Shropshire Community Health NHS
NHS Trust

Portable Electrical Equipment Management Policy

Document Details		
Title		**Portable Electrical Equipment Management Policy**
Trust Ref No		701-49125
Local Ref (optional)		
Main points the document covers		Responsibilities for using portable electrical appliances
Who is the document aimed at?		All staff
Owner		Associate Director of Estates
Approval process		
Approved by (Committee/Director)		Health and Safety Committee
Approval Date		26th October 2022
Initial Equality Impact Screening		Yes
Full Equality Impact Assessment		No
Lead Director		Director of Finance
Category		Estates
Sub Category		
Review date		31st October 2025
Distribution		
Who the policy will be distributed to		All staff
Method		Electronically to senior staff and available to all staff via the Trust website
Document Links		
Required by CQC		
Required by NHSLA		
Other		
Amendments History		
No	Date	Amendment
1	07.01.2016	Client changed to Service User and Estates Telephone No. changed

2	24-05-22	Reviewed and updated sections. Added section on extension leads.
3		
4		
5		

Policies, Procedures, Guidelines and Protocols

CONTENTS

1. Purpose

1.1 The aim of this policy is to detail the user's responsibilities whilst using or operating portable electrical appliances in carrying out their duties whilst at work with the Trust.

The policy also defines the maintenance regimes for ensuring the safety of the appliances during the course of their life and the purchasing of portable electrical equipment.

The policy also details the risk assessment qualification and outlines the overall risk category for portable electrical equipment.

2. Definitions

Appendix A outlines the frequency and type of test to be carried out on portable electrical appliances.

Appendix B identifies possible risks associated with the use of these items.

2.1 Portable Electrical Equipment

Any electrical item which can or is intended to be moved whilst connected to an electrical supply. This includes items such as televisions, computers, fridges etc.

2.2 Medical Portable Electrical Equipment

Any electrical item which can or is intended to be moved whilst connected to an electrical supply. This includes items such as suction machines, defibrillators, air beds etc.

2.3 User

This is the person who uses the equipment to carry out their daily duties whilst at work.

2.4 User checks

Equipment is looked at by the user prior to use, in order to check for signs of damage to, for example, the equipment casing, lead or plug top. (NB: this does not include opening the plug top.) Refer to Appendix C

2.5 Formal Visual Inspection

This is when equipment is looked at by a competent person (not necessarily an electrician) to check for signs of damage to the equipment casing, lead or plug top, including checking the fuse within the plug top.

2.6 Combined Test and Inspection

Equipment is looked at by a competent person (not necessarily an electrician) to check for signs of damage to the equipment casing, lead or plug top. This will include checking the fuse within the plug top, and carrying out further specialised tests using an appropriate test instrument.

2.7 Competent Person

This is defined as a person with sufficient knowledge, understanding and skills necessary to check the safety of electrical appliances. This may be demonstrated by appropriate training and/or experience in testing and inspecting electrical appliances.

2.8 CE Mark/UKCA Mark

CE marking is a declaration by the manufacturer that the product meets all the appropriate provisions of the relevant legislation implementing certain European Directives.

CE marking gives companies easier access into the European market to sell their products without adaptation or rechecking. The initials “CE” don’t stand for any specific words but are a declaration by the manufacturer that its product meets the requirements of the applicable European Directive.

The UKCA mark - From the 1st January 2023, all products placed on the British market are required to be UKCA marked (medical devices from 1st July 2023). The UKCA mark covers all good that previously held the CE mark.

2.9 British Standard Kite Mark

This demonstrates that the British Standards Institute has checked the manufacturer’s claim that its product meets the standard. The kite mark can still be found on some items of electrical goods; however, the CE mark is more prevalent today.

2.10 Electric Shock

Voltage as low as 50 volts applied between two parts of the human body causes a current to flow that can block the electrical signals between the brain and the muscles. This may have a number of effects, including:-

- Stopping the heart completely
- Preventing the person from breathing
- Causing muscle spasms

The exact effect is dependent upon a large number of things, including:-

- The size of the voltage
- Which parts of the body are involved
- How damp the person is
- Length of time the current flows

Electrical shocks from static electricity such as those experienced when getting out of a car or walking across a man-made fibre carpet can be at more than 10,000 volts, but as the current flows for a very short time, there is no dangerous effect on a person.

However, static electricity can cause a fire or explosion where there is an explosive atmosphere.

3. Responsibilities

3.1 User

The person using the equipment should be encouraged to look critically at the electrical equipment they use, and to visually check for signs of damage to the outside of the equipment, its lead and plug before they use it, but they should not take the plug apart. The user should not use the equipment if signs of damage are evident.

