

## Infection Prevention and Control Assurance - Standard Operating Procedure 32 (IPC SOP 32)

### Reducing Risks Of Infection Associated With The Use Of Electric Fans In Patient Areas

#### **Why** we have a procedure?

The Health and Social Care Act 2008: Code of Practice for the NHS for the Prevention and Control of Healthcare Associated Infections (revised January 2015) stipulates that NHS bodies must, in relation to preventing and controlling the risk of Health Care Associated Infections (HCAI), have in place appropriate core policies/procedures. Implementation of this procedure will contribute to the achievement and compliance with the Act.

The infection prevention and control measures that are outlined in this procedure are designed to interrupt the routes of transmission of infection. The correct application of infection prevention and control procedures should be applied in conjunction with the Standard Infection Prevention and Control Precautions which should be carried out at all times.

#### **What** overarching policy the procedure links to?

- This procedure is supported by the Infection Prevention and Control Assurance Policy
- Estates & Facilities Alert (EFA/2019/001) issued on 11<sup>th</sup> January 2019 – Portable fans in health care facilities: risk of cross infection.

#### **Which** services of the trust does this apply to? **Where** is it in operation?

Group	Inpatients	Community	Locations
Mental Health Services	✓	✓	all
Learning Disabilities Services	✓	✓	all
Children and Young People Services	x	✓	all

#### **Who** does the procedure apply to?

All staff involved in the direct care/contact with patients who may require the use of an electric fan whilst on Trust premises.

#### **When** should the procedure be applied?

In all cases where a patient requires the use of an electric fan e.g. to reduce a high temperature/fever or during episodes of heatwave etc.

## ***How to carry out this procedure***

### **Additional Information/ Associated Documents**

- Infection Prevention and Control Assurance Policy
- Infection Prevention and Control Assurance - Standard Operating Procedure 1 (**IPC SOP 1**) - Standard Infection Control Precautions
- Infection Prevention & Control Assurance - Standard Operating Procedure 2 (**IPC SOP 2**) – Transmission Based Precautions
- Infection Prevention & Control Assurance - Standard Operating Procedure 6 (**IPC SOP 6**) – Isolation, care of patients in isolation due to infection or disease
- Infection Prevention and Control Assurance - Standard Operating Procedure 7 (**IPC SOP 7**) - Decontamination

### **Aims**

1. To ensure compliance with the advice given in the Estates & Facilities Alert regarding the use of portable fans in health and social care facilities (EFA/2019/001 11<sup>th</sup> January 2019) see Appendix 1
2. This procedure details the actions to be followed within the Black Country Partnership NHS Foundation Trust for instances which require the use of a portable electric fan in the clinical area by a patient.

### **Definitions**

<b>Portable Electric fans</b>	<ul style="list-style-type: none"><li>• A portable electric fan is a cord-connected appliance that is easily moved by hand from place to place (i.e. not permanently affixed to the wall or ceiling), a powered machine used to create movement of air. Portable fans consist of box fans, window box fans, dual window fans, window fans, desk/table fans, pedestal/floor fans, clip-on fans, and hassock fans. (Ceiling fans are not recommended for use in healthcare)</li><li>• Portable fans come in all shapes and sizes from tiny battery powered fan that can be held in the hand, to large box fans meant to ventilate a whole room</li><li>• While fans are often used to cool people, they do not actually cool air. During periods of very high heat and humidity governments actually advise against the use of fans.</li></ul>
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### **Increased Risk of Transmission of Infection**

- Fans are considered to be non-critical reusable equipment. Through indirect transmission, microorganisms from such equipment may spread to patients and lead to infection.
- Environmental contamination due to MRSA shedding may be increased with fan use.
- Norovirus may be spread through droplets and aerosols while a patient is vomiting, fan use may facilitate spread.
- Activities that contribute to microorganism dispersal may contribute to aerosolisation and spread of *Clostridium difficile*, fan use may lead to such dispersal.
- Fans require regular planned cleaning and disinfection as per the manufacturers guidelines.

