

TRUST-WIDE NON-CLINICAL POLICY DOCUMENT

ELECTRICITY AT WORK

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| Policy Number: | HS11 |
| Scope of this Document: | All Staff, patients/service users, visitors and contractors |
| Recommending Committee: | N/A |
| Approving Committee: | Health and Safety Committee |
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| Lead Author(s): | Safety Advisor |

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2018 – Version 4

Striving for Perfect Care for the People We Serve

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ELECTRICITY AT WORK

Further information about this document:

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| Document name | Electricity at Work (HS11) |
| Document summary | Regulations lay down broad guidelines about the safety of electrical systems and electrical equipment. This document details the requirements necessary and the measures that must be employed to achieve the necessary standards of electrical safety in the workplace. |
| Author(s) Contact(s) for further information about this document | Safety Advisor Telephone: 0151 473 2934 |
| Published by Copies of this document are available from the Author(s) and via the trust's website | Mersey Care NHS Foundation Trust V7 Building Kings Business Park Prescot Liverpool L34 1PJ Your Space Extranet: http://nww.portal.merseycare.nhs.uk Trust's Website www.merseycare.nhs.uk |
| To be read in conjunction with | Health, Safety and Welfare SA07 Risk Management Policy & Strategy SA02 |
| This document can be made available in a range of alternative formats including various languages, large print and braille etc | |
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Version Control:

| | | Version History: | |
|----------|--|------------------|----------------|
| Approved | | 2015 Version 1 | October 2015 |
| Approved | | 2016 Version 2 | October 2016 |
| | | 2017 Version 1 | September 2017 |
| | | 2018 Version 2 | October 2018 |

SUPPORTING STATEMENTS – this document should be read in conjunction with the following statements:

SAFEGUARDING IS EVERYBODY’S BUSINESS

All Mersey Care NHS Foundation Trust employees have a statutory duty to safeguard and promote the welfare of children and adults, including:

- being alert to the possibility of child/adult abuse and neglect through their observation of abuse, or by professional judgement made as a result of information gathered about the child/vulnerable adult;
- knowing how to deal with a disclosure or allegation of child/adult abuse;
- undertaking training as appropriate for their role and keeping themselves updated;
- being aware of and following the local policies and procedures they need to follow if they have a child/adult concern;
- ensuring appropriate advice and support is accessed either from managers, *Safeguarding Ambassadors* or the trust’s safeguarding team;
- participating in multi-agency working to safeguard the child or adult (if appropriate to your role);
- ensuring contemporaneous records are kept at all times and record keeping is in strict adherence to Mersey Care NHS Foundation Trust policy and procedures and professional guidelines. Roles, responsibilities and accountabilities, will differ depending on the post you hold within the organisation;
- ensuring that all staff and their managers discuss and record any safeguarding issues that arise at each supervision session

EQUALITY AND HUMAN RIGHTS

Mersey Care NHS Foundation Trust recognises that some sections of society experience prejudice and discrimination. The Equality Act 2010 specifically recognises the *protected characteristics* of age, disability, gender, race, religion or belief, sexual orientation and transgender. The Equality Act also requires regard to socio-economic factors including pregnancy /maternity and marriage/civil partnership.

The trust is committed to equality of opportunity and anti-discriminatory practice both in the provision of services and in our role as a major employer. The trust believes that all people have the right to be treated with dignity and respect and is committed to the elimination of unfair and unlawful discriminatory practices.

Mersey Care NHS Foundation Trust also is aware of its legal duties under the Human Rights Act 1998. Section 6 of the Human Rights Act requires all public authorities to uphold and promote Human Rights in everything they do. It is unlawful for a public authority to perform any act which contravenes the Human Rights Act.

Mersey Care NHS Foundation Trust is committed to carrying out its functions and service delivery in line the with a Human Rights based approach and the FRED A principles of **F**airness, **R**espect, **E**quality **D**ignity, and **A**utonomy

Contents

| | | |
|---|---|---|
| 1 | PURPOSE AND DEFINITION..... | 5 |
| 2 | MERSEY CARE NHS FOUNDATION TRUST ARRANGEMENTS ... Error! Bookmark not defined. | |
| 3 | TESTING | 5 |
| 4 | USER CHECKS | 8 |
| 5 | GENERAL DUTIES – DETAILED | 9 |

1 Purpose and Definition

- 1.1 Electricity is a known hazard, which has the potential to kill
- 1.2 The Electricity at Work Regulations 1989 (EAWR) lay down broad guidelines about the safety of electrical systems and electrical equipment. The Regulations require employers to consult appropriate codes of practice and to apply the codes according to the assessed needs of the workplace.
- 1.3 The EAWR apply to all places where work is done on or near electricity. They detail the requirements necessary and the measures that must be employed to achieve the necessary standards of electrical safety in the workplace.
- 1.4 Mersey Care NHS Foundation Trust ensure approved NICEIC contractors are available for electrical works and therefore qualified to offer complete inspection and maintenance services as well as advice in respect of all electrical installations and portable equipment.
- 1.5 Contact must be made with Facilities Management prior to undertaking any works that may impact electricity.