3.2 Estates Department

Carry out repairs to, and ensure that portable electrical equipment (excluding most medical equipment) is formally inspected and tested by competent persons at regular intervals appropriate to the level of risk.

3.3 Medical Engineering Services

Carry out repairs to, and ensure that most medical portable electrical equipment is formally inspected and tested by competent persons at regular intervals appropriate to the level of risk.

3.4 Directors

Directors should ensure that this policy and its guidelines are implemented in all areas they are responsible for, and that their staff are made aware of the procedures to follow when using portable electrical appliances.

4. Faulty Equipment

4.1 Upon discovering faulty equipment, it must be removed from service immediately by switching off and unplugging the appliance from the wall socket. The fault should then be reported to the appropriate supervisor or line manager.

4.2 It may also be necessary to label the equipment “Not to be Used” where the equipment is not easily moved out of service, e.g. television, fridge, washing machine, etc.

4.3 Once the equipment is out of service, arrangements for repair should be made by contacting the relevant Estates Department responsible for maintenance as per the contract SLA (NHS PS and / or MPFT).

5. Employee-Owned Equipment

5.1 Employee-owned equipment should be discouraged from being brought into work. Where employee equipment is used at their place of work, it must have a formal visual inspection prior to its use on Trust premises. (NB: a charge may be made for this test.)

6. Service User/Patient Owned Equipment

6.1 Where Service User/Patient Owned equipment is used on Trust premises, it must have a formal visual inspection by a competent person (see section 2.7) prior to use in the ward/office environment.

6.2 Any Service User/Patient Owned equipment used on Trust premises must be capable of being cleaned in line with Trust policies and procedures.

6.3 Any Service User/Patient Owned electrical equipment that is not considered hazardous, such as personal music/game consoles and electric shavers are acceptable for patient care areas but the Trust reserve the right to test equipment before being connected, plugged in, to the Trusts electrical supply.

Caution should be used with Hair Dryers and other heated hair appliances as these items do present a fire hazard.

7. New Equipment

7.1 The purchasing of new portable electrical equipment should be through the Trust's purchasing provider (Shropshire Healthcare Purchasing Consortium).

This method of purchasing will ensure equipment meets the required safety standard.

Equipment through other routes should be discouraged, but if this is not possible to achieve, the purchaser must ensure the equipment displays the CE or British Standard Kite Mark or UKCA Mark.

7.2 If all equipment purchased is procured through one of the process methods identified in section 7.1 above, there is no requirement to have the new items pre-inspected by a competent person prior to use.

7.3 If items do not have the CE or Kite Mark or UKCA Mark, the item should be inspected by a competent person prior to use. It should be noted that the equipment may be withdrawn from service.

8. Donated Portable Electrical Equipment

8.1 If portable electrical equipment is donated, the user should check that the equipment displays the CE or Kite Mark or UKCA Mark prior to its use.

8.2 If no evidence of the CE or Kite Mark or UKCA Mark is found, the item should be inspected by a competent person prior to use. It should be noted that the equipment may be withdrawn from service.

9. Extension leads and “block” adaptors

9.1 Extension leads are portable electrical equipment and shall be tested as detailed in Appendix A

9.2 The use of “block” adaptors is not permitted in the Trust. When a block adaptor is used with a number of plugs, the angle and weight increases the stress on the socket.

9.3 The use of extension leads should be avoided where possible and should only be used whenever it is not possible to reach a wall socket with the equipment cable:

- Extension leads are particularly liable to damage – to their plugs, sockets, connections and the cable itself. Typically from leads being walked over, continually bent at the same point or stored badly.
- You can trip or fall over taut, over-stretched cable.
- Overuse of extension leads increases the risk of fire.
- The use of cable drum extension lead is only permitted for short duration work and should be completely unwound to avoid overheating.
- Additionally:
- Wherever possible extension leads should be removed from use in clinical environment.
- Extension leads must not be used in wet environments.
- Extension leads should not be plugged into another extension lead or overload the socket (e.g. all appliances using the extension lead should not total more than 13amps).

New extension leads must be purchased via the Trusts Procurement Department, allow no more than 4 (four) appliances to be connected and be of a robust type complete with Anti-Surge protection.

9.4 Risks can arise when medical electrical equipment is connected to other medical or non-medical electrical equipment, or when it is connected to the supply mains by a shared extension lead.

Such combinations are often referred to as "medical electrical systems" and may be assembled temporarily or more-or-less permanently. Medical electrical systems pose risks that may not have been taken into account in the design of individual items of equipment, even where the equipment involved is fully compliant with its relevant safety standards or is CE or UKCA marked. Any extension lead used for medical devices must be assessed for safety and infection control implications prior to use.