### **Portable Electric Fans – Safe Use**

## Principles/Guidelines

Infection Prevention & Control (IPC) recommendations for use of fans in patient care areas:

- Adjust heating, ventilation and air-conditioning system in order to achieve comfortable humidity, temperature and fresh air, therefore avoiding the need for a fan.
- Fans should have blades that are accessible for cleaning. Bladeless fans are not recommended.
- Healthcare staff should perform an infection control risk assessment before using fans in patient rooms on a case-by-case basis.
- Fans should only be used as a temporary measure and not on a year round basis (unless there is an exceptional circumstance and is approved by the IPC Team).
- Fans should only be used at the lowest speed for less disruption of dust and debris.
- Consult the IPC Team for use of fans in food preparation and food service areas.
- Consult the IPC Team for use of fans for patients on additional isolation precautions.

### Portable electric fans should NOT be used in the following situations:

- Do not use in areas where immunocompromised patients receive care (Fungal spores in dust have been shown to cause serious infections in immunocompromised patients).
- Do not use in rooms where a patient is being cared for using **airborne precautions** (see *IPC SOP 2: Transmission Based Precautions*). Fans may alter the directed airflow pattern in airborne infection isolation and Protective Isolation rooms and may result in microorganism transmission and possible infection.
- Do not use in rooms where a patient is being cared for using **droplet or contact precautions**, e.g. Clostridium difficile, MRSA, Norovirus etc.
- Do not use in areas where sterile supplies are stored.

### Prior to commencing use of a portable electric fan, confirm:

- Only use the fan if it has a valid (in-date) PAT testing sticker and the plug and cord show no sign of damage. If the fan has no PAT sticker a request should be logged via the Estates & Facilities Helpdesk for the fan to be PAT tested and must not be used until this is completed.
- Alternative cooling methods have been attempted with no success.
- The patient is in a non-restricted use location (see above).
- The use of a fan is determined to be of benefit to the patient's clinical condition or comfort.
- A risk assessment has been performed (see Appendix 4).

### If a portable fan is sanctioned for use the following tips may be used:

- Use of fans is a requirement included in the care plan of specific patients.
- Ensure the fan is clean & ready for use, no visible dust, dirt or debris.
- Position the fan so airflow is directed at the patient.
- Position the fan on a clean surface at the patient's bed level or higher. Placement of table fans on floors is not acceptable: fans must be positioned such that airflow is level with the surface of the bed.
- Ensure the airflow is into the patient's bed space and not across patient to a roommate or corridor. The direction of flow should be upwards towards the ceiling, avoiding smoke detectors.

- Ensure airflow is not blowing directly on any wounds or wound dressing or other invasive device or directly into the patients face.
- In non-patient areas, such as staff rooms, offices, ensure airflow is directed within the area.

**Turn the fan off before the following:**

- When a sterile field or aseptic procedure is required e.g. giving an injection, IV cannulation, venepuncture/phlebotomy, catheterisation, wound dressing change etc.
- Any procedure that may result in sprays or splashes of body fluids.

**Cleaning**

- Determine who will be responsible for cleaning and disinfecting the fan – responsible person is the Ward Manager/Nurse-in-Charge to assure that this has been undertaken and add to the area's equipment cleaning schedule.
- Follow the manufacturer's instructions to disassemble and thoroughly clean, disinfect and maintain the fan on a regular planned basis and whenever it becomes visibly soiled.
- A written schedule that documents when the device is cleaned and by whom is recommended.
- Perform hand hygiene before & after handling a fan.

**Fans owned by patients or families:**

- May be used when the patient/family is aware of, and in agreement with, their responsibility to ensure cleaning is performed on a regular schedule (frequency of cleaning to be determined in discussion with the unit staff).
- Should be disassembled and thoroughly cleaned by the family according to manufacturer's recommendations.
- Check with Estates & Facilities Helpdesk if the patient's own equipment requires PAT testing prior to use.

