

### Site Applicability

C&W clinical areas prioritised for Elastomeric Half Face Respirator deployment

### Practice Level/Competencies

Basic Skill – All staff assigned to wear Elastomeric Half-Face Respirators (EHFR). Fit testing of the EHFR is required prior to first use and annually thereafter.

### Policy Statement(s)

EHFR are an N95 respirator alternative and will be used as part of the PPE preservation strategy on designated units.

EHFR provide protection for staff person wearing it. It does not protect the patient. Do not use EHFR for any sterile procedure requiring a mask to protect the patient.

Staff members exhibiting any symptoms or who have been instructed to wear a surgical mask due to know exposure to any respiratory pathogens must not use an EHFR.

Use only workplace provided EHFR. Use of personally purchased PPE, including EHFR, is not supported while there is Health Authority provided PPE for use

Fit testing of the EHFR is required by Workplace Health prior to first use and annually thereafter.

A health care provider required to wear a respirator which requires an effective seal with the face for proper functioning must be clean shaven where the respirator seals with the face.

A health care provider must use a dedicated EHFR for the duration of a work shift or until no longer needed.

Health care providers must not share the EHFR during a shift.

A health care provider must disinfect their dedicated EHFR between each task and at the end of shift.

Filters must be discarded if wet/submersed or soiled. Discarded filters must be logged on unit specific discard tracking form.

Health care provider to sign for their EHFR received at the beginning of shift and sign the same EHFR as returned at end of shift. EHFRs are uniquely numbered for tracking.

EHFR and filter inventory will be reconciled daily.

### Equipment & Supplies



- Elastomeric Half-Face Respirators (EHFR)
- HEPA Filters (particulates & Airborne Infection Disease) - 3M 7093 Particulate Filters
- Hospital-grade disinfectant wipes
- Plastic storage bag, bulldog clip and Sharpie pen for labelling


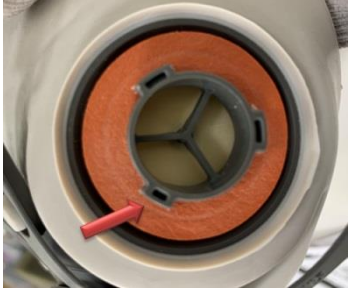


### Procedure

#### EHFR Delivery to Identified Units




STEPS	RATIONALE
1. On the day prior to shift, the designated person from unit emails the quantity and size of EHFRs needed for the next day's or weekend shift to: <a href="mailto:MEDContact@phsa.ca">MEDContact@phsa.ca</a> . The unit will use a template to request and track requests.	Helps with planning ahead for EHFR need and to verify that the sizes needed for next day are on hand.
2. Medical Equipment Depot Porter <b>DELIVERS</b> EHFRs to a central location on designated units.	Porters will deliver the reprocessed EHFRs at the times requested by the designated representative of the identified units.
3. Unit specific distribution of EHFRs a. Refer to unit Standard Work. b. Health care provider is provided one EHFR for the shift and signs a receipt of EHFR and its number. The Health Care Provider is responsible for returning the same EHFR at end of shift.	Each individual unit has a unique distribution protocol. At the beginning of each shift, returned EFHRs will be signed as returned by the healthcare user, and placed in the locked return receptacle.



