

Respiratory Protection Program Guideline .....	1
I. Purpose .....	1
II. Scope.....	1
A. Respirator selection;.....	1
B. Job functions requiring respirator use;.....	1
C. Tuberculosis education for employees; .....	1
D. Fit testing requirements for tight-fitting respirators;.....	1
E. Fit Test; .....	2
F. Procedures for respirator handling and maintenance; .....	2
III. Guidelines .....	2
A. Respirator selection.....	2
B. Job functions requiring respirator use.....	2
C. Tuberculosis education for employees .....	2
D. Fit testing requirements for tight-fitting respirators.....	2
E. The fit test.....	3
F. Procedures for fit checking, inspecting, storing, cleaning, and replacing Respirators .....	6
IV. References .....	6
V. Action.....	<u>76</u>
Referenced Forms.....	8
Attachments .....	8

<b>Section-14 Medical Services Resource Manual</b>	<b>MSRM-140301-01</b>	<b>Page: 1</b>	<b>Effective Date: 8/14/2014</b>
<b>Respiratory Protection Program Guideline</b>	<b>ACA Standards: 4-4354M, 4-ACRS-4C-09</b>		
<b>Donald Sutmiller, DO, Chief Medical Officer Oklahoma Department of Corrections</b>		<b>Signature on File</b>	

## Respiratory Protection Program Guideline

### I. Purpose

The intent of this guideline is to ensure safe, appropriate, and consistent use of respirators for protection against tuberculosis (4-ACRS-4C-09, 4-4354M). Each facility's Infection Control Nurse is responsible for implementing and maintaining this guideline.

### II. Scope

This guideline addresses the following:

- A. Respirator selection;
- B. Job functions requiring respirator use;
- C. Tuberculosis education for employees;
- D. Fit testing requirements for tight-fitting respirators;

- E. Fit Test;
- F. Procedures for respirator handling and maintenance;

### III. Guidelines

#### A. Respirator selection

Each facility is responsible for providing appropriate respiratory protection for employees at no charge to the employee. Employees of the Oklahoma Department of Corrections will use only respirators certified by the National Institute for Occupational Safety and Health (NIOSH) for protection against tuberculosis. Designated employees will use a minimum of the disposable N95, tight fitting, negative-pressure respirator. Designated employees will use only respirators they have been successfully fit tested to use. Any time the make, model, style, or size of respirator is changed the employee must pass a fit test with that respirator.

#### B. Job functions requiring respirator use

Any employee with job functions that may put them at risk of being exposed to an offender with diagnosed, or suspected, infectious tuberculosis will wear a respirator in high-risk environments. These job functions include, but are not limited to entering high risk environments housing TB confirmed or suspected cases, such as airborne infection isolation rooms (AIIRs), and vehicles being used to transport an offender with suspected or confirmed tuberculosis.

#### C. Tuberculosis education for employees

At each facility a designee of the CHSA will provide TB education for all new employees and annually for all facility staff. This education will cover the differences between exposure, infection and disease, diagnosis, transmission, pathogenesis, treatment, and follow up.

#### D. Fit testing requirements for tight-fitting respirators

Any employee required to wear a respirator must be successfully fit tested by the Infection Control Nurse/Nurses or Safety Officer with the same make, model, style, and size of respirator the individual will use. The Oklahoma Department of Corrections uses the qualitative fit test (QLFT). Any employee with facial hair that touches the seal of the respirator is not eligible for fit testing and cannot wear a respirator or engage in any activity that may place them at risk of exposure to TB. The Infection Control Nurse is responsible for obtaining and maintaining the equipment necessary for fit testing, and maintaining documentation related to the fit test program. All fit tests will begin with the Saccharin solution and progress to the Bitter solution when a failed Saccharin test is documented.

Saccharin and Bitter solutions are the only two solutions to be used for fit testing in the DOC.

1. Respirator Questionnaire

The "Respirator Questionnaire" MSRM 140301.01.1 is to ensure the employee is capable of safely performing their job duties while wearing the respirator. It is to be administered confidentially and in a manner that ensures the employee understands its content. The facility must determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator in the workplace. This questionnaire will be completed initially and whenever a fit test must be repeated. The completed form will be filed in the individual's confidential record.

2. Department medical evaluation

In the event an employee is referred for a medical evaluation prior to the fit test, a Department of Corrections medical provider will evaluate the employee for ability to wear a respirator. The employee will be given a copy of the "Respirator Questionnaire" MSRM 140301.01.1 to present to the medical provider. The employee must provide the Infection Control Nurse written authorization from the medical provider for the employee to be fit tested. This authorization will be stored in the individual's employee record with the completed "Respirator Questionnaire" MSRM 140301.01.1. An employee will be referred to a department physician if,

- a. The answer to #10 of the Respiratory Questionnaire is "Yes";
- b. An employee reports medical signs, symptoms, history or conditions that could prevent their ability to use a respirator.