2.1 PROCEDURES

- 2.1 Employees must not bring or use electrical items from home or elsewhere. Only Mersey Care NHS Foundation Trust authorised and approved equipment may be used. All electrical systems on our premises are checked to make sure that danger to anyone on site is prevented. This includes portable items and the fixed wiring systems at sites.
- 2.2 Equipment purchased will be in accordance to purchasing guidelines in addition to compliance with CE marking relevant regulatory requirements.
- 2.3 Where necessary, specialist electrical assistance will be obtained from outside the company. We will make sure that any electrical contractors employed to carry out electrical work on wiring or equipment is competent, belong to an appropriate body and comply with all relevant safety electrical standards and legislation.
- 2.4 Any equipment considered defective must be withdrawn from service and reported to the facilities help desk.
- 2.5 Mersey Care NHS Foundation Trust will make sure that any electrical contractor employed to carry out electrical work on wiring or equipment is competent, belong to an appropriate body and comply with all relevant safety standards.
- 2.6 If there is any accident involving electricity, a qualified first-aider must be summoned immediately.

No employee must undertake repairs to any electrical equipment.

3 Testing

- 3.1 Portable equipment (basically anything with a plug on it) must be inspected and tested on a suitably regular basis.
- 3.2 The law does not specify how often these must be carried out as it is individual to the piece of equipment and circumstances of use. This inspection frequency will be based upon manufacturer's guidance, experience and for example with relation to the equipment's

condition, type, use and environment.

- 3.3 Each item must be labelled with its own unique identification number and so must any detachable power supply lead.
- 3.4 All portable appliances will be electrically test by a competent person at least once every one to five years, depending on the appliance and the results of previous assessments.
- 3.5 The fixed wiring installation supplying electrical sockets, lighting or other wired-in equipment will be inspected by a competent specialist electrical contractor every 5 years.
- 3.6 The following standards will apply to all electrical equipment used and stored on Company premises:
 - a) All new electrical equipment is to be checked prior to use and distribution within the site.
 - b) All defective electrical equipment must be identified by a hazard label and isolated from the electrical supply.
 - c) Hazard notices must be placed on electrical switchgear warning of the danger of electricity.
 - d) Only 'competent suitably qualified people' are to be allowed to work with electrical equipment.
 - e) All portable electrical equipment is to be tested by a 'competent person', identified by number and recorded with test results.

The intervals between checks, inspections and tests must be kept under review. After the first few inspections/tests consideration can be given to increasing the intervals or if necessary reducing them.

3.7 **Inspection of Portable Equipment**

Inspection, for individual piece of equipment, does not necessarily have to be carried out by a highly-trained person. Different levels of competence are required for different tasks. It is the manager's responsibility to ensure that the level of competence is appropriate.

The most expensive part of the maintenance arrangements are combined inspection and testing. To ensure that much time and effort is not unnecessarily expended in having unrealistically short periods between examinations, suggested starting points for combined inspection and testing intervals in low risk environments such as offices are shown in the table below.

General guidance on the frequency of inspection and testing can be found in *table 1* on the following page.

3.8 Table 1 Suggested initial intervals for checking portable electrical equipment

| Equipment/environment | User checks | Formal visual inspection | Combined inspection and testing |
|---|--------------------|---|--|
| Battery-operated: (less than 40 volts) | Yes | No | No |
| Extra low voltage: (less than 50 volts AC): Telephone equipment, low-voltage desk-lights | Yes | No | No |
| Desktop computers, VDU screens | Yes | Yes, 2–4 years | No if double insulated, otherwise up to 5 years |
| Photocopiers, fax machines: Not hand-held. Rarely moved | Yes | Yes, 2–4 years | No if double insulated, otherwise up to 5 years |
| Double insulated <input type="checkbox"/> (Class II) equipment: Not hand-held. Moved occasionally, e.g. fans, table lamps | Yes | Yes, 2–4 years | No |
| Double insulated (Class II) equipment: Hand-held, e.g. some floor cleaners, some kitchen equipment | Yes | Yes, 6 months – 1 year | No |
| Earthed equipment (Class I): Electric kettles, some floor cleaners, some kitchen equipment and irons | Yes | Yes, 6 months – 1 year | Yes, 1–2 years |
| Cables (leads and plugs connected to the above) and mains voltage extension leads and battery-charging equipment | Yes | Yes, 6 months – 4 years depending on the type of equipment it is connected to | Yes, 1–5 years depending on the type of equipment it is connected to |

4 User Checks

- 4.1 The user check is a vital safety precaution. Many faults can be determined by a visual inspection. The user is the person most familiar with the equipment and maybe in the best position to know if it is in a safe condition and working properly. No record need be made of the user check unless some aspect of the equipment is unsatisfactory, or damaged.
- 4.2 The user check is limited to an external visual inspection without any dismantling of the equipment, such as removal of covers or plug tops. The inspection must include the checks listed above.

