

# **BRONCHODILATOR ADMINISTRATION**

## Handheld Metered Dose Inhaler, Small Volume Nebulizer

### **TIME ALLOWED FOR SKILL PERFORMANCE - 5 MINUTES PER COMPONENT**

#### **PERFORMANCE OBJECTIVE**

Given an adult manikin or a human “patient” and appropriate equipment and supplies, the candidate shall, within the allotted station time, be able to recognize and select the medication ordered, properly assemble the delivery device and administer the drug using the criteria herein prescribed.

#### **TESTING CONDITIONS**

1. Examiner shall insure that the session is conducted as a testing station and **NOT** as a teaching session.
2. The station shall test only the skill of Bronchodilator Administration and shall **NOT** be conducted as a part of any other skill or scenario.
3. Candidates shall be tested in private and one candidate at a time.
4. Examiner shall require candidate to take or verbalize body substance isolation precautions before station time begins.

#### **STATION EQUIPMENT:**

1. Adult manikin or a human “patient”
2. Oxygen tank, regulator and nonrebreather mask
3. Small volume nebulizer administration device and oxygen supply tubing
4. Drug box containing the following items:
  - a. handheld metered dose inhaler and, if required by local protocol, a spacer
  - b. sample or simulation of a bronchodilator packaged for use in a nebulizer
5. A watch or clock with readings in seconds

#### **INSTRUCTIONS TO THE EXAMINER**

1. The Course Coordinator, lead Instructor and Examiner are responsible for insuring the presence of all necessary equipment; and also for insuring that all equipment is in working order prior to beginning the test session.
2. Examiner will **NOT** remove or hide equipment required to complete the skill.
3. Before the test session begins, the candidate shall be allowed to familiarize with the equipment. During this time Examiner shall answer any questions the candidate has about the equipment.
4. Scenarios must **NOT** be used except as indicated by the criteria.
5. Examiner shall prompt candidate **ONLY** as indicated by the criteria.
6. The initial setting is the manikin or simulated patient sitting up. Assessment indicates that bronchodilator administration is appropriate. Oxygen is being administered via nonrebreather mask at 15 liters per minute (simulated flow is acceptable).
7. Examiner, acting as medical control, shall specify the drug name (as labeled), dose (number of metered doses) and the route of administration ordered. Instruct the candidate to select that drug and administer it. This is a test of psychomotor skills, not a test of the candidate’s knowledge of specific drugs.

8. Choose a drug which is contained in the drug box for the handheld metered dose inhaler segment. Instruct the candidate to select that drug and administer it. The order should include the use of the spacer, if its use is desired or expected. This station is a test of psychomotor skills, not a test of the candidate's knowledge of specific drugs.
9. Choose a drug which is contained in the drug box for the small volume nebulizer segment. Instruct the candidate to select that drug and administer it via nebulizer with an oxygen flow rate of 8 liters per minute. This station is a test of psychomotor skills, not a test of the candidate's knowledge of specific drugs. .
10. When questioned about allergies, Examiner shall state: "There are no allergies."
11. If questioned about self administered doses of other bronchodilators, Examiner shall state: "No medications have been taken."
12. Once a test session has begun, it must be completed within the allotted time with **NO** restart allowed.
13. Station time shall **NOT** be restarted or extended for any reason.
14. Station time shall begin immediately after Examiner finishes examination instructions and informs candidates to begin.
15. Examiner shall record starting and ending times in the appropriate section of score sheet.
16. If station time limit is exceeded, Examiner shall end the test, record skill as failure.
17. Sequence errors shall **NOT** be penalized unless specified by the grading criteria.
18. Additional steps not called for in criteria shall **NOT** be penalized as sequence errors
19. Omitted steps shall **NOT** be penalized as sequence errors.
20. Documentation by narrative is required on all steps awarded a "0" and on all skills failures.
21. Candidate shall **NOT** fail because of Examiner error.

**HANDHELD METERED DOSE INHALER GRADING CRITERIA**  
[STATION TIME 5 MINUTES]

**Examiner states:** “The patient meets all criteria for administration of a bronchodilator. Medical Control has authorized the administration of \_\_\_\_\_ (drug name and dose) via handheld metered dose inhaler.”

