

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 1 of 10</b>
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**I. Purpose**

Usage of a PAPR is to protect the healthcare worker (HCW) during performance of daily care from bacterial and/or viral contamination; and/or during high-hazard procedures on a patient with a suspected or confirmed Aerosol Transmissible Disease (ATD). A powered air-purifying respirator (PAPR) will be worn by the HCW if a N95 respirator is not available; HCW is not a candidate for fit testing; or fit testing was not successful.

The PAPR is not intended for use during sterile procedures, such as in the OR, Cardiac Cath Lab, Interventional Radiology or other sterile procedure areas. The PAPR air exhaust from the wearer is unfiltered and does not protect the patient from transmission of airborne pathogens or hair or skin cells from the wearer of the PAPR.

**II. Policy**

Powered air-purifying respirators (PAPRs) will be available for all HCW during high risk aerosol generating procedures. The type of PAPR currently used at this facility is the MAXAIR PAPR System.

**III. Procedure**

All HCWs who require a PAPR for respiratory protection will receive initial respiratory protection training, including procedures for assembly, cleaning/disinfection and storage of the PAPR. PAPR wearers still need full annual respiratory protection training. Additional training will be provided to the HCW as needed.

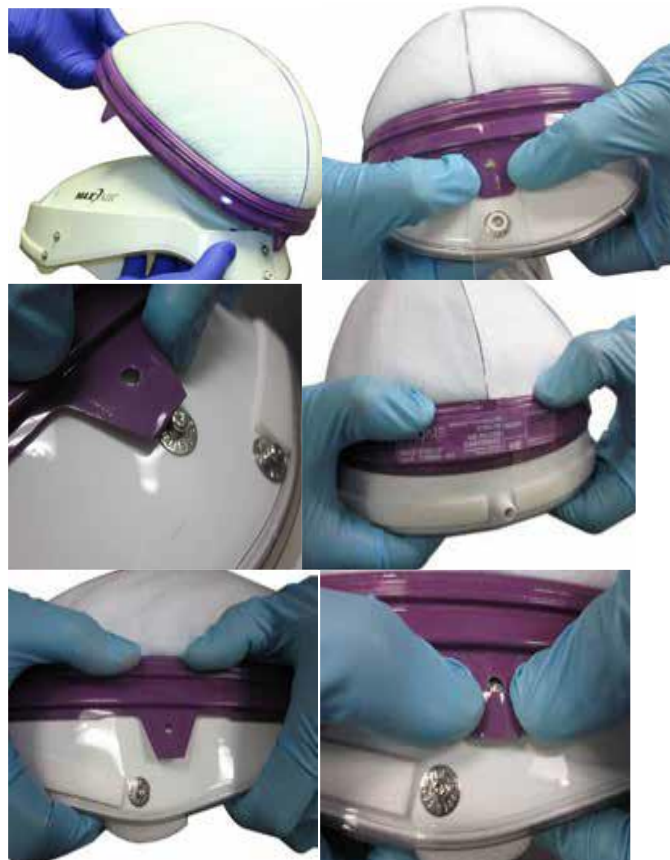
1. Proper assembly and donning/doffing procedure for the MAXAIR PAPR:
  - a. Perform hand hygiene using soap and water or alcohol hand sanitizing agent as appropriate.
  - b. Inspect components of the PAPR, including the HE Filter, before use to ensure there are no tears or breaks.
  - c. Hold the Helmet upright with one hand; with the other hand align the Filter Cartridge with the Helmet rear upper snap.
  - d. Rear Snap: Snap and secure the Filter Cartridge rear tab in place onto the Helmet rear upper snap.
  - e. Center and lift the left and right side Filter Cartridge snap tabs such that they sit on top of the Helmet side upper snaps.
  - f. Using the front top step of the Filter Cartridge retainer ring, firmly push the

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 2 of 10</b>
--	---

Filter Cartridge down towards the Helmet front alignment post

- g. Similarly press the Filter Cartridge ring down on each side so the side tabs are in line with the Helmet side upper snaps.
- h. Snap and secure each Filter Cartridge side snap tab on to each respective Helmet side upper snap



- i. Obtain a fully charged battery.(Charger LED should be green after battery is connected to charger for more than 10 seconds.)



**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
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<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.:</b> IC700F
	<b>Revision Date:</b> 05/2021
	<b>Reviewed:</b> 05/2021
	<b>Page:</b> Page 3 of 10

- j. . Assemble the battery onto the belt. Place the top edge of the Belt under the Battery Clip. Move the Belt fully under and up to the top of the Clip.

k.



- k. Connect the Helmet Power Cord to the Battery. Push the Power Cord Connector into the Battery Receptacle until the Secure Connection audibly clicks.



≤ ½ inch ( 1.25 cm)

- L. Hold the Helmet by the rear headband in one hand, pull the front top edge of the DLC Cuff down, and place your chin into the DLC Cuff. Then, pull the Helmet over and down on to your head.