**EHFR Allocation, Assembly and Storage**

STEPS	RATIONALE
<p>1. Health care provider will <b>COLLECT</b>:</p> <ul style="list-style-type: none"> <li>a. A clean EHFR, of appropriate size</li> </ul>  <ul style="list-style-type: none"> <li>b. A pair of filters from unit-specific storage area.</li> <li>c. <b>RETAIN</b> plastic storage bag for storage of EHFR when not in use during shift.</li> </ul>	<p>Clean EHFRs will be stored in areas specific to individual programs. Health care providers must wear the size of EHFR that they have been fit-tested to (S, M, L – marked on each mask at the nosepiece). Healthcare providers must use the dedicated EHFR for the duration of the work shift to help preserve PPE.</p> <p>Filters are re-used and stored as pairs, in plastic bags, in unit specific storage areas. Filters are reusable provided appropriate cleaning and disinfecting between shifts.</p> <p>A plastic storage bag is required to house the EHFR for the duration of the work shift when it is not being used.</p>
<p>2. <b>PERFORM</b> hand hygiene and unwrap the EHFR for inspection.</p>	<p>Inspection of the EHFR ensures the health care provider has a respirator that offers protection against airborne contaminants.</p>
<p>3. <b>VISUALLY INSPECT</b> each part of the EHFR to identify potential defects as follows:</p> <ul style="list-style-type: none"> <li>a. <b>FACEPIECE</b>: Cracks, deformities, tears, dirt, and any modifications.</li> <li>b. <b>STRAPS</b>: straps must be elastic and have points of attachment to the face piece; no modifications are allowed.</li> <li>c. <b>INHALATION AND EXHALATION VALVES</b>: Cracks or tears, distortion, foreign materials (e.g., hair, lint, dirt). Make sure valves lay flat on valve assembly. Assure that exhalation valve cover is in place and not cracked or broken.</li> <li>d. <b>FILTERS/FILTER HOLDERS, O-RINGS/THREADS</b>: Cracks or other defects.</li> </ul> <p><b>IF A DEFECT IS IDENTIFIED</b> with any part of the EHFR on inspection, <b>LABEL</b> with 'Do Not Use' sticker and identify defect</p>  <ul style="list-style-type: none"> <li>a) <b>PLACE</b> EHFR in a plastic bag with defective parts</li> <li>b) <b>COMPLETE</b> a PSLS</li> <li>c) <b>RETURN to MDR</b> per standard procedure. <b>DO NOT</b> return defective EHFR via pneumatic tube.</li> <li>d) If assigned EFHR is found to be defective, an emergency request for a replacement must be made to <a href="mailto:MED&gt;Contact@phsa.ca">MED Contact@phsa.ca</a> or local 1092 by an authorized person.</li> </ul>	<p>Inspecting the EHFR prior to use ensures health care provider safety and timely identification of defective equipment.</p> <p><a href="#">Refer to 3M Half Facepiece Respirator 6000 Series</a> product insert for part details and visual aids.</p> <p>Ensures that defective equipment is identified, repaired and that trends in defects are documented.</p> <p>Label must be inside the plastic bag so that it stays with the defective EHFR.</p> <p>There will not be a stockpile of EHFRs; therefore any defective equipment must be replaced as it is deemed defective.</p>

<p>4. When EHFR has been inspected and confirmed for use:</p> <ol style="list-style-type: none"> <li><b>CHECK</b> the filters for expiry date; if there is no date OR if expired, return the filter to MED for replacement, and sign out a different filter for your shift.</li> <li>If expiry date is faded or if the date sticker has fallen off, <b>RETURN</b> the filter to MED for replacement, and sign out a different filter for your shift.</li> </ol>	<p>Filters expire 6 months from date of opening. Filters in original packaging are labelled with expiry date.</p>
<p>5. <b>ASSEMBLE</b> the EHFR by placing filters in the EHFR</p> <ol style="list-style-type: none"> <li><b>ALIGN</b> smallest opening on back of filter, with smallest notch on EHFR</li> </ol> <div style="display: flex; justify-content: space-around;">   </div> <p><i>Left-showing back of filter with arrow indicating smallest of three openings. Right-showing side of EHFR mask with arrow indicating smallest notch.</i></p> <ol style="list-style-type: none"> <li><b>FIT</b> filter into opening—this should happen with ease.</li> <li>Gently <b>TWIST</b> the filter to lock in place. The cartridge will be level with the bottom of the respirator, in final position.</li> </ol> <p><i>Final position of filter when properly installed</i></p> <div style="display: flex; justify-content: space-around;">   </div> <p style="display: flex; justify-content: space-around;"><b>Correct</b>                      <b>Incorrect</b></p>	<p>Aligning the filters accurately to the side of the EHFR is necessary in order to twist and lock the filter in place.</p> <p>If the filter does not fit onto the mask with ease, the notch may not be aligned with the opening. Reposition and try again.</p> <p>Do not use force when fitting and/or twisting the filter as this can damage both the EHFR and filter.</p>
<p>8. <b>LABEL</b> plastic bag with health care provider name using masking tape or clear tape, or a removable Sharpie pen directly on the bag.</p>	<p>EHFRs are placed in labelled plastic bags and kept with the health care provider, to allow health care providers to keep their designated EHFR secure, and to easily identifiable.</p>
<p>9. <b>CLIP</b> labelled EHFR onto uniform or pocket for storage.</p>	<p>EHFR kept with health care provider during shift to keep it secure and available immediately for patient care.</p>

