

# Procedure for the use of the EASIAIR 2020 Powered Air Purifying Air Respirator



## Purpose of this procedure:

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Powered air purifying respirators (PAPR) are primarily for use by staff who have been unable to be successfully fitted to a tight fitting disposable FFP3 respirator and who would be undertaking aerosol generating procedures (AGP's).

This procedure should be read in conjunction with the NHS Lothian RPE Policy and RPE Procedure.

This Standard Operating Procedure (SOP) has been written to ensure that those staff:

- Understand how to safely check, assemble and correctly use the EASIAIR 2020 (PAPR) respirator.
- Know how to safely put on (Don) and take off (Doff) the respirator.
- Have information to ensure the correct decontamination of the equipment in line with NHS Lothian Infection and Prevention Control Procedures.

The responsibility for the safe storage, use and maintenance of records of this PAPR rests with the member staff.

**Name:**

**Designation:**

**Ward:**

**Service:**

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## The Procedure:

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### 1. General Information

The PAPR kit circulates air around a loose-fitting hood. The belt mounted blower unit delivers air through a filter, via hose, into the hooded headpiece. The constant supply of filtered air creates positive air pressure inside the headpiece, which prevents external contaminated air from entering the users breathing zone.

The PAPR's are for named personnel use only and will be used on a sessional basis.

The donning and doffing of the PAPR must be undertaken within the "defined areas" of the ward or department.

Cleaning of the PAPR must be undertaken within the "dirty utility" within the ward or department.

#### 1.1 Information, Instruction & Training:

Before using the PAPR the user must view the training video, access the step by step guide to donning and doffing (links below) and read the [manufacturers guidance](#) for reference.

<http://vimeo.com/432824939/71ee81e74b>

A step by step guide to donning and doffing the EASIAIR 2020 – Feb 2021 - awaited from IPCT.

Further information is available on [NHS Lothian intranet Infection Prevention and Control Personal Protective Equipment – EASIAIR 2020 Powered Air Purifying Respirator](#)

\*All training and education must be recorded on the face fit testing (PAPR) Tableau/Dashboard.

## 2. Sessional Use

Sessional use of PAPR is permitted in a COVID-19 cohort (e.g. critical care) where AGP's are being performed outside of a single room accommodation (unit wider airborne precautions). PAPR should be removed when leaving the cohort area.

For single (non-continuous) AGP procedures in patients who are cared for in a single room, PAPR should be removed with all other PPE (including gown, gloves) after the AGP is completed AND fallow time has elapsed OR when leaving the patients isolation room.

A local risk assessment must be undertaken for sessional use in for examples theatres where more frequent changing of PPE/RPE may be required. The risk assessment findings should be supported by the PPE Strategic Group and Partnership.

Sessional use is defined moving between patients, and for a period of time where a healthcare worker is undertaking duties in an environment where there is a potential exposure to COVID-19. A session ends when the healthcare worker leaves the clinical setting or exposure environment.

**The EASIAIR 2020 hoods are single use only and **MUST** be disposed of **AFTER** doffing. A new hood must be selected each time RPE is donned.**

**The PPE and EASIAIR 2020 hoods **MUST** be disposed of in the clinical (orange) waste.**

The following steps should be followed when using the PAPR for each use.

### 2.1 Inspect the Components:

Visually inspect all a parts for damage and or wear and tear. If any parts show signs of damage, replace immediately.

This procedure presumes that the filters are new (if not these should be changed on a monthly cycle), batteries are charged and that all parts are clean and dry.

### 2.2 Assemble

1. Attach a fully charged battery onto the blower unit by sliding it along the guide rails, clicking into place.
2. Remove the filter cover by twisting the cover anti clockwise and lifting away from the blower unit.
3. Place an EASIAIR 2020 filter into the blower unit and re-attach the cover, twisting clockwise to lock.
4. Thread the PVC belt through the loops on the back of the blower unit.
5. Perform airflow check before each use to determine if the kit is operating correctly.

### **3. Donning and Doffing**

The EASIAIR 2020 PAPR should be donned and doffed in conjunction with the appropriate PPE and in line with the step by step guide.

A buddy partner may be required.

This procedure should also be referenced in association with the requirements of the National Infection Prevention and Control Manual.

**The donning and doffing must be undertaken in the “defined areas” within the ward or department.**

**PPE sequence of donning:**

**Step 1 – Fit the RPE (EASIAIR 2020)**

**Step 2 – Fit Gown and**

**Step 3 – Put on Gloves**

**RPE - Donning the EASIAIR 2020 PAPR**

1. Layout the EASIAIR 2020 PAPR Kit.
2. Don the belt mounted blower unit and tighten to fit securely. Slide to your side for easy access.
3. Attach one end of the hose to the blower unit. Push to fit, and twist clockwise to lock.
4. Attach the other end of the hose to the hood. Push to fit, and turn clockwise to lock.
5. Turn the unit on and slide it around to the small of your back.
6. Don the hood. To adjust the headpiece tighten the clasp on the back of the outer hood to fit. The long sleeved gown should be worn over the blower unit and hose.

