsupported if it has been properly placed in the bone. Extension tubing or a three-way stopcock valve with a syringe should be attached and aspiration of blood or bone marrow can be attempted to confirm proper placement or fluid can be injected slowly while watching for signs of infiltration. Remember that it is not always possible to aspirate cloudy marrow or blood from a properly placed intraosseous needle and you may wish to alter your response between candidates accordingly. The candidate should slowly inject fluid and observe for signs of infiltration around the injection site and then adjust the appropriate flow rate. Finally, the needle should be secured in place and stabilized with sterile gauze or other bulky dressings.

The scenario lists the weight of the patient and the amount of fluid to be administered. You may alter the weight of the patient throughout the examination as long as you note the weight on the candidate’s evaluation form. Given the scenario, the candidate should bolus an appropriate amount of fluid or calculate and set the appropriate drip rate as he/she would in the field. If the fluid is not administered appropriately, you should deduct the point for the step which reads, “Connects administration set and adjusts flow rate as appropriate,” check the related “Critical Criteria” statement, and completely document the error as required on the back side of the evaluation form. Do not let any candidate leave the room with any documentation of his/her calculation.

At the conclusion of the performance, carefully review all "Critical Criteria" statements on the evaluation form and be sure to document your rationale for checking any of these statements. Be sure that all your paperwork is complete, totaled, signed, and your room has been prepared to appear in a consistent manner before accepting the next candidate for evaluation.

### **Equipment List**

Do not open these skills for testing until the following equipment is available. If the Pediatric Ventilatory Management skill is being evaluated in a separate Pediatric Skills area, disregard all pediatric equipment in the following list. You must ensure that all equipment is working adequately throughout the examination. All equipment must be disassembled (reservoir disconnected and oxygen supply tubing disconnected when using only non-disposable equipment, regulator turned off, laryngoscope disassembled, cuffs deflated with syringes disconnected, etc.) before accepting a candidate for evaluation:

- Examination gloves (may also add masks, gowns, and eyewear)
- Intubation manikins (infant)
- Manikin (approximate size of a 1 year old child)
- Laryngoscope handle and blades (straight and curved – infant)
- Endotracheal tubes (3.0 – 5.0 mm)
- End-tidal CO<sub>2</sub> detector and/or esophageal detector device (EDD)
- Syringes (10 mL, 20 mL, etc.)
- Stylette
- Bag-valve-mask device with reservoir (infant)

- Oxygen cylinder with regulator (may be empty)
- Oxygen connecting tubing
- Selection of oropharyngeal airways (infant)
- Selection of nasopharyngeal airways (infant)
- Various supplemental oxygen devices (nasal cannula, non-rebreather mask with reservoir, etc. for infant)
- Stethoscope
- Lubricant (silicone spray)
- 1/2" tape
- Spare batteries
- Tongue blade
- Towel or other appropriate padding
- Intraosseous infusion manikin with replacement tibias (6 – 8 sticks/tibia)
- IV solutions\*
- Administration sets\*\*
- IV extension tubing or 3-way stopcock
- Intraosseous needles (Jamshidi<sup>®</sup>, electric, drill-type and/or spring-loaded device)
- Gauze pads (2x2, 4x4, etc.)
- Alcohol preps or similar substitute
- Bulky dressing
- Approved sharps container

\* Need a selection array but may be expired

\*\* Need a selection array and must include microdrip (60 gtt/mL) tubing

The Skill Examiner reads the following instructions to all Intermediate/99 and Paramedic candidates who must complete the Pediatric Ventilatory Management Skill:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PEDIATRIC VENTILATORY MANAGEMENT**

Since you are testing at the [Intermediate/99, Paramedic] level today, these progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to an apneic infant who has no other associated injuries. This is a non-trauma situation and cervical precautions are not necessary. You are required to demonstrate sequentially all procedures you would perform, from simple maneuvers and adjuncts to endotracheal intubation. You will have three (3) attempts to successfully intubate the manikin. You must actually ventilate the manikin for at least thirty (30) seconds with each adjunct and procedure utilized. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carryout your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

Upon your arrival to the scene, you observe the infant as he/she goes into respiratory arrest and becomes unresponsive. A palpable brachial pulse of 106 is still present. Bystander ventilations have **not** been initiated. The scene is safe and no hemorrhage or other immediate problem is found.

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technicians who must complete the Pediatric Respiratory Compromise Skill:

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR PEDIATRIC RESPIRATORY COMPROMISE**

**Since you are testing at the Advanced Emergency Medical Technician level today**, these progressive skills are designed to evaluate your ability to provide immediate and aggressive ventilatory assistance to a one (1) year old child in respiratory distress. No other associated injuries are present. This is a non-trauma situation and cervical precautions are not necessary. You must actually perform all assessments and interventions that you feel are necessary. If you choose to ventilate the manikin with a bag-valve-mask device, you must do so for at least one (1) minute. I will serve as your trained assistant and will be interacting with you throughout these skills. I will correctly carryout your orders upon your direction. Do you have any questions?

At this time, please take two (2) minutes to check your equipment and prepare whatever you feel is necessary.

[After two (2) minutes or sooner if the candidate states, "I'm prepared," the Skill Examiner continues reading the following:]

You respond to a residence for a sick child who is having difficulty breathing. The scene is safe and no hemorrhage or other immediate problem is found. As you enter the residence, you see a one (1) year old child sitting on his mother's lap.

The Skill Examiner reads the following instructions to all Advanced Emergency Medical Technician, Intermediate/99 and Paramedic candidates who must complete the Pediatric Intraosseous Infusion Skill:

**INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR  
PEDIATRIC INTRAOSSEOUS INFUSION**

Welcome to the Pediatric Intraosseous Infusion skill. This skill is designed to test your ability to establish an intraosseous infusion in a pediatric patient just as you would in the field. You will have a maximum of two (2) attempts to establish a patent and flowing intraosseous infusion within a six (6) minute time limit. Within this time limit, you will be required to properly administer fluid to a pediatric patient just as you would in the field based on a given scenario. Although we are using the manikin, you should conduct yourself as if this were a real patient. You should assume that I am the parent of this patient and may ask me any questions you would normally ask in this situation. Do you have any questions?