***Where do I go for further advice or information?***

- Infection Prevention and Control Team
- Estates & Facilities Managers
- Your Service Manager, Matron, General Manager, Head of Nursing, Group Director
- Your Group Governance Staff

**Training**

Staff may receive training in relation to this procedure, where it is identified in their appraisal as part of the specific development needs for their role and responsibilities.

Please refer to the Trust's Mandatory and Risk Management Training Needs Analysis for further details on training requirements, target audiences and update frequencies

**Monitoring / Review of this Procedure**

In the event of planned change in the process(es) described within this document or an incident involving the described process(es) within the review cycle, this SOP will be reviewed and revised as necessary to maintain its accuracy and effectiveness.

**Equality Impact Assessment**

Please refer to overarching policy

**Data Protection Act and Freedom of Information Act**  
Please refer to overarching policy

**Appendix 1**

# Estates and Facilities Alert

Reference: EFA/2019/001      Issued: 11 January 2019      Review Date: 10 January 2025



## Portable fans in health and social care facilities: risk of cross infection

### Summary

Portable fans used in clinical areas have been linked to cross infection in health and social care facilities. Each use and reuse should be clinically risk assessed. Local procurement, cleaning, decontamination and maintenance policies must be produced and kept under review.

### Action

1. All portable fans used in clinical areas should be clinically risk assessed for each use and reuse. The risk assessment should address the following:
  - a. Portable fans are not recommended for use during outbreaks of infection or when a patient is known or suspected to have an infectious agent.
  - b. Availability of manufacturers' information and advice on how to maintain and decontaminate the fan. This should be consistent with national [13](#) and local infection prevention and control policy.
  - c. Consideration should be given to whether the fan can be adequately decontaminated for safe reuse or whether it should be disposed of after use.
  - d. Any assurance and evidence provided by the manufacturer that internal contamination will not be dispersed into the clinical/care area.
2. Any portable fans determined by risk assessment to present an infection risk should be removed from clinical use.
3. All portable fans used in health and social care facilities:
  - a. should be removed from the clinical area immediately and decontaminated after each patient use,
  - b. and subject to planned preventative maintenance.
4. National procurement bodies should include specialist infection control input to product specification and evaluation criteria to ensure that procurement of all reusable patient care equipment is sufficiently risk assessed prior to purchase.
5. Local procurement must ensure that Infection Prevention and Control Teams and estates departments are consulted when patient equipment is being procured locally for use in health and social care facilities.

#### Action by

- Directors of Infection Prevention and Control
- Infection Control Managers
- Procurement Leads
- Health & Safety Managers
- Estates & Facilities Managers
- Domestic Services Managers
- Directors of Nursing

#### Deadlines for action

Actions underway: 05 February 2019  
Actions complete: 02 April 2019

## Problem / background

6. Bladeless portable fans have been linked to healthcare associated infection.<sup>(2)</sup> Dust and debris can naturally accumulate within the body of bladeless fans and this will provide a reservoir for micro-organisms.
7. There is currently no evidence that conventional bladed fans disperse micro-organisms in the same way. However, the electric motors in these fans are air cooled and, similar to bladeless fans, dust and debris can accumulate within the motor housing. A similar reservoir of micro-organisms may therefore be created and entrained in the airflow. As a precautionary measure they may be considered equally implicated. Consequently, all portable fans are within scope of this alert.
8. Health Protection Scotland has produced an SBAR and position statement on the appropriate use and reuse of portable fans (bladed and bladeless) in clinical areas.<sup>(3)</sup>
9. Fans should be classed as unsuitable for reuse if the manufacturer cannot provide appropriate risk information, maintenance and decontamination instructions consistent with national and local decontamination policies for reusable patient care equipment.
10. The Republic of Ireland's Health Service Executive has recently published guidance<sup>(4)</sup> which may be helpful to the development of local procurement, cleaning, decontamination and maintenance policies.
11. Portable fans used in non-clinical areas are outside the scope of this alert although these should be visibly cleaned and maintained.