**Donning the EHFR**

STEPS	RATIONALE
<p>1. <b>PERFORM</b> Hand Hygiene and <b>DON/PUT ON</b> gown.</p>	<p>For ordering of PPE donning, refer to <a href="#">Donning (Putting on) Personal Protective Equipment: Droplet &amp; Contact and Airborne Precautions (Includes Aerosol-Generating Medical Procedures)</a></p> <p>Routine Practices for Infection Prevention and Control require proper hand hygiene before and after touching any patient and/or their environment. Hand hygiene is one of the most effective measures to prevent the spread of infection.</p> <p>Wearing a long sleeved, water resistant gown protects forearms and clothing.</p>
<p><b>OPTIONAL STEP for staff with dermatologic sensitivity:</b></p> <p>2. <b>WET</b> a paper towel and wipe down the exterior of the EHFR where it seals with face;</p> <p>3. <b>DRY</b> with a dry paper towel</p> <p>4.</p>	<p>This removes residue from hospital grade wipes that may cause dermatologic sensitivity.</p>
<p>5. <b>PLACE</b> the respirator over your nose and mouth with bottom (neck) straps unfastened.</p> 	<p>Note: The filters in the visual steps are not the version used at BC Children's Hospital and BC Women's Hospital. The photos depict perforated casings. The 3MP100 used have enclosed casings.</p>
<p>6. <b>PULL</b> the top strap over your head, placing the head cradle on the crown of your head.</p> 	
<p>7. <b>HOOK</b> the bottom straps together behind your neck.</p> 	

<p>8. <b>ADJUST</b> strap tension to achieve a secure fit.</p> 	
<p>9. <b>PERFORM</b> a positive and negative seal check and adjust EHFR as necessary.</p>  <div style="background-color: #e6f2ff; padding: 5px;"> <p><b>Using Hard Case Particulate Filters</b>            Squeeze filter covers with hands toward facepiece to restrict airflow. Be careful not to disturb the position of the respirator. <i>Inhale gently.</i> The facepiece should collapse slightly. If air leaks between the face and the facepiece, reposition it and adjust the straps for a tighter seal.*</p> </div>	<p>EHFR failure is related to poor fit and leakage at face seal. Seal check must be performed every time an EHFR is used and after any adjustment.</p> <p>Refer to <a href="#">Appendix A Seal Check Procedures</a> to review the detailed positive and negative seal check procedure.</p>
<p>10. <b>DON/PUT ON</b> remaining PPE (eye protection then gloves) and <b>ENTER</b> patient room/area.</p>	

**Doffing the EHFR**

STEPS	RATIONALE
<p>1. <b>BEFORE</b> exiting the patient room:            a. <b>REMOVE</b> gloves and gown            b. <b>PERFORM</b> hand hygiene</p>	<p>Routine Practices for Infection Prevention and Control require proper hand hygiene before and after touching any patient and/or their environment. Hand hygiene is one of the most effective measures to prevent the spread of infection.</p> <p>For order of PPE donning, refer to <a href="#">Donning (Putting on) Personal Protective Equipment: Droplet &amp; Contact and Airborne Precautions (Includes Aerosol-Generating Medical Procedures)</a></p>
<p>2. <b>EXIT</b> patient room to hallway or anteroom and <b>PERFORM</b> hand hygiene</p>	
<p>3. <b>DOFF/TAKE OFF</b> eye protection and <b>DISPOSE</b> of or <b>DISINFECT</b> per <a href="#">Standard Work: Goggle Cleaning for Re-Use</a></p>	<p>Refer to current policies and procedures on ePOPS, including:  <a href="#">COVID -19 Application of PPE Emergency Prioritization Framework</a>  <a href="#">COVID-19: Emergency Prioritization in a Pandemic Personal Protective Equipment (PPE) Allocation Framework</a></p>
<p>4. <b>PERFORM</b> hand hygiene and <b>DOFF/TAKE OFF</b> EHFR:            a. <b>BEND</b> forward slightly            b. Using both hands, <b>DETACH</b> the straps behind the neck            c. Using both hands again, <b>EXHALE and REMOVE</b> the EHFR using the top straps/head cradle</p>	<p><b>Hand hygiene is required between removing each item of PPE.</b>            Bending forward while doffing helps prevent contaminated straps from touching body or clothing.</p> <p>Straps are used to handle the EHFR to avoid staff contamination.</p>
<p>5. <b>PERFORM</b> Hand Hygiene</p>	