The patient you are treating is...

## Random EMT Skills and Spinal Immobilization (Supine Patient) Essay to Skill Examiners

Essays and instructions for five (5) EMT skills are included in this essay. The National Registry Representative will provide you with copies of all appropriate evaluation instruments that will be used in today's examination. Candidates must test the skills as follows:

LEVEL	SKILL(S) TO TEST
Intermediate/99, Paramedic	Test one (1) of the following: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Seated Patient)</li> <li>▪ Spinal Immobilization (Supine Patient)</li> <li>▪ Bleeding Control/Shock Management</li> </ul>
Advanced Emergency Medical Technician	All must test one (1) of the following: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Seated Patient)</li> <li>▪ Bleeding Control/Shock Management</li> <li>▪ Long Bone Immobilization</li> <li>▪ Joint Immobilization</li> </ul> Additionally, all NRAEMT candidates must also test: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Supine Patient)</li> </ul>

**Candidates retesting any skill(s) must retest over the specific skill(s) previously failed. Therefore, all equipment for all five (5) EMT skills must be available and properly functioning before beginning any evaluation. Should any candidate dispute any skill that you direct him/her to complete, please contact the National Registry Representative immediately for clarification. Do not let the candidate leave the room until the matter is resolved with the National Registry Representative.** The essays that follow are:

1. Spinal Immobilization (Seated Patient)
2. Bleeding Control/Shock Management
3. Long Bone Immobilization
4. Joint Immobilization
5. Spinal Immobilization (Supine Patient)

Thank you for serving as a Skill Examiner at today's examination. Before you read the specific essay(s) for the skill(s) you will be evaluating today, please take a few moments to review your general responsibilities as a Skill Examiner:

- Conducting examination-related activities on an equal basis for all candidates, paying particular attention to eliminate actual or perceived discrimination based upon race, color, national origin, religion, gender, age, disability, position within the local EMS system, or any other potentially discriminatory factor. The Skill Examiner must help ensure that the EMT Assistant and/or Simulated Patient conduct himself/herself in a similar manner throughout the examination.
- Objectively observing and recording each candidate's performance.
- Acting in a professional, unbiased, non-discriminating manner, being cautious to avoid any perceived harassment of any candidate.
- Providing consistent and specific instructions to each candidate by reading the "Instructions to the Psychomotor Skills Candidate" exactly as printed in the material provided by the National Registry. Skill Examiners must limit conversation with candidates to communication of

instructions and answering of questions. All Skill Examiners must avoid social conversation with candidates or making comments on a candidate's performance.

- Recording, totaling, and documenting all performances as required on all skill evaluation forms.
- Thoroughly reading the specific essay for the assigned skill before actual evaluation begins.
- Checking all equipment, props, and moulage prior to and during the examination.
- Briefing any Simulated Patient and EMT Assistant for the assigned skill.
- Assuring professional conduct of all personnel involved with the particular skill throughout the examination.
- Maintaining the security of all issued examination material during the examination and ensuring the return of all material to the National Registry Representative.

### **Spinal Immobilization (Seated Patient) Essay to Skill Examiners**

This skill is designed to evaluate a candidate's ability to provide spinal immobilization to a seated patient in whom spinal instability is suspected. Each candidate will be required to appropriately apply any acceptable half-spine immobilization device on a seated patient and verbalize movement of the Simulated Patient to a long backboard.

The candidate is evaluated on his/her ability to protect and provide immediate immobilization of the spine. The candidate will be advised that the scene size-up and primary survey have been completed and no condition requiring further resuscitation efforts or urgent transportation is present. A live Simulated Patient who is an adult or adolescent who is at least sixteen (16) years of age is required in this skill. The Simulated Patient must be of average adult height and weight. The use of very small children as Simulated Patients is not permitted in this skill. The Simulated Patient will present seated in an armless chair, sitting upright with his/her back loosely touching the back of the chair. The Simulated Patient will not present slumped forward or with the head held in any grossly abnormal position. The position of the Simulated Patient must be identical for all candidates.

The primary survey as well as reassessment of the Simulated Patient's airway, breathing, and central circulation are not required in this skill. The candidate will be required to check motor, sensory, and circulatory functions in each extremity at the proper times throughout this skill. Once the candidate has immobilized the seated patient, simply ask him/her to verbally explain all key steps he/she would complete while moving the Simulated Patient to the long backboard. The candidate may check motor, sensory, and circulatory functions at anytime during the procedure without a loss of points. However, if he/she fails to check motor, sensory, or circulatory function in all extremities after verbalizing immobilization to a long backboard, a zero should be placed in the "Points Awarded" column for this step. The related "Critical Criteria" statement would also need to be checked and documented as required.

You should have various half-spine immobilization devices collected in the testing room that represent those devices utilized in the local EMS system (KED, XP-1, OSS, half spine board, Kansas board, etc.) or other accepted devices. It is required that at least one (1) rigid wooden or plastic half-spine board and one (1) commercial vest-type immobilization device with all other associated immobilization equipment provided by the manufacturer be available in this room. You are responsible to check that all equipment listed is present and in proper working order (not too frayed or worn, all buckles and straps are present, etc.). The candidate may choose to bring a device with which he/she is familiar and the National Registry Representative must approve these devices. You must also be familiar with the proper use of these devices before any evaluation of the candidate can occur. Be sure to give the candidate time to survey

and check the equipment before any evaluation begins. You must not indicate any displeasure with the candidate's choice of any immobilization device.

