RESPIRATORY PROTECTIVE EQUIPMENT (RPE)

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WHAT IS RPE?

- Healthcare may expose staff to harmful substances contaminating the air in the form of infectious agents, dust, mist, gas or fume. For example:
  - Flu
  - Using a liquid containing volatile solvents
  - Reconstituting chemotherapy
- RPE is designed to protect the wearer from these hazards
- We’ll focus on infectious agents
- Staff require RPE that is adequate and suitable to ensure the wearer is protected. This means:
  - **Adequate** – It is right for the hazard and reduces exposure to the level required to protect the wearer’s health
  - **Suitable** – It is right for the wearer, task and environment, such that the wearer can work freely and without additional risks due to the RPE
RPE in Healthcare

- Generally RPE can be classified into two basic categories:
  1. Shield
     - Offers physical protection from blood/fluid/chemicals
  2. Respirators which come in three levels of protection:
     - FFP1 – allows 22% of air to leak into the mask and has a 78% filtering efficiency
     - FFP2 – allows 8% of air to leak into the mask and has a 92% filtering efficiency
     - FFP3 – allows 2% of air to leak into the mask and has a 98% filtering efficiency

- They all filter to 0.3 microns
KNOW YOUR MASK
VALVE OR NO VALVE
WHAT YOU NEED TO KNOW

- Any masks used as respirators need to meet British Standards: EN149:2001
- BEING MORE EXPENSIVE DOES NOT MEAN A MASK IS BETTER
- This needs to be clearly printed on the box and the mask
- They need to be stored in a dry clean environment
- They will have an expiry date:
  - After this then the user uses them at their own risk
LEGAL RESPONSIBILITIES

- If an employer expects staff to be exposed to risk they are required by law to provide appropriate RPE

- The employer is obliged to provide appropriate training:
  - Fit testing
Fit Testing

- Fit testing does **not** need to be provided on a regular basis by law.
- The law requires that staff are fit tested and understand the following:
  - Which mask they have been fit tested for
  - When to wear a respirator
  - How to safely don the respirator
  - How to undertake a fit check
  - How to safely doff the respirator
**FIT TESTING (2)**

- When should fit testing be repeated?
  - When a new mask is selected
  - When the mask is changed
  - If staff gain weight
  - If staff lose weight
  - If staff have surgery to change the shape of their face
  - Staff may ask for re-training if they use RPE infrequently

- Male staff (generally) need to be clean shaven

- The safe use of RPE is the responsibility of the employee
WHAT INFECTIOUS AGENTS REQUIRE RPE

- This is not an exhaustive list
  - Seasonal flu (AGP*)
  - Pandemic flu (AGP)
  - TB (AGP)
  - MDR-TB (multi-drug resistant TB)
  - SARS (severe acute respiratory syndrome)
  - MERS-CoV (Middle East respiratory syndrome coronavirus)
  - Meningococcal meningitis
  - VHF (viral haemorrhagic fever)
- If you’re not sure – seek advice (PHE/microbiologist)

* Aerosol generating procedures
TRANSMISSION RISK

- Most respiratory infections are still spread by direct or indirect contact
  - Clean hands
  - Clean environment
- Good standard precautions are still vital
Transmission Risk (2)

- Use surgical facemasks when entering the room of a patient with a respiratory infection*
- Use RPE when undertaking an AGP

Aerosol Generating Procedures:
- Positive pressure ventilation (BiPAP and CPAP)
- Endotracheal intubation
- Airway suction
- High frequency oscillatory ventilation
- Tracheostomy
- Chest physiotherapy
- Sputum induction
- Bronchoscopy
- *Nebuliser treatment

* Not in the national guidance but worth considering as the nebuliser therapy is intended to improve respiration and may induce coughing in the patient which is a risk to staff