**EHFR Disinfection Between Tasks/Patient Care Activities**

STEPS	RATIONALE
<p>1. <b>COMPLETE POINT OF CARE RISK ASSESSMENT</b> to determine if respirator has been contaminated to guide when EHFR requires disinfection</p> <p>2. <b>PERFORM</b> hand hygiene and <b>DON/PUT ON</b> clean gloves</p> <p>a. <b>WIPE</b> interior and exterior of respirator using hospital grade disinfectant wipe with contact time of 3 minutes, including all plastic components of the EHFR (e.g., the plastic portion of the head cradle straps).</p> <p>b. <b>LET EHFR STAND to air-dry for 10 minutes before placing in storage bag.</b></p> <p>c. <b>PLACE</b> respirator in personal plastic storage bag once it is visibly dry.</p> <p>d. <b>CLIP</b> storage bag containing clean, dry EHFR to uniform or pocket and store between use.</p>	<p>Refer to: <a href="#">COVID-19: PPE use –Application of PPE Emergency Prioritization Policy</a></p> <p><b>Disinfection between patients protects against transmission.</b></p> <p>Filters do not need to be removed for disinfection between patient care tasks/activities; filters are only removed for disinfection at the end of shift before being sent for medical device reprocessing. Fabric straps cannot be disinfected during shift for use by same staff member; fabric straps are disinfected by MDR for use in between staff members at end of shift.</p> <p><b>EHFR must be completely dry before placing into storage bag.</b></p> <p>Refer to: Guideline: Use, Cleaning, Maintenance and Storage of Reusable Elastomeric Respirators for additional detailed cleaning instructions.</p>
<p>3. <b>DOFF/TAKE OFF</b> gloves</p>	
<p>4. <b>PERFORM</b> hand hygiene</p>	

**EHFR end of shift process**

STEPS	RATIONALE
<p>1. <b>DON</b> clean gloves</p>	<p>Refer to: Guideline: Use, Cleaning, Maintenance and Storage of Reusable Elastomeric Respirators for additional detailed cleaning instructions</p>
<p>2. <b>REMOVE filters and disinfect:</b></p> <p>a. <b>WIPE</b> all sides of filters using hospital grade disinfectant with contact time of 3 minutes</p> <p>b. <b>PLACE</b> on clean surface to air dry</p> <p><b>When filters are VISIBLY DRY:</b></p> <p>c. <b>PLACE</b> filters in a clean clear plastic bag, and store in unit-specific storage area.</p> <p>3. <b>SIGN</b> the 'filter returned' sheet and document filter number.</p>	<p>Filters are removed and disinfected at the end of shift to reduce contamination as much as possible.</p> <p>If a filter becomes wet/submersed or soiled – DISCARD. Discarded filters must be logged on unit specific discard tracking form.</p> <p>Filters are numbered, tracked and accounted for at the end of each shift, reducing the risk of them being lost.</p>
<p>4. <b>Disinfect EHFR</b> for reprocessing</p> <p>a. <b>WIPE</b> interior and exterior of respirator using hospital grade disinfectant with contact time of 3 minutes</p> <p>b. <b>PLACE</b> on a clean surface to dry</p> <p><b>When EHFR is VISIBLY DRY:</b></p> <p>c. <b>SIGN</b> the 'EHFR returned' sheet with healthcare worker's name and the EHFR number.</p> <p>d. <b>PLACE</b> EHFR in plastic bag and follow individual department procedures: return EHFR to manager, and/or place EHFR in MDRD-yellow return receptacle in designated area, either in clean storage or in soiled return elevator.</p>	<p>Brightly coloured, tamper-proof bins are used to securely store used EFHR until it is ready to be picked up by Medical Equipment Depot, who will move used EHFRs to MDRD for reprocessing.</p> <p>Recording EHFR mask number and healthcare staff signature will be used to track and audit EHFR use.</p> <p>EHFRs must be secured until Medical Equipment Depot picks them up for reprocessing.</p>