The skill evaluation instrument was designed to be generic so it could be utilized to evaluate the candidate's performance regardless of the half-spine immobilization device utilized. All manufacturers' instructions describe varying orders in which straps and buckles are to be applied when securing the torso for various commercial half-spine immobilization devices. This skill is not designed to specifically evaluate each individual device but to "generically" verify a candidate's competence in safely and adequately securing a suspected unstable cervical spine in a seated patient. **Therefore, while the specific order of placing and securing straps and buckles is not critical, it is imperative that the patient's head be secured to the half-spine immobilization device only after the device has been secured to the torso.** This sequential order most defensibly minimizes potential cervical spine compromise and is the most widely accepted and defended order of application to date regardless of the device. Placement of an appropriate cervical collar is also required with any type of half-spine immobilization device. Given the chosen device, your careful observation of the candidate's technique and a reasonable standard of judgment should guide you when determining if the device was appropriately secured to the torso before the head was placed in the device. You must also apply the same reasonable standard of judgment when checking to see if the device was applied too loosely or not appropriately fastened to the Simulated Patient.

A trained EMT Assistant will be present in the skill to assist the candidate by applying manual in-line immobilization of the head and cervical spine only upon the candidate's commands. The assistant must be briefed to follow only the commands of the candidate, as the candidate is responsible for the actions that he/she directs the assistant to perform. When directed, the assistant must maintain manual in-line immobilization as a trained EMT Assistant would in the field. No unnecessary movement of the Simulated Patient's head or other "games" will be tolerated or are meant to be a part of this examination. However, if the assistant is directed to provide improper care, points on the evaluation form relating to this improper care should be deducted and documented. For example, if the candidate directs the assistant to let go of the head prior to its mechanical immobilization, the candidate has failed to maintain manual, neutral, in-line immobilization. You must check the related statement under "Critical Criteria" and document your rationale. On the other hand, if the assistant accidentally releases immobilization without an order, you should direct the assistant to again take manual in-line immobilization. Immediately inform the candidate that this action will not affect his/her evaluation. At no time should you allow the candidate or assistant EMT to perform a procedure that would actually injure the Simulated Patient. The candidate should also verbally describe how he/she would move and secure the Simulated Patient to the long backboard.

The Simulated Patient should be briefed on his/her role in this skill and act as a calm patient would if this were a real situation. You may question the Simulated Patient about spinal movement and overall care in assisting with the evaluation process after the candidate completes his/her performance and exits the room.

### Equipment List

Do not open this skill for testing until you have one (1) Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. One (1) assistant EMT is also required in this skill. The following equipment must be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Half-spine immobilization device\* (wooden or plastic)

- Vest-type immobilization device\*
- Padding material (pads or towels)
- Armless chair
- Cervical collars (correct sizes)
- Cravats (6)
- Kling, Kerlex, etc.
- Long immobilization straps (6 of any type)
- Tape (2" or 3" adhesive)
- Blankets (2)

\* It is required that the skill include one (1) plain wooden or plastic half board with tape, straps, blankets, and cravats as well as one (1) common vest-type device (complete). Additional styles and brands of devices and equipment may be included as a local option.

### **Bleeding Control/Shock Management Essay to Skill Examiners**

This skill is designed to evaluate the candidate's ability to treat a life-threatening arterial hemorrhage from an extremity and subsequent hypoperfusion. This skill will be scenario-based and will require some dialogue between you and the candidate. The candidate will be required to properly treat a life-threatening arterial hemorrhage from an extremity in accordance with recommendations by the American College of Surgeons.

This skill requires the presence of a live Simulated Patient. The Simulated Patient must be an adult or adolescent who is at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. The use of very small children as Simulated Patients is not permitted in this skill. The Simulated Patient will present with an arterial bleed from a severe laceration of the extremity. Simple moulage may enhance the visual cue for the location of the wound but is not required in this skill. You will direct the actions of the candidate at predetermined intervals as indicated on the evaluation form. The candidate will be required to provide the appropriate intervention at each interval as the Simulated Patient's condition changes. It is essential, due to the purpose of this skill that the Simulated Patient's condition does not deteriorate to a point where CPR would be initiated. This skill is not designed to evaluate CPR skills.

The scenario provided in this essay is an example of an acceptable scenario for this skill. It is not intended to be the only possible scenario for this skill. Variations of the scenario are possible and should be utilized in order to reduce the possibility of candidates knowing the scenario before entering this skill. If the scenario is changed for the examination, the following guidelines must be used:

- An isolated laceration to an extremity producing an arterial bleed must be present.
- The scene must be safe.
- As the scenario continues, the Simulated Patient must present signs and symptoms of hypoperfusion.

Due to the scenario format of this skill, you are required to supply information to the candidate at various times during the exam. When the candidate initially applies direct pressure to the wound, you should inform the candidate that the wound continues to bleed. If the candidate applies a pressure dressing and bandage, you should inform the candidate that the wound continues to bleed. In accordance with recommendations by the American College of Surgeons, application of a tourniquet proximal to the injury

is the reasonable next step if hemorrhage cannot be controlled with pressure. If the candidate delays applying a tourniquet and applies additional dressings over the first, you should again inform him/her that the wound continues to bleed. If the candidate attempts to elevate the extremity or apply pressure to the related arterial pressure point, you should inform the candidate that the wound continues to bleed. There is no published evidence that supports controlling arterial hemorrhage from an extremity with elevation or pressure to an arterial pressure point. If the candidate delays application of the tourniquet, you should check the related “Critical Criteria” statement and document his/her delay in treating the hemorrhage in a timely manner as required on the skill evaluation form. After the candidate properly applies an arterial tourniquet, you should inform him/her that the bleeding is controlled. Once the bleeding is controlled in a timely manner, you should provide signs and symptoms of hypoperfusion (restlessness; cool, clammy skin; BP 110/80, P 118, R 30).

### **Equipment List**

Do not open this skill for testing until you have one (1) EMT Assistant and one (1) Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. The following equipment must be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Field dressings (various sizes)
- Bandages (various sizes)
- Tourniquet (commercial or improvised)
- Oxygen cylinder with delivery system (tank may be empty)
- Oxygen delivery devices (nasal cannula, simple face mask, non-rebreather mask)
- Blanket
- Gauze pads (2x2, 4x4, etc.)
- Kling, Kerlex, etc.