## References

- 1) [National Infection Prevention and Control Manual](#), Health Protection Scotland
- 2) Alsaffar L, Osbourne L, Bourne NT. Bacterial Colonisation of Bladeless Electrical Fans. [Journal of Hospital Infection 2018](#).
- 3) Health Protection Scotland. SBAR: [Portable cooling fans for use in clinical areas](#). 2018.
- 4) [2018 Guidelines for the Use of Portable Electric Fans in Healthcare Settings](#), Republic of Ireland Health Service Executive

## Distribution

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## Enquiries

This alert has been compiled under a partnership arrangement by the organisations below and it has been distributed across the UK. Enquiries should be directed to the appropriate Regional Office quoting the alert reference number.

## England

Enquires should quote reference number EFA/2019/001 and be addressed to:-  
[nhsi.mb-defectsandfailures@nhs.net](mailto:nhsi.mb-defectsandfailures@nhs.net)

### Reporting adverse incidents in England

Defects or failures should be reported on this system: <http://efm.hscic.gov.uk/>

The web-based D&F reporting system is managed by the NHS and Social Care Information Centre on behalf of the Department of Health. For further information on this system, including obtaining login details, please contact the efm-information Helpdesk. Tel 0300 303 5678.

## Northern Ireland

Enquiries and adverse incident reports in Northern Ireland should be addressed to:

Northern Ireland Adverse Incident Centre, CMO Group,  
Department of Health  
Tel: 028 9052 3868 Email: [niaic@health-ni.gov.uk](mailto:niaic@health-ni.gov.uk)  
<http://www.health-ni.gov.uk/niaic>

### Reporting adverse incidents in Northern Ireland

Please report directly to NIAIC using the [forms on our website](#).

## Scotland

Enquiries and adverse incident reports in Scotland should be addressed to:

Incident Reporting and Investigation Centre (IRIC)  
Health Facilities Scotland, NHS National Services Scotland  
Tel: 0131 275 7575 E-mail: [nss.irc@nhs.net](mailto:nss.irc@nhs.net)

### Reporting adverse incidents in Scotland

Use our [online report form](#) or download the [PDF form](#)

Independent facilities which only provide private care should report to the [Care Inspectorate](#).

## Wales

Enquiries and adverse incident reports in Wales should be addressed to:

NHS Wales Shared Services Partnership – Specialist Estates Services  
4<sup>th</sup> Floor, Companies House, Crown Way, Cardiff CF14 3UB

Tel: 029 2090 4118  
E-mail: [efa.ses@wales.nhs.uk](mailto:efa.ses@wales.nhs.uk)

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Appendix 2

## Purchase of Portable Electric Fans for use in Patient Areas

1. Nurse-in-Charge/Unit or Ward Manager to undertake a risk assessment (see Appendix 1) to ensure the criteria is met prior to purchase order being raised.
2. Only fans approved by the Infection Prevention & Control Team can be purchased for use in patient areas. The Procurement Department will hold a list of approved fans and only those listed can be purchased. **N.B purchased made using approved purchase cards must also comply with procurement of the recommended product.**
3. On delivery each portable fan will be PAT tested by the Estates Team (request to be logged on the Estates & Facilities Hot Desk before the fan can be approved for use), use and re-tested periodically as required by the Trust's policy and procedures.
4. Once the equipment has been labelled/PAT tested the Ward Manager/Unit Manager will be responsible to ensure the device is correctly & securely stored when not in use. **N.B.** This will include protecting the fan from dust e.g. stored covered when not in use (clear plastic sack)
5. Matrons will ensure, as part of their routine checks, that this procedure is being implemented correctly and provide advice and assurance as required.

### Portable Electric Fans Approved for use in Patient Areas:

- **12 inch white desk fan** with push button control and adjustable tilt. The guard should be removable to allow for adequate cleaning & disinfection.