M. Position the Helmet so that the front headband is within ½ inch of the eyebrows and the rear headband is resting under the occipital bone above the vertebrae on the neck, and then tighten the Adjustment Knob clockwise to ensure the most secure fit of the helmet on the head for all activities. Do not over tighten to cause discomfort.

- i. Don gloves and other personal protective equipment (PPE).

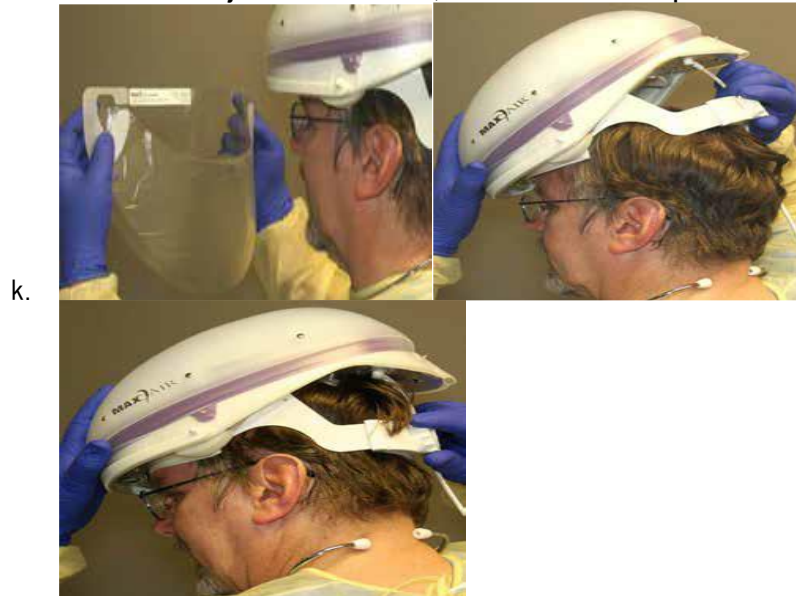
- j. HCW enters room to deliver care.

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 4 of 10</b>
--	---

Doff the System

- a. With the System mounted on head, remove the DLC from the Helmet. Dispose the DLC according to your institution's protocol for contaminated waste.
- b. Loosen the rear Headband Adjustment Knob by turning it counterclockwise
- c. Hold the front top of the Helmet in one hand and with the other hand on the Adjustment Knob; lift the Helmet up and off the head.



**2. Instructions when exiting the room**

- a. Remove PPEs and perform hand hygiene.
- b. Don clean gloves and remove the PAPR.
- c. Helmet Cleaning/Disinfection: Wipe outside surface of the lens and filter cover and all other exposed parts (i.e. battery including power cord and belt) with hospital-approved bleach wipes or alcohol wipes, as appropriate. Allow PAPR and parts to air dry.
- d. Store the cleaned PAPR in a plastic bag with a tag indicating date when the PAPR was cleaned. Keep the assigned PAPR in a clean, secured area, readily available for use on next patient.

**3. At the end of the shift, caregiver must return the PAPR to Respiratory Therapy (RT) for cleaning/disinfecting and storage:**

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 5 of 10</b>
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**Note:** For those areas with specific PAPR equipment's designated for their use, follow departmental procedure on returning PAPR.

- a. Perform hand hygiene and don gloves.
- b. Remove sweatband and cuff and dispose of accordingly.
- c. Helmet Cleaning/Disinfection: Wipe outside surface of the lens and filter cover and all other exposed parts (i.e. battery including power cord and belt) with hospital-approved bleach or alcohol wipes, as appropriate. Allow PAPR and parts to air dry.
- d. Replace sweatband and assemble a new disposable cuff to the lens.
- e. Inspect components of the PAPR, including the HE filter, to ensure there are no tears, breaks, or contamination.
- f. Battery should be placed on charger and charged until the red light turns green.
- g. Filters should be changed when breathing resistance increases or the filter becomes damaged or exposed to blood or bodily fluids.

**4. PAPR battery**

- i. The Lithium-Ion battery provides up to 10 hours of continued use.
- ii. Batteries will be changed / charged after the end of each shift when in use.
- iii. Power supply power cord should be attached to the charger, and then must be plugged into the wall outlet.
- iv. Confirm the green light on the power supply is illuminated prior to plugging the unit into the battery.
- v. Once the green light is illuminated, plug the charger cord into the battery to initiate charging.

**5. Equipment Storage and Maintenance**

- i. Equipment will be stored assembled and ready for immediate use.
- ii. Batteries will be inspected daily, and recharged as needed.
- iii. HE Filters will be inspected by the HCW before each use.
- iv. Filter of the PAPR must be replaced when the yellow LED light is illuminated or at a time interval determined by the Safety Department and Infection Control. Yellow light indicates that the filter is soiled or challenged with particulate matter and should be replaced.