### **Long Bone Immobilization Essay to Skill Examiners**

This skill is designed to evaluate a candidate's ability to immobilize a suspected long bone fracture properly using a rigid splint. The candidate will be advised that a primary survey has been completed on the victim and that a suspected long bone fracture was discovered during the secondary assessment. The Simulated Patient will present with a non-angulated, closed, suspected long bone fracture of the upper or lower extremity, specifically a suspected fracture of the radius, ulna, tibia, or fibula. You should alternate injury sites throughout today's examination.

The candidate will then be required to treat the specific, isolated injury. The primary survey as well as reassessment of the patient's airway, breathing, and central circulation are not required in this skill. The candidate will be required to check motor, sensory, and circulatory functions in the injured extremity prior to splint application and after completing the splinting process. Additionally, the use of traction splints, pneumatic splints, and vacuum splints is **not** permitted and should not be available for use.

The candidate is required to “Secure the entire injured extremity” after the splint has been applied. There are various methods of accomplishing this particular task. Long bone fractures of the upper extremity may be secured by tying the extremity to the torso after a splint has been applied. Long bone fractures of

the lower extremity may be secured by placing the victim properly on a long backboard or applying a rigid long board splint between the victim's legs and then securing the legs together. Any of these methods should be considered acceptable and points should be awarded accordingly.

When splinting the upper extremity, the candidate is required to immobilize the hand in the position of function. A position that is to be avoided is one in which the hand is secured with the palm flattened and fingers extended. The palm should not be flattened. Additionally, the wrist should be dorsiflexed about 20 – 30° and all the fingers should be slightly flexed.

When splinting the lower extremity, the candidate is required to immobilize the foot in a position of function. Two positions that are to be avoided are gross plantar flexion or extreme dorsiflexion. No points should be awarded if these positions are used.

### **Equipment List**

Do not open this skill for testing until you have one (1) Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. One (1) EMT Assistant EMT is also required in this skill. The following equipment must be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Rigid splint materials (various sizes)
- Roller gauze
- Cravats (6)
- Tape

### **Joint Immobilization Essay to Skill Examiners**

This skill is designed to evaluate a candidate's ability to immobilize a suspected shoulder injury using a sling and swathe. The candidate will be advised that a primary survey has been completed on the victim and that a suspected shoulder injury is discovered during the secondary assessment. The Simulated Patient will present with the upper arm positioned at his/her side while supporting the lower arm at a 90° angle across his/her chest with the uninjured hand. For the purposes of this skill, the injured arm should not be positioned away from the body, behind the body, or in any complicated position that could not be immobilized by using a sling and swathe.

The candidate will then be required to treat the specific, isolated injury. The primary survey as well as reassessment of the patient's airway, breathing, and central circulation are not required in this skill. The candidate will be required to check motor, sensory, and circulatory functions in the injured extremity prior to splint application and after completing the splinting process. Additionally, the only splint available in this skill is a sling and swathe. Any other splint, including a long backboard, may not be used to complete this skill. If a candidate asks for a long backboard, simply inform the candidate that the only acceptable splinting material approved for completion of this skill is a sling and swathe.

## Equipment List

Do not open this skill for testing until you have one (1) Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. One (1) EMT Assistant is also required in this skill. The following equipment must be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Cravats (6) to be used as a sling and swathe

### Spinal Immobilization (Supine Patient) Essay to Skill Examiners

This skill is designed to evaluate the candidate's ability to immediately protect and immobilize the Simulated Patient's spine by using a rigid long spinal immobilization device. The candidate will be advised that the scene size-up and primary survey have been completed and no condition requiring further resuscitation efforts or urgent transportation is present. The Simulated Patient will present lying on his/her back, arms straight down at his/her side, and feet together. Candidates should not have to be concerned with distracters such as limb realignment, prone or other unusual positions. The presenting position of the Simulated Patient must be identical for all candidates.

The candidate will be required to treat the specific, isolated problem of a suspected unstable spine. Primary and secondary assessments of airway, breathing, and central circulation are not required in this skill. The candidate will be required to check motor, sensory, and circulatory function in each extremity at the proper times throughout this skill. If a candidate fails to check any of these functions in any extremity, a zero must be awarded for this step in the "Points Awarded" column.

There are various long spine immobilization devices utilized in the EMS community. The evaluation form was designed to be generic so it could be used to evaluate the candidate regardless of the immobilization device used. You should have various long spine immobilization devices available for this skill, specifically long spine immobilization devices used in the local EMS system, long spine board, and a scoop stretcher. The candidate may choose to bring a device with which he/she is familiar. The National Registry Representative must approve this device and you must be familiar with its proper use before evaluation of the candidate begins. Do not indicate displeasure with the candidate's choice of equipment. Be sure to evaluate the candidate on how well he/she immobilizes and protects the Simulated Patient's spine, not on what immobilization device is used.

The candidate must, with the help of an EMT Assistant and the Skill Examiner, move the Simulated Patient from the ground onto the long spinal immobilization device. There are various acceptable ways to move a patient from the ground onto a long spinal immobilization device (i.e. logroll, straddle slide, etc.). You should not advocate one method over the others. All methods should be considered acceptable as long as spinal integrity is not compromised. Regardless of the method used, the EMT Assistant should control the head and cervical spine while the candidate and evaluator move the Simulated Patient upon direction of the candidate.

Immobilization of the lower spine/pelvis in line with the torso is required. Lateral movement of the legs will cause angulation of the lower spine and should be avoided. Additionally, tilting the backboard when the pelvis and upper legs are not secured will ultimately cause movement of the legs and angulation of the spine.

This skill requires that an assistant EMT be present during the evaluation. Candidates are to be evaluated individually with the assisting EMT providing manual stabilization and immobilization of the head and cervical spine. The assisting EMT should be told not to speak, but to follow the commands of the candidate. The candidate is responsible for the conduct of the assisting EMT. If the assisting EMT is instructed to provide improper care, areas on the score sheet relating to that care should be deducted. At no time should you allow the candidate or assisting EMT to perform a procedure that would actually injure the Simulated Patient.

