**Attachment 10**

**Bronchodilator Test SOP**

# BRONCHODILATOR TEST

Form Approved

OMB NO. 0920-xxxx

Expiration Date: xx/xx/20xx

**I. BACKGROUND**

Bronchodilator (BD) administration can follow spirometry to detect reversible airways obstruction. Albuterol is the most commonly used form of bronchodilator for post - BD testing. For many projects, post-BD spirometry is only done for participants with abnormal pre-BD spirometry results (especially airway obstruction).

**II. CONTRAINDICATIONS**

Contraindications are the same as for baseline spirometry with the following exceptions.

1. Systolic BP >160 or diastolic BP >100 mmHg
2. Pulse >100 beats per minute

**III. EQUIPMENT AND SUPPLIES**

1. A spirometer

2. An albuterol metered-dose inhaler (MDI) that delivers 100mcg albuterol per puff

3. Disposable cardboard mouthpiece or 6” length of blue ventilator tubing to serve as spacer.

**IV. TEST PROCEDURES**

1. Prepare the bronchodilator administration equipment

1. Attach a spacer
2. Shake the MDI; if it has not been used for more than four (4) hours, activate the canister once to verify aerosol delivery.

2. Pre-test procedure

1. Explain possible symptoms from test: “You may experience temporary jitteriness and/or rapid heart rate.”

3. Test procedure.

a. Hold the MDI with a spacer 1 to 2 inches from the subject's open mouth.

b. Have the subject exhale fully.

c. Place the MDI with spacer in the subject’s mouth.

Public reporting burden of this collection of information is estimated to average 20 mins per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-xxxx).

d. While the subject is inhaling slowly activate the MDI while instructing the subject to continue to inhale slowly until they have inhaled fully over approximately 5 seconds.

e. Instruct the subject to hold his breath at total lung capacity (TLC) for 5 seconds and then to exhale slowly.

f. Wait 30 seconds.

g. Repeat procedure three additional times for a total of 4 metered doses being administered (400mcg total.)

h. Wait 10 minutes.

i. Repeat spirometry.

**V. REFERENCES**

1. Miller MR, Hankinson J, Brusasco V, et al, ATS/ERS Task Force. Standardisation of spirometry. Eur Respir J. 2005 Aug; 26(2):319-338.
2. AARC (American Association for Respiratory Care) clinical practice guideline. Spirometry: 1996 update. Respir Care 1996; 36:629-636.