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 6 of 10</b>
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- v. In between use, PAPRs are to be cleaned and kept secured and batteries will be charged at the end of each shift.
- vi. For PAPRs and equipment that is stored in Respiratory Therapy: RT staff is responsible for cleaning the equipment, reassembling, and storing the units after the PAPRs are no longer in use.

**6. Traffic Control**

- i. If the patient is assigned to an Airborne Infection Isolation Room (AIIR), the door to the room will remain closed at all times to maintain negative pressure and avoid disruption of air flow.
- ii. Nursing has the authority and responsibility to limit visitors and guests as needed for patient, visitors and employee safety.
- iii. All visitors entering the AIIRs will be required to wear a mask.
- iv. Only HCW are permitted to don a PAPR. PAPRs are not for visitor or patient use.

**7. Discontinuation of PAPR Use**

Providers may discontinue airborne precautions where PAPR use would no longer be required.

**IV. Workplace Safety**

- A. Be sure PAPR is turned off and disconnected from power before cleaning with wipes or any liquid material.
- B. Do not immerse helmet in water or any liquid as it may damage the fan module.
- C. Do not use solvents to clean the helmet as it may deface the PAPR material.
- D. PAPRs are not intended for use in atmospheres deemed immediately dangerous to life or health (IDLH).
- E. PAPRs do not produce oxygen; therefore, do not use PAPRs in atmospheres containing less than 19% oxygen.
- F. Pay attention to the status lights of the PAPR. Damaged and worn filters must be replaced immediately to ensure adequate protection for the user.

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 7 of 10</b>
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V. Post Exposure Management

I. Definiton

A. An Exposure Incident is defined as an event in which a patient or employee sustains a substantial exposure to an ATD case without the benefit of all applicable and required control measures ( i.e. respiratory protection, isolation, treatment). It reasonably appears from the circumstances of the exposure that transmission of disease is sufficiently likely to require medical evaluation.

B. The following factors should be considered in determining an event involving a substantial exposure incident:

- Infectiousness of the source
- proximity of individual from the source
- duration of exposure
- any personal protective equipment used during exposure

C. Infection Prevention and Control and Employee Health Service Department are to be consulted for determination of an exposure incident.

D. Exposed employees will be notified through county email and text messages after determination of Supervisor or designee. Employee to complete exposure questionnaire via Persinda.

E. Employee Health Services will monitor employee compliance to the notification and determines if any post exposure medical evaluation is needed.

F. Reportable Aerosol Transmissible Disease (RATD) will be reported to Los Angeles Public Health in accordance to Title 17.

V. **Training: 5199 ATD (i)**

A. Training is provided to all employees with occupational exposure at the time of initial assignment and annually, and when any significant changes to the plan are made.

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 8 of 10</b>
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B. Training material will be appropriate in content and vocabulary to the education level, literacy and language of the employee.

C. The program must contain the following:

1. An accessible copy of the regulation, available online at: [www.dir.ca.gov/Title8/5199.html](http://www.dir.ca.gov/Title8/5199.html)
2. A general explanation of ATDs with signs and symptoms that would require further medical evaluation.
3. An explanation of the modes of transmission of ATPs and control procedures.
4. An explanation of the ATD Plan, how to give input and how to obtain a copy.
5. How to recognize tasks and other activities that may put them at risk.
6. Appropriate engineering, work practice controls, decontamination and disinfection procedures, and personal and respiratory equipment use and limitations.
7. Selection, use and care of personal protective equipment.
8. Information on vaccines.
9. What to do in case of an exposure.
10. Information on the hospital's surge plan.
11. An opportunity for interactive questions answered within 24 hours.

**VI. References**

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**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 9 of 10</b>
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- C. California Code of Regulations, Title 8. Industrial Relations, Division 1. Department of Industrial Relations, Chapter 4. Division of Industrial Safety, Subchapter 7. General Industry Safety Orders, Group 16. Control of Hazardous Substances, Article 109. Hazardous Substances and Processes, Section 5199. Aerosol Transmissible Diseases/Pathogens  
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- D. California Code of Regulations, Title 8. Industrial Relations, Division 1. Department of Industrial Relations, Chapter 4. Division of Industrial Safety, Subchapter 7. General Industry Safety Orders, Group 16. Control of Hazardous Substances, Article 107. Dusts, Fumes, Mists, Vapors and Gases, Section 5144. Respiratory Protection  
<http://www.dir.ca.gov/Title8/5144.html>  
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**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER**  
**Infection Prevention and Control**

<b>SUBJECT: Powered Air-Purifying Respirator</b>	<b>Policy No.: IC700F</b> <b>Revision Date: 05/2021</b> <b>Reviewed: 05/2021</b> <b>Page: Page 10 of 10</b>
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