This skill requires the presence of a live Simulated Patient. The Simulated Patient must be an adult or adolescent who is at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. The use of very small children as Simulated Patients is not permitted in this skill. The Simulated Patient should be briefed on his/her role in this skill. You may use comments from the Simulated Patient about spinal movement in the scoring process as long as he/she is certified at the level of EMT-Basic or higher.

### **Equipment List**

Do not open this skill for testing until you have one (1) EMT Assistant and one (1) Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight. The following equipment must be available and you must ensure that it is working adequately throughout the examination:

- Examination gloves
- Long spine immobilization device (long board, etc.)
- Head immobilizer (commercial or improvised)
- Cervical collar (appropriate size)
- Patient securing straps (6-8 with compatible buckles/fasteners)
- Blankets
- Padding (towels, cloths, etc.)
- Tape

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR SPINAL IMMOBILIZATION (SEATED PATIENT)**

This skill is designed to evaluate your ability to provide spinal immobilization to a sitting patient using a half-spine immobilization device. You arrive on the scene of an auto crash with an EMT Assistant. The scene is safe and there is only one (1) patient. The assistant EMT has completed the scene size-up as well as the primary assessment and no critical condition requiring any intervention was found. For the purposes of this evaluation, the Simulated Patient's vital signs remain stable. You are required to treat the specific, isolated problem of a suspected unstable spine using a half-spine immobilization device. You are responsible for the direction and subsequent actions of the EMT Assistant. Transferring and immobilizing the Simulated Patient to the long backboard should be described verbally. You have ten (10) minutes to complete this skill. Do you have any questions?

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR BLEEDING CONTROL/SHOCK MANAGEMENT**

This skill is designed to evaluate your ability to control hemorrhage. This is a scenario-based evaluation. As you progress through the scenario, you will be given various signs and symptoms appropriate for the Simulated Patient's condition. You will be required to manage the Simulated Patient based on these signs and symptoms. You may use any of the supplies and equipment available in this room. You have ten (10) minutes to complete this skill. Please take a few moments and familiarize yourself with this equipment before we begin. Do you have any questions?

[Sample Scenario:]

You respond to a stabbing and find a 25 year old (male/female) patient. Upon examination, you find a two (2) inch stab wound to the inside of the right arm at the antecubital fossa. Bright red blood is spurting from the wound. The scene is safe and the patient is responsive and alert. (His/Her) airway is open and (he/she) is breathing adequately. Do you have any questions?

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR LONG BONE IMMOBILIZATION**

This skill is designed to evaluate your ability to properly immobilize a closed, non-angulated suspected long bone fracture. You are required to treat only the specific, isolated injury. The scene size-up and primary survey have been completed and a suspected, closed, non-angulated fracture of the \_\_\_\_\_ (radius, ulna, tibia, fibula) is discovered during the secondary assessment. Continued assessment of the patient's airway, breathing, and central circulation is not necessary in this skill. You may use any equipment available in this room. You have five (5) minutes to complete this skill. Do you have any questions?

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR JOINT IMMOBILIZATION**

This skill is designed to evaluate your ability to properly immobilize an uncomplicated shoulder injury. You are required to treat only the specific, isolated injury to the shoulder. The scene size-up and primary survey have been completed and a suspected injury to the \_\_\_\_\_ (left, right) shoulder is discovered during the secondary assessment. Continued assessment of the patient's airway, breathing, and central circulation is not necessary. You may use any equipment available in this room. You have five (5) minutes to complete this skill. Do you have any questions?

## **INSTRUCTIONS TO THE PSYCHOMOTOR SKILLS CANDIDATE FOR SPINAL IMMOBILIZATION (SUPINE PATIENT)**

This skill is designed to evaluate your ability to provide spinal immobilization to a supine patient using a long spine immobilization device. You arrive on the scene with an EMT Assistant. The assistant EMT has completed the scene size-up as well as the primary survey and no critical condition requiring any intervention was found. For the purposes of this evaluation, the Simulated Patient's vital signs remain stable. You are required to treat the specific, isolated problem of a suspected unstable spine using a long spine immobilization device. When moving the Simulated Patient to the device, you should use the help of the assistant EMT and me. The assistant EMT should control the head and cervical spine of the Simulated Patient while you and I move the Simulated Patient to the immobilization device. You are responsible for the direction and subsequent actions of the EMT Assistant and me. You may use any equipment available in this room. You have ten (10) minutes to complete this procedure. Do you have any questions?

Appendix A:  
Equipment List

**NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICAINS  
ADVANCED LEVEL PSYCHOMOTOR EXAMINATION  
EQUIPMENT LIST**

The Examination Coordinator is responsible for obtaining and setting up the various skills on the day prior to the scheduled psychomotor examination if possible. If it is not possible to set up all skills the day before the psychomotor examination, the Examination Coordinator must at least verify the availability of all equipment that is considered to be the minimal essential equipment needed.

**PATIENT ASSESSMENT – TRAUMA**

(Advanced EMT, Intermediate/99, and Paramedic candidates complete this skill)

- Examination gloves
- Moulage kit or similar substitute
- Outer garments to be cut away
- Penlight
- Blood pressure cuff
- Stethoscope
- Scissors
- Blanket
- Tape (for outer garments)
- A live Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight and dressed in appropriate attire (shorts or swimsuit) down to which he/she will be exposed. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized may also be used as the Simulated Patient.

**PATIENT ASSESSMENT – MEDICAL**

(Advanced EMT and Intermediate/99 candidates complete this skill)

- Examination gloves
- Moulage kit or similar substitute
- Outer garments to be cut away
- Penlight
- Blood pressure cuff
- Stethoscope
- Scissors
- Blanket
- Tape (for outer garments)
- A live Simulated Patient who is an adult or adolescent at least sixteen (16) years of age. The Simulated Patient must also be of average adult height and weight and dressed in appropriate attire (shorts or swimsuit) down to which he/she will be exposed. A high fidelity simulation manikin capable of responding as a real patient given the scenario(s) utilized may also be used as the Simulated Patient.