5. <b>DOFF/TAKE OFF</b> gloves and <b>PERFORM</b> hand hygiene	
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**Return of EHFR for Medical Device Reprocessing**

STEPS	RATIONALE
1. Unit Manager <b>PLACES</b> signed 'returned' EHFR tracking sheet into plastic bag and <b>PLACES</b> bag into yellow storage container with soiled EHFRs.	Numbered EHFRs are tracked back to MDRD for reconciliation before reprocessing.
2. Medical Equipment Depot Porter <b>RETRIEVES</b> clear totes containing used EHFRs by unlocking the soiled storage bin, removing the clear tote, replacing it with an empty clean tote and re-locking the bin. Porter takes clear totes with used EHFRs from the designated storage room and <b>RETURNS</b> to Medical Device Reprocessing.	Medical Equipment Depot (MED) Porter retrieves materials for reprocessing on a standard schedule.
3. Medical Device Reprocessing department a. <b>UNPACKS</b> soiled EHFR b. <b>COUNTS</b> the number received, and compares to the returned EHFR packing list; c. <b>LOGS</b> the unit from which EHFR were retrieved d. <b>REPROCESSES</b> per MDR standard procedures e. <b>WIPES</b> the clear totes	EHFRs are tracked and reconciled at the end of each shift to ensure all EHFRs are returned and accounted for daily.
4. <b>CLEAN</b> EHFR are placed in unit labelled grey totes and picked up by MED for storage.	MED stores clean EHFRs until request is received from designated unit representative indicating the number and sizes OF EHFRs required for next-day shift.  MED stores EHFRs for emergency requests outside regular shifts; requests come from pre-authorized requestor.
5. MED team <b>DELIVERS</b> requested number and sizes of EHFRs to the unit at the time specified the next day. Authorized person signs to receive EHFRs.	Secure delivery of EHFRs.

**Related Documents:**

- [COVID -19 Application of PPE Emergency Prioritization Framework](#)
- [COVID-19: Emergency Prioritization in a Pandemic Personal Protective Equipment \(PPE\) Allocation Framework](#)
- [COVID-19: PPE use –Application of PPE Emergency Prioritization Policy](#)
- [Donning \(Putting on\) Personal Protective Equipment: Droplet & Contact and Airborne Precautions \(Includes Aerosol-Generating Medical Procedures\)](#)
- [Doffing \(Taking Off\) Personal Protective Equipment: Droplet & Contact And Airborne Precautions \(Includes Aerosol-Generating Medical Procedures\)](#)
- [Standard Work: Reprocessing of Single-Use \(Disposable\) Eye Protection and/or Reusable Eye Protection \(Goggles or Face Shield\)](#)

**References**

- 3M Half Facepiece Respirator 6000 Series. Accessed March 30, 2020. [https://www.3m.com/3M/en\\_US/company-us/all-3m-products/~/All-3M-Products/Personal-Protective-Equipment/Reusable-Respirators/Safety/Worker-Health-Safety/Half-Facepiece-Respirators/?N=5002385+8709322+8711017+8711405+8720539+8720550+8720785+8726639+3294857497&rt=r3](https://www.3m.com/3M/en_US/company-us/all-3m-products/~/All-3M-Products/Personal-Protective-Equipment/Reusable-Respirators/Safety/Worker-Health-Safety/Half-Facepiece-Respirators/?N=5002385+8709322+8711017+8711405+8720539+8720550+8720785+8726639+3294857497&rt=r3)
- 3M™ Particulate Filter 7093, P100. March 2009.
- 3M™ Technical Bulletin. March 2020. Cleaning and Disinfecting 3M Reusable Elastomeric Half and Full Facepiece Respirators following Potential Exposure to Coronaviruses.