**\*1. Avoids contamination of equipment or replaces contaminated equipment prior to use.**

- 2 = Performs above criteria
- 0 = Does not perform above criteria

**\*2. Confirms order (medication, dosage and route)**

- 2 = Performs step
- 0 = Omits any portion of step

**\*3. Informs patient of order for medication and inquires about allergies and recent doses of other bronchodilators**

- 2 = Performs step
- 1 = Inquires about allergies but does not inform patient of order or inquire about use of other bronchodilators
- 0 = Does not inquire about allergies

**\*4. Selects correct medication from drug box as requested by Examiner**

- 2 = Performs step
- 0 = Omits step

**\*5. Verbalizes check of medication for contamination and expiration date**

- 2 = Performs step
- 0 = Omits any portion of step

**\*6. Shakes the inhaler**

- 2 = Performs step
- 0 = Omits step

**7. Attaches spacer to inhaler, if ordered**

- 2 = Performs step, if ordered
- 0 = Omits step, if ordered

**8. Verbalizes recheck of the medication label**

- 2 = Performs step
- 0 = Omits step

**9. Removes nonrebreather mask from patient**

- 2 = Performs step
- 0 = Omits step

**10. Verbalizes recheck of the medication label**

2 = Performs step  
0 = Omits step

**\*11. Performs steps 1-10 prior to step 12 and performs at least one (1) recheck of the medication label**

2 = Performs as above  
0 = Does not perform as above

**12. Instructs patient to exhale deeply**

2 = Performs step  
0 = Omits step

**\*13. Instructs patient to put the mouthpiece in mouth and make a seal with lips**

2 = Performs step  
0 = Omits step

**\*14. Instructs patient to depress the inhaler canister while inhaling and then hold breath as long as comfortable**

2 = Performs step  
0 = Omits any portion of step

**\*15. Replaces non-rebreather mask on patient**

2 = Performs step  
0 = Omits step

**SMALL VOLUME NEBULIZER GRADING CRITERIA**  
[STATION TIME 5 MINUTES]

**Examiner states:** “The patient meets all criteria for administration of a bronchodilator. Medical Control has authorized the administration of \_\_\_\_\_ (drug name and dose) via small volume nebulizer at \_\_\_\_ liters per minute (l.p.m.)”

**\*1. Avoids contamination of equipment or replaces contaminated equipment prior to use.**

- 2 = Performs above criteria
- 0 = Does not perform above criteria

**\*2. Confirms order (medication, dosage and route)**

- 2 = Performs step
- 0 = Omits any portion of step

**\*3. Informs patient of order for medication and inquires about allergies and recent doses of other bronchodilators**

- 2 = Performs step
- 1 = Inquires about allergies but does not inform patient of order or inquire about use of other bronchodilators
- 0 = Does not inquire about allergies

**\*4. Selects correct medication from drug box as requested by Examiner**

- 2 = Performs step
- 0 = Omits step

**\*5. Verbalizes check of medication for contamination and expiration date**

- 2 = Performs step
- 0 = Omits any portion of step

**\*6. Adds appropriate volume of medication to the nebulizer**

- 2 = Performs step
- 0 = Omits step

**\*7. Assembles nebulizer according to the manufacturer’s standard (or local protocol) and connects to oxygen regulator**

- 2 = Performs step
- 0 = Omits any portion of step

**8. Verbalizes recheck of the medication label**

- 2 = Performs step
- 0 = Omits step

**\*9. Adjusts oxygen liter flow as ordered and allows mist to fill breathing tube or mask prior to applying to patient**

- 2 = Adjusts flow rate to within one (1) l.p.m. of requested flow
- 1 = Adjusts flow rate to within two (2) l.p.m. of requested flow
- 0 = Omits any portion of step
- Adjusts flow rate to deliver more than two (2) l.p.m. above or below the requested flow

**10. Verbalizes recheck of the medication label**

- 2 = Performs step
- 0 = Omits step

**\*11. Performs steps 1-10 prior to step 12 and performs at least one (1) recheck of the medication label**

- 2 = Performs as above
- 0 = Does not perform as above

**\*12. Removes non-rebreather mask and positions nebulizer device on patient**

- a. Begins oxygen flow rate and mist before nebulizer placed on patient
- b. Positions device according to manufacturer's standard or local protocol

- 2 = Performs step
- 0 = Omits any portion of step

**NOTE:** Examiner shall state that the medication administration has been completed.