## VENTILATORY MANAGEMENT (ADULT & SUPRAGLOTTIC AIRWAY DEVICE)

1. **Advanced Emergency Medical Technician (AEMT) candidates** only complete one (1) adult scenario and are only authorized to place a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>).
2. **Intermediate/99 and Paramedic candidates** must complete two (2) separate adult scenarios:
  - a. Endotracheal intubation of the apneic adult patient
  - b. Insertion of a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>) into an apneic adult patient

Equipment for the Pediatric Ventilatory Management and Pediatric Respiratory Compromise Skills is listed separately in the Pediatric Skills section below.

- Examination gloves (may also add masks, gowns, and eyewear)
- Adult intubation manikin
- Laryngoscope handle and blades (straight and curved of various sizes)
- Endotracheal tubes (6.0 - 8.5 mm)
- End-tidal CO<sub>2</sub> detector (waveform capnography or colorimetric) and/or esophageal detector device (EDD)
- Syringes (10 mL, 20 mL, 35 mL, etc.)
- Stylette
- Bag-valve-mask device with reservoir
- Oxygen cylinder with regulator (may be empty)
- Oxygen connecting tubing
- Selection of oropharyngeal airways
- Selection of nasopharyngeal airways
- Various supplemental oxygen devices (nasal cannula, non-rebreather mask with reservoir, etc.)
- Suction device with rigid and flexible catheters and appropriate suction tubing
- Sterile water or saline
- Supraglottic airway to include at least one (1) of the following:
  - Combitube<sup>®</sup>
  - PTL<sup>®</sup>
  - King LT<sup>®</sup> Oropharyngeal Airway or similar
- Stethoscope
- Lubricant (silicone spray)
- 1/2" tape
- Spare batteries
- Tongue blade

## CARDIAC MANAGEMENT SKILLS (DYNAMIC CARDIOLOGY, STATIC CARDIOLOGY, AND CARDIAC ARREST MANAGEMENT/AED)

(Intermediate/99 and Paramedic candidates complete both Dynamic and Static Cardiology skills. Advanced EMT candidates complete the Cardiac Arrest Management/AED Skill only.)

These skills should be located in a quiet, isolated room with a desk or table and two (2) comfortable chairs. Prepared testing scenarios for the Dynamic portion and ECG tracings will be provided by the National Registry Representative. ***The manikin must be placed and left on the floor for these skills. Live shocks must be delivered if possible.*** If the monitor/defibrillator does not sense appropriate transthoracic resistance and will not deliver a shock, the Skill Examiner must operate the equipment to simulate actual delivery of a shock as best as possible.

- Examination gloves
- Monitor/defibrillator (no automated, semi-automated or interpreting machines permitted) with freshly charged batteries and spares
- Arrhythmia generator compatible with manikin and monitor/defibrillator
- Defibrillation manikin
- Conductive medium (gel, pads, etc.)
- ECG paper
- Automated External Defibrillator (trainer model) with freshly charged and spare batteries
- CPR manikin that can be defibrillated with an AED Trainer

## ORAL STATION

(Only Paramedic candidates complete this station)

These skills should be located in a quiet, isolated room with a desk or table and two (2) comfortable chairs. The Skill Examiner will sit across from and face the candidate during the testing in this station. The National Registry Representative will provide prepared testing cases and a barrier to prohibit any candidate from observing any case information or examiner documentation. Each candidate completes two (2) separate cases, each of which is conducted by a separate Skill Examiner.

- Tablet paper for candidate (All notes **must** be collected before dismissing the candidate from the room.)
- Pen or pencil for candidate
- Divider barrier (provided by NREMT) that prohibits candidate from observing any printed case materials or documentation
- Watch or visible clock with a second hand

## **IV AND MEDICATION SKILLS (IV THERAPY AND IV BOLUS MEDICATIONS)**

(Advanced EMT, Intermediate/99 and Paramedic candidates complete both the IV and Bolus Medication Skills.)

Equipment for the Pediatric Intraosseous Infusion Skill is listed separately in the Pediatric Skills section below.

- Examination gloves
- IV infusion arm
- IV solutions\*
- Administration sets\*\*
- IV catheters\*\*\*
- IV push medications (prefilled syringes)\*\*\*\*
- Tape
- Gauze pads (2x2, 4x4, etc.)
- Syringes (various sizes)
- Tourniquet
- Alcohol preps or similar substitute
- Approved sharps container

NOTE: Please refer to the essay for a detailed discussion of the following:

- \* Need a selection array but may be expired
- \*\* Need a selection array and must include microdrip tubing (60 gtt/cc)
- \*\*\* Need a selection array and can replace with small (20-22 ga.) catheters
- \*\*\*\* Must include atropine, epinephrine 1:10,000, naloxone, and dextrose 50% plus several others

## **PEDIATRIC SKILLS (PEDIATRIC VENTILATORY MANAGEMENT, PEDIATRIC INTRAOSSEOUS INFUSION, AND PEDIATRIC RESPIRATORY COMPROMISE)**

(Intermediate/99 and Paramedic candidates complete the Pediatric Ventilatory Management Skill. Only Advanced EMT candidates complete the Pediatric Respiratory Compromise Skill. Advanced EMT, Intermediate/99 and Paramedic candidates complete the Pediatric Intraosseous Skill.)

NOTE: These skills may be set up as part of the Ventilatory Management Skills and the IV and Medication Skills.