10. Socket Covers

10.1 The use of socket covers is prohibited within the Trust. The type available, image 1 below depicts some typical types, are not constructed

to any electrical or other safety standard. The pins on the socket covers may be larger than the socket tubes which can cause damage to the socket and defeat the safety design of BS 1363. Refer to DOH Guidance DoH guidance - dangers of plug socket covers and CAS alert EFA/2016/002

In certain circumstances the insertion of socket covers, or their breakage whilst in use, can allow foreign objects to be inserted directly onto live parts within the socket, thus presenting a high risk of electric shock.

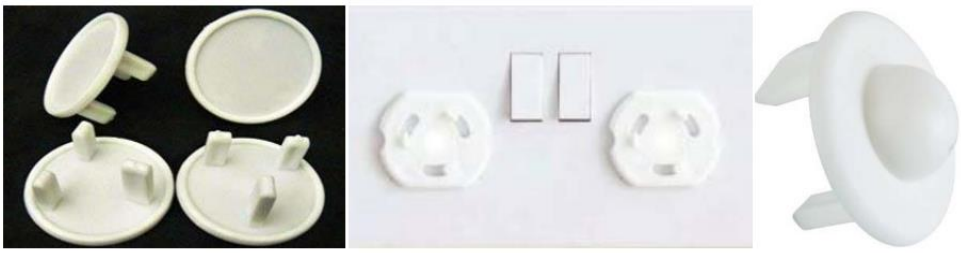

Image 1 Typical Tpes of device available

11. Purchasing of Medical Portable Electrical Equipment

11.1 Please refer to the Trust's Management of Medical Devices Policy (no 1536/17215) prior to purchasing this type of equipment.

APPENDIX A: Formal Testing Inspections

Frequency of inspections carried out for the Trust.

Equipment/Environment	User Checks	Formal Visual Inspection	Combined Inspection and Testing
Battery operated (less than 20 volts)	Yes	No	No
IT equipment (PCs, screens, projectors etc)	Yes	5 years	None if double-insulated, otherwise every 5 years
Photocopiers, fax machines (not hand held). Rarely moved.	Yes	5 years	None if double-insulated, otherwise every 5 years
Double-insulated equipment (not hand held). Moved occasionally, e.g. fans, lamps, TVs etc	Yes	5 years	None
Double-insulated equipment (hand held), e.g. small floor cleaners	Yes	1 year	None
Earthed equipment (Class 1) e.g. kettles, hoovers	Yes	n/a	1 year
Specific equipment, e.g. portable food trollies	Yes	n/a	3-monthly
Cables (leads) and plugs connect to the above. Extension leads (mains voltage)	Yes	1 to 5 years **dependent upon type of equipment it is connected to**	1 to 5 years **dependent upon type of equipment it is connected to**
50v portable hand lamps (secondary winding centre tapped to earth 25v)	Yes	No	Yearly
110v portable and hand-held tools, extension leads, site lighting, moveable wiring systems and associated switchgear (secondary winding centre tapped to earth 55v)	Yes	Monthly	Before first use on site, and then 3-monthly
230v portable and hand-held tools, extension leads and portable floodlighting (230v supply fuses or MCBs)	Use prohibited	Use prohibited	Use prohibited

NB: Experience of operating the maintenance system over a period of time, together with information on faults found, should be used to review the frequency of inspection by risk assessment.

APPENDIX B: Portable Electrical Appliances Risk Assessment

B.1 Electrical injuries can be caused by a wide range of voltages, but the risk of injury is generally greater with higher voltages, and is dependent upon individual circumstances. Alternating current (AC) and Direct Current (DC) electrical supplies can cause a range of injuries including: -

- Electric shock
- Electrical burns
- Loss of muscle control
- Thermal burns
- Death
- Fire

B.2 In general, portable electrical appliances are very safe to use, providing these simple precautions are taken: -

- Check that the electrical equipment is suitable for the work and the way in which it is going to be used.
- Check that the electrical equipment is in good condition.
- Check that the equipment is suitable for the electrical supply with which it is going to be used, and that the installation is safe.
- Maintain the portable electrical equipment.

B.3 Anyone who uses portable electrical equipment will be at risk from the above-listed hazards. Within the Trust all staff will at some time use one or a range of portable electrical equipment whilst carrying out their duties.

In addition, patients and visitors are also at risk where this equipment is present.

B.4 The risk is quantified by assessing the measures of consequence against the measures of likelihood.

B.5 Measures of Consequence is assessed as “Fatality – single death of any person”.

B.6 The measures of likelihood however need to be quantified in relation to what processes are currently in place.