E. The fit test

1. Supplies

- a. One hood,
- b. Sensitivity test solution (Saccharin and/or Bitter) with a nebulizer.
- c. Fit test solution (Saccharin or Bitter) with a nebulizer.
- d. Timer.
- e. The individual's completed "Respirator Questionnaire" MSRM 140301.01.1.

## 2. Preparation

- a. Prepare the hood, if applicable.
- b. Prepare the nebulizer for the sensitivity test using 1cc of the sensitivity test solution.
- c. Prepare the nebulizer for the fit test using 1cc of the fit test solution.
- d. The nebulizers must be thoroughly rinsed in water, shake dry and refilled at least each morning and afternoon or at least every four hours during use.
- e. Review the "Respirator Questionnaire" MSRM 140301.01.1 to ensure the individual is an appropriate candidate for fit testing.

## 3. Sensitivity Test

- a. Ensure the employee has had nothing by mouth for 15 minutes prior to the test.
- b. Explain the fit test procedure.
- c. Have the employee put on the hood without a respirator. Throughout the test the employee should breathe with the mouth wide open and the tongue extended.
- d. Position the hood so that there is about six inches between the employee's face and hood window.
- e. Using the nebulizer with the sensitivity solution, spray the aerosol into the hood through the hole in the hood window. Inject ten sprays of the bulb, fully collapsing and allowing the bulb to expand fully on each spray.
- f. Ask the employee if the solution can be detected. If detected, note the number of sprays and proceed to the fit test.
- g. If not tasted, spray additional ten sprays. Note the number of sprays required to detect the solution.
- h. If 30 sprays are inadequate, the employee cannot detect the sensitivity solution and proceed to the Bitter solution sensitivity test.

- i. The sensitivity test and fit test are performed in the same manner regardless of the solutions used, making sure to use the appropriate sensitivity and test solutions together.

#### 4. Fit Test Procedure

- a. Allow the employee to clear the taste of the sensitivity solution from the mouth.
- b. Have the employee put on and fit check the respirator using the manufacturer's instructions.
- c. Have the employee put on the hood while wearing the respirator, as before, breathing through a wide-open mouth with the tongue extended.
- d. Using the nebulizer with the fit test solution, spray the fit test aerosol using the same number of sprays as was required to detect the solution in the sensitivity test.
- e. To maintain an adequate concentration of aerosol during this test, one-half the number of sprays used in step 4d is injected every 30 seconds during the fit test.
- f. After the initial aerosol is injected, ask the employee to perform the following test exercises for 60 seconds each.
  - (1) Normal breathing.
  - (2) Deep breathing – breath should be deep and regular.
  - (3) Turning head from side to side – movement should be completed with one turn each second.
  - (4) Nodding head up and down – movement should be complete and made about one turn per second.
  - (5) Talking – ask the employee to read the “Rainbow Passage”, Attachment A, aloud and slowly. The passage is repeated for one minute.
  - (6) Jog in place.
  - (7) Normal breathing.
- g. If the entire test is completed without the employee detecting the test solution, the test is successful and the respirator fit test is deemed adequate. If the test solution is detected, the

fit test is stopped and the fit is deemed unsatisfactory and a different respirator model or size should be tried.

5. Annual Testing and Additional Fit Test

- a. The employer shall ensure that an employee using a tight-fitting respirator is fit tested prior to initial use of the respirator, whenever a different respirator (size, style, model or make) is used, and at least annually thereafter.
- b. The employer shall conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
- c. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

6. Procedures for fit checking, inspecting, storing, cleaning, and replacing Respirators

All manufacturer's instructions for fit checking, inspecting, storing, cleaning, and replacing respirators will be reviewed with each employee at the time of the fit test. Fit checking and inspections will be done each time the respirator is worn. Respirators will be stored individually and protected from crushing or folding. Any time a respirator is discarded it is replaced with the same make, model, style and size of respirator.

IV. References

Francis J. Curry, National Tuberculosis Center. TB Control Frequently Asked Questions: *What precautions should be taken when transporting a TB Patient?* March 2004.

U. S. Department of Health and Human Services and Centers for Disease Control and Prevention. *NIOSH Respiratory Protection Program in Health Care Facilities, Administrator's Guide*, September 1999.

"Respiratory protection for M. tuberculosis." 29 Code of Federal Regulation 1910.139.

OSHA Guidelines 29 CFR 1910.134 entitled Respiratory Protection

[OP-140301](#) entitled, "Tuberculosis Control Program"

V. Action

The Chief Medical Officer, Medical Services will be responsible for compliance with this procedure.

The CMO will be responsible for the annual review and revisions.

Any exceptions to this procedure will require prior written approval from the CMO.

This procedure will be effective as indicated.

Replaced: Medical Services Resource Manual 140301-01 entitled "Respiratory Protection Program Guidelines", dated December 13, 2011

Distribution: Medical Services Resource Manual

Referenced Forms

Title

Located in

[MSRM 140301.01.1](#)

“Respirator Questionnaire”

MSRM 140301-01

Attachments

[Attachment A](#)

“Rainbow Passage”

MSRM 140301-01