### **PEDIATRIC VENTILATORY MANAGEMENT**

- Examination gloves (may also add masks, gowns, and eyewear)
- Infant intubation manikin
- Laryngoscope handle and blades (straight and curved of appropriate sizes)
- Endotracheal tubes (3.0 – 5.0 mm)
- End-tidal CO<sub>2</sub> detector and/or esophageal detector device (EDD)
- Syringes (10 mL, 20 mL)
- Stylette
- Bag-valve-mask device with reservoir
- Oxygen cylinder with regulator (may be empty)
- Oxygen connecting tubing

- Selection of oropharyngeal airways
- Selection of nasopharyngeal airways
- Various supplemental oxygen devices (nasal cannula, non-rebreather mask with reservoir, etc.)
- Stethoscope
- Lubricant (silicone spray)
- 1/2" tape
- Spare batteries
- Tongue blade
- Towel or other appropriate padding

### **PEDIATRIC INTRAOSSEOUS INFUSION**

- Examination gloves
- Intraosseous infusion manikin with replacement tibias (6 – 8 sticks/tibia)
- IV solutions\*
- Administration sets\*\*
- IV extension tubing or 3-way stopcock
- Intraosseous needles (Jamshidi<sup>®</sup>, electric, drill-type and/or spring-loaded device)
- Syringes (various sizes)
- Tape
- Gauze pads (2x2, 4x4, etc.)
- Alcohol preps or similar substitute
- Bulky dressing
- Approved sharps container

NOTE: Please refer to the essay for a detailed discussion of the following:

\* Need a selection array but may be expired

\*\* Need a selection array and must include microdrip (60 gtt/mL) tubing

### **PEDIATRIC RESPIRATORY COMPROMISE**

- Examination gloves (may also add masks, gowns, and eyewear)
- Infant manikin (approximate size of a 1 year old child)
- Bag-valve-mask device with reservoir
- Oxygen cylinder with regulator (may be empty)
- Oxygen connecting tubing
- Selection of oropharyngeal airways
- Selection of nasopharyngeal airways
- Various supplemental oxygen devices (nasal cannula, non-rebreather mask with reservoir, etc.)
- Stethoscope
- Tongue blade
- Towel or other appropriate padding

## RANDOM EMT SKILLS AND SPINAL IMMOBILIZATION (SUPINE PATIENT) SKILL

Skills will be tested as follows but all equipment for all skills must be available. One (1) adult or adolescent who is at least sixteen (16) years of age must serve as the Simulated Patient for this skill. The Simulated Patient must also be of average adult height and weight.

LEVEL	SKILL(S) TO TEST
Intermediate/99, Paramedic	Test one (1) of the following: <ul style="list-style-type: none"><li>▪ Spinal Immobilization (Seated Patient)</li><li>▪ Spinal Immobilization (Supine Patient)</li><li>▪ Bleeding Control/Shock Management</li></ul>
Advanced Emergency Medical Technician	All must test one (1) of the following: <ul style="list-style-type: none"><li>▪ Spinal Immobilization (Seated Patient)</li><li>▪ Bleeding Control/Shock Management</li><li>▪ Long Bone Immobilization</li><li>▪ Joint Immobilization</li></ul> Additionally, all NRAEMT candidates must also test: <ul style="list-style-type: none"><li>▪ Spinal Immobilization (Supine Patient)</li></ul>

### SPINAL IMMOBILIZATION (SEATED PATIENT)

- Examination gloves
- Half-spine immobilization device\* (wooden or plastic)
- Vest-type immobilization device\*
- Padding material (pads or towels)
- Armless chair
- Cervical collars (correct sizes)
- Cravats (6)
- Kling, Kerlex, etc.
- Long immobilization straps (6 of any type)
- Tape (2" or 3" adhesive)
- Blankets (2)

\*It is required that the skill include one (1) plain wooden or plastic half board with tape, straps, blankets, and cravats as well as one (1) common vest-type device (complete). Additional styles and brands of devices and equipment may be included as a local option.

### BLEEDING CONTROL/SHOCK MANAGEMENT

- Examination gloves
- Field dressings (various sizes)
- Bandages (various sizes)
- Tourniquet (commercial or improvised)
- Oxygen cylinder with delivery system (tank may be empty)
- Oxygen delivery devices (nasal cannula, simple face mask, non-rebreather mask)
- Blanket

- Gauze pads (2x2, 4x4, etc.)
- Kling, Kerlex, etc.

### **LONG BONE IMMOBILIZATION**

- Examination gloves
- Rigid splint materials (various sizes)
- Roller gauze
- Cravats (6)
- Tape

### **JOINT IMMOBILIZATION**

- Examination gloves
- Cravats (6) to be used as a sling and swathe

### **SPINAL IMMOBILIZATION (SUPINE PATIENT)**

- Examination gloves
- Long spine immobilization device (long board, etc.)
- Head immobilizer (commercial or improvised)
- Cervical collar (appropriate size)
- Patient securing straps (6-8 with compatible buckles/fasteners)
- Blankets
- Padding (towels, cloths, etc.)
- Tape

Appendix B:  
Sample Reservation List

## Sample Reservation List for Advanced Level NREMT Psychomotor Examination

**From:** DoNotReply@nremt.org  
**Sent:** August 18, 2013  
**To:** Examination Department; curley@acmeparau.edu  
**Subject:** Exam request #2013000601 finalized

Examination ID = 2013000601  
Level = Para  
Type = Practical

1	Burgett, Samuel	xxx-xx-xxxx	Para	Practical
2	Bush, Ed	xxx-xx-xxxx	Para	Practical
3	Cicero, Angel	xxx-xx-xxxx	Para	Practical
4	Clinton, Walter	xxx-xx-xxxx	AEMT	Practical
5	Hendrix, James	xxx-xx-xxxx	AEMT	Practical
6	Korda, Donald	xxx-xx-xxxx	Para	Practical
7	Lefever, Marcus	xxx-xx-xxxx	I/99	Practical
8	Lubscomb, Cindy	xxx-xx-xxxx	Para	Practical
9	Lyle, Marty	xxx-xx-xxxx	AEMT	Practical
10	Mascaro, Jim	xxx-xx-xxxx	I/99	Practical
11	Matthes, Tracy	xxx-xx-xxxx	Para	Practical
12	Miller, Steven	xxx-xx-xxxx	Para	Practical
13	Perez, Juan	xxx-xx-xxxx	Para	Practical
14	Purdy, Christopher	xxx-xx-xxxx	AEMT	Practical
15	Smith, L.C.	xxx-xx-xxxx	Para	Practical
16	Stephanos, George	xxx-xx-xxxx	Para	Practical
17	Thatcher, Melissa	xxx-xx-xxxx	Para	Practical
18	Walker, Jan	xxx-xx-xxxx	I/99	Practical
19	Wilson, James	xxx-xx-xxxx	Para	Practical
20	Bart, Anthony	xxx-xx-xxxx	I/99	Practical
21	Peterson, Sally	xxx-xx-xxxx	Para	Practical
22	Daniels, Charles	xxx-xx-xxxx	AEMT	Practical
23	Kaplan, Judy	xxx-xx-xxxx	Para	Practical

