

Duke Hospital and Clinics Hazard Specific Respiratory Protection Policy

For TB, COVID-19, SARS, and Other Airborne Particulates in Clinical Settings

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Department: Duke University, Duke Hospital and Clinics, the Private Diagnostic Clinics, and Duke Primary Care

This document is intended to supplement the “Duke Respiratory Protection Policy” (Section II, chapter 2 of the Duke Safety Manual), which states that departments with employees who are required to use respiratory protection shall develop and implement a written site-specific policy defining the use of respirators for each application. This document supports the Duke Tuberculosis Exposure Control Plan (Section VI, chapter 2 of the Duke Safety Manual). The Duke Safety Manual can be found online at www.safety.duke.edu.

This document provides a standard format for documenting tasks that require the use of respiratory protection by employees. Respiratory protection is used to reduce the probability of exposure to airborne particulates. If exposed to airborne pathogens, employees could contract the disease caused by that pathogen (e.g., TB or SARS). If exposed to ribavirin particulates, employees may experience eye irritation or develop possible reproductive effects. Records for this department, documenting which employees are authorized to use respiratory protection, the model and size of respirator they are authorized to use, and their status with regards to medical clearance, training, and fit-testing for respirator use are kept in the Safety Management Database maintained by the Occupational and Environmental Safety Office (OESO).

General/Respirator Selection:

Respirator use is required while performing the following tasks:

Task	Acceptable Respiratory Protection for This Task	When to throw away/Disinfect
<ul style="list-style-type: none"> • Entering an enclosed area housing a patient (or non-human primate) that is on Airborne Isolation • Mixing or administering BCG outside of a biological safety cabinet • Entering a laboratory or autopsy suite when aerosols from an airborne disease are being produced • Opening up exhaust ductwork in the air-handling system coming from an area where aerosols from an airborne disease are present 	<p>N95 Respirator or Powered Air-Purifying Respirator (PAPR)</p>	<ul style="list-style-type: none"> • When providing patient care, discard N95 respirator or PAPR head cover when dirty or damaged or at end of patient's stay • For other tasks throw away N95 or PAPR head cover when task is complete
<ul style="list-style-type: none"> • Entering an enclosed area housing a patient who is on Airborne Isolation <u>AND</u> Contact Isolation 	<p>N95 Respirator or PAPR</p>	<ul style="list-style-type: none"> • Discard N95 respirators after use - do NOT reuse • Throw away PAPR head covers after use (or if reuse by same employee for same patient is necessary, completely and thoroughly disinfect with hospital-grade disinfectant) • Disinfect <u>all</u> exterior surfaces of the PAPR unit with hospital-grade disinfectant after use

During use of their respirators, employees may encounter an emergency involving respirator function or a toxic/life-threatening atmosphere for which the respirator is not designed. Potential emergencies and the recommended method of handling these emergencies are as follows:

Type of Emergency	Respirator affected	Suggested Action
Difficulty breathing through respirator.	N95	Leave contaminated area, get new mask.
Flow to PAPR head cover decreases noticeably or other malfunction is noticed (SafetyTech FlexAir PAPRs are equipped with alarms).	PAPR	Leave contaminated area. Order a replacement PAPR from Equipment Distribution through the Equipment Request Portal. <i>(For immediate needs or emergent situations call 681-2072, 24/7).</i> Tag the malfunctioning PAPR and place it and the charger in the area where equipment is returned to Clinical Engineering.

Health Evaluation:

Medical clearance expiration dates are indicated on the compliance reports from OESO. Only employees who have current medical clearance will be allowed to wear respirators. Documentation of medical clearance is kept at Employee Health.

Fit-Testing and Training:

Fit-testing and training records are kept by Employee Health and OESO. Only employees who are in compliance with training and fit-testing will wear respirators. Employees can only wear respirators of the specific models and sizes for which they have been trained and fit tested. NOTE: Fit-testing is not required for PAPRs.

Preventive Conditions:

Some employees may be unable to wear the specified type of respirator because of a beard or other preventive condition. Employees who cannot wear the N95 for any reason will use the PAPR. PAPR head covers and N95 respirator masks **do not** contain latex.

Maintenance, Inspection, Cleaning and Repair:

- 1) PAPR performance monitoring, maintenance, and inspection will be performed by Equipment Distribution.
- 2) Each PAPR user is responsible for inspecting the PAPR before using it to ensure that the filters are in place, that the head cover is attached properly, and that the

airflow is adequate.

- 3) The brand of PAPR disposable head covers **must** be the same brand as the PAPR; head cover brands **are not** interchangeable.
- 4) N95 respirator users should inspect the respirator before use to make sure that the metal nose bridge piece is in place, that the mask is not misshapen, and that the straps are attached. The user must perform a “user seal check” upon donning the respirator which will ensure that the essential parts of the N95 are present and that the fit is adequate.
- 5) After wearing a PAPR into the room of a patient on contact isolation, the employee who used the PAPR is responsible for disinfecting the outside of the non-disposable parts of the PAPR (and the disposable head cover if it is going to be reused). The N95 respirator is to be discarded in this situation.
- 6) The N95 respirator masks and the PAPR head covers are not to be used between employees and are only to be used while providing care for one patient (one employee, one patient). They will be thrown away when they become worn or dirty (or are no longer needed to care for that one patient).

Contact Numbers and Ordering Information:

- General questions on respirator usage: Call Biological Safety, 684-8822.
- To order PAPRs from Equipment Distribution:
 - ◆ Through the Equipment Request Portal for standard orders.
 - ◆ For immediate needs or emergent situations call the Equipment Distribution hotline at 681-2072, 24/7.
- Order PAPR disposable head covers and N95 respirator masks through SAP:
 - ◆ SafetyTech FlexAir PAPR disposable head covers – SAP # 330895
 - ◆ 3M Teal N95 respirator mask, medium – SAP # 14174
 - ◆ 3M Teal N95 respirator mask, small – SAP # 26378
 - ◆ Technol Orange N95 respirator mask – SAP # 14173
- For PAPR repair and/or replacement: Order a replacement PAPR from Equipment Distribution. Tag the malfunctioning PAPR and place it and the charger in the area where equipment is returned to Clinical Engineering.
- For questions about medical clearance – Employee Occupational Health and Wellness (EOHW), 684-3136.

Storage:

Respirators will be stored in the following approved locations:

- Anterooms of isolation rooms when in use, otherwise in the Equipment Distribution Division of the Clinical Engineering Department.

Miscellaneous:

- 1) New employee fit-tests, when required, will be performed at EOHW during their placement exams.
- 2) Annual fit-tests sessions will be scheduled through EOHW. EOHW also provides fit-

testing in the hospital on a walk-in basis in room 4000C at various posted times. Schedules are sent out monthly to supervisors and managers. In addition the schedule is posted on the OESO website and on the door of room 4000C.

- 3) Training for the PAPR and N95 respirators will be available online through OESO's training website. The module that covers both types of respirators is named "Respirator Training for Airborne Pathogens".
- 4) Managers are responsible for tracking medical clearance, fit test, and training needs for their employees and for ensuring that employees are paid to attend a fit-test session once per year (except for those employees who wear PAPRs, as these respirators do not require annual fit-testing).