**PPE sequence of doffing:**

**Step 1 – Remove Gown**

**Step 2 – Remove RPE EASIAIR 2020 and**

**Step 3- Remove Gloves**

**RPE - Doffing the EASIAIR 2020 PAPR**

1. Loosen the clasp on the rear of the headpiece.
2. Remove the hood by the frame from the outside of the hood.
3. Bring the belt mounted blower unit around to your side and turn off.
4. Detach the headpiece from the hose and dispose of cover (if used).
5. Detach hose from the blower unit.
6. Unfasten belt and remove.

## 4. Cleaning and Maintenance

### Before cleaning:

- Doff the PAPR equipment
- Wear the correct PPE (gloves, apron, FRSM)
- Hand cleaning facilities must be available.
- Visually inspect all components for damage and wear and tear.

If any components are cracked, worn or damaged, they should be replaced immediately. If replacements are unavailable then the PAPR should not be used.

Cleaning of the PAPR must be carried out in the ward or department dirty utility.

*Do not soak or submerge the kit during cleaning.*

### Cleaning – Chlorine Solution (ChlorClean)

- The non-disposable parts of the PAPR ensemble must be wiped down with a soft disposable cloth dampened with a solution of ChlorClean in a concentration of 1,000ppm available chlorine. Allow to air dry (this also ensures adequate contact time). Ensure that all surface parts of the equipment are in contact.

The decontamination steps are:

- Detach the hose from the headpiece and dispose of the single use hood via the (clinical) waste stream.
- Wipe down the headpiece Wipe down the belt.
- Wipe down the blower unit along with the hose and filter cover.
- Remove the battery and wipe down the battery and battery cavity.
- Filters cannot be cleaned and must be replaced on monthly cycle.

## **5. Visual checks prior to each use**

Each time the equipment is used a visual safety check must be performed before donning the respirator.

Check all components for signs of damage, scratches or tears e.g.

- Cracks to the blower unit or filter casing.
- Broken belt strap.
- Split hose.
- Torn or split hood.
- Leaking or damaged battery unit.
- Frayed, split or loose cable to the battery charger
- Damaged plug to charger (cracked loose or bent pins)
- Portable appliance testing (PAT) is required this should be arranged via Estates or a Third Party Hard FM provider.
- Perform airflow check before each use to determine if the kit is operating correctly.

## **6. Storage**

Once the PAPR is cleaned store in a safe place (e.g. where clinical equipment or supplies are held) to allow to dry. The PAPR should now be ready for the next user.

### **6.1 Batteries**

To prolong the life of the battery, it is advisable to disconnect from the power supply once fully charged.

Staff should be made aware of where spare batteries are stored.

## **7. Filters**

The filters will require changing on a monthly cycle and a log kept of their use.

This log must be maintained and kept up to date by the user of the PAPR.

## **8. User Responsibilities Summary**

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- Ensuring the safe storage, cleaning and use of the PAPR.
- Completing a safety check before each use to ensure all components are in good condition, with no visible damage (holes, scratches, tears etc.).
- Ensuring any damaged or worn parts are replaced before assembly.
- To perform an air flow check before each use to ensure that the kit is operating as designed.
- Ensure that the battery is fully charged.
- Ensure the battery charger is available for portable appliance testing (PAT.)

## **9. PAPR Unit Identification**

The Service using any PAPR unit must ensure that it is asset labelled/tagged with a unique identification code.

## **10. Occupational Health/Health & Safety**

For staff experiencing dry skin, moisturising the face prior to donning the hood is recommended.

Where hearing instructions is identified as a problem, instructions should be clearly provided.

## **Associated materials/references:**

- NHS Lothian Respiratory Protective Equipment Policy and Procedure.
- NHS Lothian Waste Management Policy
- [COVID-19 Guidance for the remobilisation of services within health and care settings](#)
- NHS Scotland [Scottish Covid-19 Infection Prevention & Control Addendum for Acute Settings](#)

## Appendix 1

### Safety checklist to be completed before each use

Name:

Designation:

Ward/Service:

Date:

**Asset Number:**

Date Commissioned:

Condition	Maintenance Required	Date of Action	Fit for Use	Name and Signature
Cleanliness			Yes/No	
Scratches			Yes/No	
Valve/Diaphragm			Yes/No	
Seal			Yes/No	
Filter Check	Insert date filter first used.	This should be within (1) month of first use of filter.	Yes/No	
Visor/Hood			Yes/No	
Headpiece			Yes/No	
Belt			Yes/No	
Battery capacity			Yes/No	
Airflow Test			Yes/No	
Alarm Test			Yes/No	

**\*Safety checklists will be reviewed monthly by the Health and Safety Department RPE Service Technicians.**