Appendix C:  
Signs to Post for Skills

# **PATIENT ASSESSMENT – TRAUMA**

**[Advanced EMT, Intermediate/99, and  
Paramedic Candidates]**

# **PATIENT ASSESSMENT – MEDICAL**

**[Advanced EMT and Intermediate/99  
Candidates]**

# VENTILATORY MANAGEMENT

**Advanced Emergency Medical Technician (AEMT) candidates** only complete one (1) adult scenario and are only authorized to place a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>).

**Intermediate/99 and Paramedic candidates** must complete two (2) separate adult scenarios:

1. Endotracheal intubation of the apneic adult patient
2. Insertion of a supraglottic airway device (Combitube<sup>®</sup>, PTL<sup>®</sup>, King LT<sup>®</sup>) into an apneic adult patient

# **CARDIAC MANAGEMENT SKILLS**

**[Intermediate/99 and Paramedic Candidates  
Complete Both Dynamic and Static  
Cardiology Skills.**

**AEMT Candidates Complete Cardiac Arrest  
Management/AED only.]**

# **ORAL STATION**

**[Paramedic Candidates Only]**

# IV AND MEDICATION SKILLS

LEVEL	SKILL(S) TO TEST
Advanced Emergency Medical Technician	<ul style="list-style-type: none"><li>▪ Intravenous Therapy</li><li>▪ Intravenous Bolus Medications</li></ul>
Intermediate/99	<ul style="list-style-type: none"><li>▪ Intravenous Therapy</li><li>▪ Intravenous Bolus Medications</li></ul>
Paramedic	<ul style="list-style-type: none"><li>▪ Intravenous Therapy</li><li>▪ Intravenous Bolus Medications</li></ul>

# **PEDIATRIC SKILLS**

**[Intermediate/99 and Paramedic Candidates Complete Both Pediatric Ventilatory Management and Pediatric Intraosseous Infusion Skills.]**

**Advanced EMT Candidates Complete Both Pediatric Respiratory Compromise and Pediatric Intraosseous Infusion Skills.]**

# RANDOM EMT SKILLS AND SPINAL IMMOBILIZATION (SUPINE PATIENT)

LEVEL	SKILL(S) TO TEST
Intermediate/99, Paramedic	Test one (1) of the following: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Seated Patient)</li> <li>▪ Spinal Immobilization (Supine Patient)</li> <li>▪ Bleeding Control/Shock Management</li> </ul>
Advanced Emergency Medical Technician	All must test one (1) of the following: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Seated Patient)</li> <li>▪ Bleeding Control/Shock Management</li> <li>▪ Long Bone Immobilization</li> <li>▪ Joint Immobilization</li> </ul> Additionally, all NRAEMT candidates must also test: <ul style="list-style-type: none"> <li>▪ Spinal Immobilization (Supine Patient)</li> </ul>

Appendix D:  
Examination Staff Roster

**NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS**

**ADVANCED LEVEL PSYCHOMOTOR EXAMINATION  
ROSTER FOR SKILL STATION EXAMINERS, EMT ASSISTANTS, AND PATIENTS**

**PATIENT ASSESSMENT – TRAUMA** (Advanced EMT, I/99, and Paramedic candidates complete this skill)

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

PATIENT\*: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

PATIENT\*: \_\_\_\_\_

\*May substitute a high fidelity simulation manikin

**PATIENT ASSESSMENT – MEDICAL** (Only Advanced EMT and I/99 candidates complete this skill)

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

PATIENT\*: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

PATIENT\*: \_\_\_\_\_

\*May substitute a high fidelity simulation manikin

**VENTILATORY MANAGEMENT** (Advanced EMT candidates only permitted to use supraglottic airway device; I/99 and Paramedic candidates test both ET and supraglottic airway device)

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

**CARDIAC MANAGEMENT SKILLS** (I/99 and Paramedic candidates complete both Dynamic and Static Cardiology skills; Advanced EMT candidates complete Cardiac Arrest Management/AED skill)

Dynamic and Static Cardiology:

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

Cardiac Arrest Management/AED:

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

**ORAL STATION** (Only Paramedic candidates complete this station)

Oral A Case:

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

Oral B Case:

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

**IV & MEDICATION SKILLS** (Advanced EMT, I/99 and Paramedic candidates complete both IV and IV Bolus Medications skills)

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

**PEDIATRIC SKILLS** (I/99 and Paramedic candidates complete Pediatric Ventilatory Management and Pediatric Intraosseous skills; Advanced EMT candidates complete Pediatric Respiratory Compromise and Pediatric Intraosseous skills)

NOTE: Pediatric Ventilatory Management, Pediatric Respiratory Compromise and Pediatric Intraosseous Infusion skills may be set up as part of the Ventilatory Management and the IV & Medication Skill Stations.

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

**RANDOM EMT SKILLS AND SPINAL IMMOBILIZATION (SUPINE PATIENT)**

(Advanced EMT, I/99, and Paramedic candidates complete one [1] EMT skill chosen at random. Additionally, each Advanced EMT candidate must also complete the Spinal Immobilization [Supine Patient] skill.)

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EMT ASSISTANT: \_\_\_\_\_

PATIENT: \_\_\_\_\_

EXAMINER: \_\_\_\_\_ LOCATION: \_\_\_\_\_

EMT ASSISTANT: \_\_\_\_\_

PATIENT: \_\_\_\_\_