These processes include: -

- Fault reporting and repair service procedures implemented
- Trust incident reporting procedures in place (Datix)
- Planned inspection and testing takes place at a frequency appropriate to the equipment type and use
- All equipment used within the Trust is either CE or British Standard Kite Marked, indicating it is fit and proper for its intended use.
- Equipment is selected for the appropriate voltage supply

- Equipment is used within a maintained building or environment

In addition to the above processes, consideration of the class of equipment used and the environment it is being used in, needs to be taken into account. For example, earthed equipment such as floor polishers present a higher risk of exposure to hazards than double-insulated equipment like televisions and IT equipment.

B.7 Other considerations should include test data and, in particular, the failure profile measured in percentage (failure %) terms.

B.8 The measure of likelihood related to the list in B.1 above should take into account formal testing being carried out (Appendix A), the processes implemented within the Trust (section B.6) and the failure profile (section B.7),

B.9 The likelihood is therefore considered to be “Rare – the event may occur only in exceptional circumstances”.

B.10 The overall risk of death by coming into contact with, or using portable electrical equipment in normal circumstances is considered to be a low-risk category.

APPENDIX C –Electrical Equipment Checks – Guidance for Staff

C.1 All staff members are responsible for ensuring their own safety and that of others in the workplace. This involves identifying and taking the appropriate action to remove or minimise hazards.

C.2 Staff should be aware of the risk of fire and electric shock as a result of faulty rechargeable devices, particularly those with lithium batteries, and faulty chargers.

C.3 The following list outlines common causes of electrical hazards which staff should be aware of and, if encountered, they should take action themselves wherever possible or report the matter to the responsible person:

- Charger or battery/device overheating
- Damage to the lead including fraying, cuts or heavy scuffing, e.g. from floor box covers
- Damage to the plug, e.g. to the cover or bent pins
- Signs of overheating, such as burn marks or staining on the plug, lead or the electrical equipment
- Tape applied to join leads together
- Wires visible where the leads joins the plug (the cable is not being gripped where it enters the plug)
- Damage to the outer cover of the equipment itself, including loose parts or screws. If any of the above are discovered whilst an appliance is in use, it should immediately be switched off at the mains and its use discontinued.

Hazard Reduction

- Personal electrical devices should not be charged where water or other liquid spills are likely
- Chargers should be unplugged when the battery is fully charged
- Personal rechargeable electronic equipment should be visually inspected prior to use and found to be free from defects, cracks, damaged cables, burn marks
- Cables should not be trapped under furniture or in floor boxes
- Devices must not be charged in an oxygen rich environment.

APPENDIX D - User checklist

Plug

- ☐ Not loose in socket outlet and can be removed from socket outlet without difficulty
- ☐ Free from cracks or damage
- ☐ Free from any signs of overheating
- ☐ Flexible cable is secure
- ☐ If the plug is of the non-rewireable type or moulded on type, the cable grip should be checked by firmly pulling and twisting the cable. No movement should be apparent
- ☐ Pins not bent
- ☐ Pins preferably sleeved particularly where young children may touch the plug
- ☐ No cardboard label on the bottom
- ☐ Plug does not rattle

Flex or cable

- ☐ Good condition
- ☐ Free from cuts, fraying or damage
- ☐ Not to short or long or in any other way unsatisfactory
- ☐ No joints or connections that may render it unsuitable for use
- ☐ Only one flex connected into one plug
- ☐ Not too tightly bent in any one place
- ☐ Not run under a carpet
- ☐ Not a trip hazard
- ☐ An extension lead should be inspected throughout its length

Socket outlet

- ☐ Free from cracks or other damage
- ☐ No sign of overheating
- ☐ Shutter mechanism of socket outlet functioning
- ☐ Not loose
- ☐ Switch if fitted operates correctly

Adaptor or extension lead fitted with RCD

- ☐ Inspect device and verify it has a rated residual current not exceeding 30mA. Check the device by plugging it in, switching it on and then pushing the test button. The RCD should operate disconnected the supply from the socket outlets

Appliance or item of equipment

- ☐ Free from cracks, chemical or corrosion damage to the case, or damage that could result in access to live parts
- ☐ Equipment is operated with any protective covers in place and any doors closed
- ☐ Able to be used safely
- ☐ Switches on and off correctly
- ☐ Works properly
- ☐ Sufficient space to allow cooling

- ☐ Not positioned so close to walls and partitions that there is inadequate space for cooling or ventilation
- ☐ No sign of overheating
- ☐ Not likely to overheat
- ☐ No books or files on top of a computer
- ☐ Cups etc. are not placed where contents could spill on equipment

Environment

- ☐ Equipment suitable for its environment
- ☐ No indiscriminate use of extension leads or multiway adaptors
- ☐ Equipment not normally left on overnight

Suitability

- ☐ Equipment should be suitable for the work it is required to carry out