

For Attention and Action by:
Chief Executive of each HSS Trust
General Manager/Chief Executive of each HSS Board
Chief Executive of each Agency



HEALTH ESTATES
ESTATE POLICY

**NORTHERN
IRELAND
ADVERSE
INCIDENT
CENTRE**

TITLE:
**INAPPROPRIATE USE OF BREATHING FILTERS,
HMEs AND HMEFs IN BREATHING CIRCUITS: RISK
OF INADEQUATE VENTILATION**

MANUFACTURER/SUPPLIER

Various

PROBLEM

There is a risk of ineffective ventilation to the patient if breathing filters, heat and moisture exchangers (HMEs) or heat and moisture exchanging filters (HMEFs) incorporated into breathing circuits become occluded due to inappropriate use.

DISTRIBUTION

This notice should be brought to the attention of all who need to know or be aware of it, including those listed below, in accordance with local procedures. This will include:

- Liaison Officers
- Risk Managers
- Health & Safety Officers/Advisors
- Directors of Anaesthetics
- Medical Directors
- Nurse Directors
- Clinical Dental Directors
- Theatre Managers
- Intensive Therapy Units
- Consultants in Communicable Disease Control
- Special Care Baby Units
- Maternity Departments
- All wards
- Accident & Emergency Departments
- General Medical Practitioners
- General Dental Practitioners
- Social Care Staff
- Community Care Staff
- Residential and Care Homes
- Hospices
- Private Clinics

Boards/Trusts should ensure that if appropriate, this information is passed to all persons having the responsibility for the premises registered under "THE REGISTERED HOMES (NI) ORDER 1992.

ACTION

Ensure that filters, HMEs and HMEFs are correctly positioned in the breathing system by appropriately trained staff following the manufacturer's instructions for use. Staff should be aware that occlusion of the filter, HME or HMEF increases the resistance to airflow, resulting in increased airway pressures. Airway pressures should be monitored during use and the filter, HME or HMEF changed as necessary.

Staff should check the manufacturer's instructions for use:

- before any drugs are to be administered via the breathing system to ensure that nebulisation is not contra-indicated. Also check with the manufacturer of the drug that it is suitable for nebulisation. Ensure that the filter, HME or HMEF is correctly positioned and closely monitor airway pressures during and after nebulisation.
- before using active humidification (i.e. heated water bath humidifiers)
- for other contra-indications, such as use with patients who exhibit excessive respiratory tract secretions

**SAFETY
NOTICE**

BACKGROUND

The Medical Devices Agency (MDA) has received several reports of increased resistance to airflow of breathing filters, HMEs and HMEFs resulting in ineffective patient ventilation. One incident resulted in a patient developing a pneumothorax.

Reports indicate that the manufacturers' instructions for use are not being followed and that the devices are being used when contra-indicated. These have included use on patients with excessive respiratory tract secretions, incorrectly positioned devices and lack of monitoring of resistance to airflow during use, all of which have resulted in ineffective patient ventilation.

ENQUIRIES

Enquires to the NIAIC should quote the reference number SN(NI) 2002/36 and be addressed to:

Northern Ireland Adverse Incident Centre (NIAIC)
Health Estates
Estate Policy Directorate
Stoney Road
Dundonald
Belfast BT16 1US
Marked for the attention of Mr Brian Godfrey

Tel: 02890 523714
Fax: 02890 523900
Email: brian.godfrey@dhsspsni.gov.uk



Brian Godfrey
NIAIC Manager



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HOW TO REPORT ADVERSE INCIDENTS

Adverse Incidents relating to medical devices, non-medical equipment, plant and buildings should be reported to NIAIC as soon as possible. Advice on how to report is given in Safety Notice SN (NI) 2002/01. If you are in doubt about how to report incidents, please speak to your liaison officer or contact NIAIC using the telephone number provided. Adverse Incident reporting forms and an on-line reporting facility are available on the NIAIC website at www.dhsspsni.gov.uk/niaic

*Heath Estates is an Executive Agency of the Department of Health, Social Services and Public Safety
Áisíneacht Feidhmeannach don Roinn Sláinte. Serbhísí Sóisialta agus Sábháilteacht Phoiblí*