Hawes Clever, L; Rogers, BMR; Yost, OC; Liverman CT. Committee on the Use of Elastomeric Respirators in Health Care. 2019. Consensus Study Report: Reusable Elastomeric Respirators in Health Care. Considerations for Routine and Surge Use.

Provincial Infection Control Network of BC (PICNET). November 19, 2009. Recommendations for the Use of Reusable Half-Facepiece Elastomeric Respirators in Healthcare Settings

Standard Work: Reprocessing of Single-Use (Disposable) Eye Protection and/or Reusable Eye Protection (Goggles or Face Shield) <http://policyandorders.cw.bc.ca/resource-gallery/Documents/Infection%20Control/C-0506-16-60578%20Standard%20Work%20Reprocessing%20of%20Single-Use%20Eye%20Protection%20and%20or%20Reusable%20Eye%20Protection.pdf>

Wear it Right. Accessed March 30, 2020. [https://www.3m.com/3M/en\\_US/company-us/all-3m-products/~/3M-Half-Facepiece-Reusable-Respirator-6100-07024-AAD-Small-24-EA-Case/?N=5002385+8709322+8711405+3294780296&preselect=8720539+8720550+8720785+8726639&rt=rud](https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Half-Facepiece-Reusable-Respirator-6100-07024-AAD-Small-24-EA-Case/?N=5002385+8709322+8711405+3294780296&preselect=8720539+8720550+8720785+8726639&rt=rud)

WorkSafe BC OHS Regulation Section 8.39 (2): Face Seal

### Definitions

**'Elastomeric half-face respirators' (EHFR)** – are tight fitting reusable respirators (full facepiece that have a flexible, rubber-like face piece with either permanent or removable filters or cartridges or both. They remove contaminants from air by passing it through the filter medium. Depending on which filter medium is used, reusable respirators provide protection from particulates/bioaerosols (e.g. Tuberculosis, Varicella or Zoster, Cytotoxic drugs, etc.) vapors/gases (e.g. Formaldehyde, Xylene) or combination thereof (e.g. laboratory chemicals).

### Appendix

- [Appendix A: Seal Check Procedures](#)

### Version History

DATE	DOCUMENT NUMBER and TITLE	ACTION TAKEN
26-Mar-2020	C-0506-12-60597 Elastomeric Half Face Respirator Use	Developed by CW COVID Response Working Group; Approved by Professional Practice Director
12-May-2020	“	Updated; Approved by Professional Practice Director
22-May-2020	“	Updated; Approved by Professional Practice Director

### Disclaimer

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## Appendix A – Seal Check Procedures

User seal checks consist of both positive and negative pressure checks as described below.

### A. Positive Pressure Check

1. Put on the respirator and any other associated personal protective equipment. Tighten the straps until the respirator feels snug but comfortable. Wear the respirator for a few minutes so that it will warm up and conform to your face better.
2. Close off the exhaust valve opening by covering it with the palm of your hand and breathe out slightly to force air into the facepiece. Hold for 10 seconds.
3. If you have a good seal, the facepiece should bulge out and stay out. No air should leak out of the facepiece past the sides, top or bottom.
4. If the air does leak out, check the inhalation valves and try repositioning the respirator on your face and adjusting the head straps.
5. If it is not possible to get a good fit, do not use the respirator and do not perform the task for which the respirator is required. Inform your supervisor/manager and contact Workplace Health.

### B. Negative Pressure Check

1. Put on the respirator and any other associated personal protective equipment. Tighten the straps until the respirator feels snug but comfortable. Wear the respirator for a few minutes so that it will warm up and conform to your face better.
2. Close off the inlet opening of the cartridges or filters by covering them gently with the palms of your hands (In some cases you may have to remove the cartridges so you can cover the inlet valves.).
3. Breathe in slightly to create a vacuum, hold for 10 seconds.
4. If you have a good seal, the facepiece should collapse slightly against your face and stay collapsed. No air should leak into the facepiece past the sides, top or bottom.
5. If the air does leak out, check the exhalation valve(s) and try repositioning the respirator on your face and adjusting the head straps.
6. If it is not possible to get a good fit, do not use the respirator and do not perform the task for which the respirator is required. Inform your supervisor/manager and contact Workplace Health.