## Safe Use of Portable Electric Fans in Patient Areas

1. Nurse-in-Charge/Unit or Ward Manager to undertake a risk assessment (see Appendix 1) to ensure the criteria is met prior to the fan being used and all other options for temperature control have been tested.
2. Nurse-in-Charge/Unit or Ward Manager will ensure that the fan is clean and dust free & has a valid in-date PAT tested label prior to authorising its use for the patient. N.B. Use of the fan will be for a specified time and will be included in the care plan and nursing care evaluation, updated at least one per shift.
3. After each use, the fan **MUST** be cleaned and stored dust free as before. This may include a request to the Estates & Facilities Department to enable the fan guard to be removed to allow adequate cleaning & disinfection and then replaced, prior to return to storage and protected from further contamination using a clear plastic bag.
4. If/when the device is no longer fit for purpose it must be disposed of correctly (See Waste Management Policy & procedures regarding disposal of electrical waste).
5. The Ward/Unit Manager will keep a cleaning log for each fan to evidence compliance with this procedure and provide reports as/when required.

### Risk Assessment for the Use of Portable Electric Fans in Patient Areas

<b>Patient Name &amp; NHS Number:</b>	<b>Ward &amp; Room Number:</b>	<b>Date &amp; Time of Assessment:</b>		
<b>N.B. Portable electric fans are for use on a named patient basis only and following completion of a risk assessment. This must be retained in the patients record &amp; be included in the individual care plan. FANS ARE FOR SHORT-TERM USE ONLY</b>				
<b>Assessment of the patient</b>		<b>Yes</b>	<b>No</b>	<b>N/A</b>
Does the patient have a temperature above 38°C?				
Is the patient immunocompromised due to disease or treatment or being nursed in Protective Isolation?				
Is the patient being nursed in isolation due to an airborne infection?				
Have the Infection Prevention & Control Team advised that this patient is nursed with airborne, contact, droplet or any other infection control precautions?				
Is it possible to lower the patient's temperature by any other means e.g. remove a layer of clothing, cool drinks, cool shower etc.?				
Has the need for a fan been identified in the patient's notes & care plan and deemed to be of benefit to the patient's clinical condition & comfort?				
Is it clinically safe for the patient to have a fan in their room?				
<b>N.B if used fans MUST be turned off when undertaking any aseptic procedures.</b>				
<b>Assessment of the environment</b>		<b>Yes</b>	<b>No</b>	<b>N/A</b>
Is it possible to lower the temperature of the patient's room by any other means e.g. opening windows & doors, reducing heating level?				
Is air conditioning available in the room?				
Are there any sterile supplies stored in the room?				
Can the flow of air from the fan be directed that is level with the surface of the patient's bed or chair & directed upwards towards the ceiling ( <i>avoiding smoke detectors</i> )?				
<b>Assessment of the equipment</b>		<b>Yes</b>	<b>No</b>	<b>N/A</b>
Is a 12 inch white desk fan available for use?				
Is the fan clean and free from dust?				
Is the fan guard easily removable for cleaning purposes?				
Does the fan have a valid PAT testing label which is in-date?				
Does the plug & cord show any kind of wear, tear or damage?				
Does the fan belong to the patient/family? If so has it been cleaned & PAT tested PRIOR to use?				

**N.B. The fan MUST be cleaned after each use & PRIOR to returning to storage.**

## Standard Operating Procedure Details

<b>Unique Identifier</b> for this SOP is	BCPFT-COI-POL-05-32
State if SOP is <b>New</b> or <b>Revised</b>	New
<b>Policy Category</b>	Control of Infection
<b>Executive Director</b> whose portfolio this SOP comes under	Executive Director of Nursing, AHPs and Governance
<b>Policy Lead/Author</b> Job titles only	Infection Prevention and Control Team
<b>Committee/Group Responsible for Approval of this SOP</b>	Infection Prevention and Control Committee
<b>Month/year consultation process completed</b>	February 2019
<b>Month/year SOP was approved</b>	April 2019
<b>Next review due</b>	April 2022
<b>Disclosure Status</b>	'B' can be disclosed to patients and the public

### Review and Amendment History

Version	Date	Description of Change
1.0	Feb 2019	New SOP for BCPFT established in response to the Estates & Facilities Alert EFA/2019/001 (11 <sup>th</sup> January 2019)