The user check should proceed as follows:

Checks to be made with power disconnected

- a) Inspection of the plug
- b) Inspection of the flex or cable
- c) Inspection the socket or flex outlet
- d) Inspection of any adaptor or extension lead.

Checks plugged in

- a) Inspect the appliance or item of equipment.
- b) Are you aware of any fault in the equipment?
- c) Disconnect the equipment by switching off and unplugging the item of equipment.
- d) Take action if any faults or damage are apparent.

Faulty equipment must be:

- a) Switched off and unplugged from the supply (if safe to do so),
- b) Labelled to identify that it is not to be used,
- c) Reported to your site representative
- d) Removed from service as soon as possible.

Where damaged or faulty equipment is identified, an assessment must be made by a competent person as to the suitability of the equipment for the use or location.

Plug Checks

- a) Not loose in socket outlet and can be removed from Socket outlet without difficulty.
- b) Free from cracks or damage.
- c) Free from any signs of overheating.
- d) Flexible cable secure in its anchorage.
- e) If the plug is the moulded on type, the cable grip must be checked by firmly pulling and twisting the cable. No movement should be apparent.
- f) The pins must not be bent.
- g) Pins preferably sleeved, particularly where young children may touch the plug.
- h) No cardboard label on the bottom.
- i) Plug does not rattle.

Flex or Cable

- a) Good Condition

- b) Free from cuts, fraying or damage.
- c) Not in a location where it could be damaged.
- d) Not too long, too short or in any other way unsatisfactory.
- e) No Joints or connections that may render it unsuitable for use, such as taped joints. Only one flex connected in to one plug.
- f) Not too tightly bent at any place. Not run under a carpet.
- g) Not a trip hazard.
- h) An extension lead must be inspected throughout its length. This will mean uncoiling coiled type extension leads.
- i) Extension leads must only be used when fully uncoiled
- j) Extension leads must not be joined up to other extension leads (ie daisy chained)

Socket Outlet or Flex outlet.

- a) Free from cracks or other damage.
- b) No sign of overheating.
- c) Shutter mechanism of socket outlet is functioning. Not loose (i.e. properly secured)
- d) Switch, if fitted, operates correctly.

Appliance or item of equipment

- a) Free from cracks, chemical or corrosion damage to the case, or damage that could result in access to live parts.
- b) Equipment is operated with protective covers in place and doors closed.
- c) Able to be used safely.
- d) Switches on and off correctly.
- e) Works properly.
- f) Sufficient space to permit cooling. For example the equipment must not be positioned close to walls and partitions so that there is inadequate spacing for ventilation and cooling.
- g) No sign of overheating.
- h) Not likely to overheat. No books or files on top of a computer or towels over a convector heater.
- i) Cups and plants are not placed where their contents could spill in to equipment

Environment Equipment suitable for its environment.

- a) No indiscriminate use of extension leads or multi-way adaptors
- b) Equipment not normally left on overnight.

Suitability

Equipment suitable for the work for which it is intended.

5 GENERAL DUTIES – DETAILED

5.1 Systems and Work Activities

Injury may arise from electric shocks, electric burn, a fire of electrical origin, electric arcing or explosion initiated or caused by electricity. Through the appointment of competent individuals Mersey Care NHS Foundation Trust is able to ensure that the system for distribution of electricity is constructed and maintained so as to prevent danger. Additionally, work activities, the use and maintenance of systems, as well as work near a system, are carried out in such a way as not to create danger. A regular inspection programme is undertaken by competent individuals at all sites

5.2 **Strength and Capability of Electrical Equipment**

No electrical equipment must be used where its electrical strength and capability may be exceeded in such a way as to give rise to overload and, therefore, danger i.e. risk of injury.

If the type of equipment and use is such that there is any doubt then an assessment must be undertaken to ensure that it is suitable for the job, contact Facilities Management for guidance.

Avoid the use of multi-point adapters. Also avoid using extension leads and leads with multi-plug socket outlets wherever possible. If extension leads are used they must be suitably fused and care must be taken not to overload or use coiled on reel.

5.3 **Adverse or Hazardous Environments**

Electrical equipment must not be exposed to adverse or hazardous environments unless it is of such construction or suitably protected so as to prevent danger such as effects of the weather; natural hazards; temperature; wet, dirty or corrosive conditions; pressure; and flammable or explosive substances (including dusts, vapours, gases).

5.4 **Insulation/Earthing**

Mersey Care NHS Foundation Trust electrically competent persons will ensure all conductors are either suitably insulated or earthed so as to prevent danger.

5.5 **Means for Protecting From Excess of Current, Cutting Off Supply and Isolation**

A suitable means for protection from excess current is provided in all systems. Suitable fuses or preferably circuit breakers capable of interrupting the current or reducing it to a safe level are provided for protecting every part of a system.

Residual current devices (RCDs) are operated by means of the test button at least monthly to ensure that they remain effective.

Suitable means are provided on all systems for cutting of the supply of electrical energy electrical equipment and for the isolation of any electrical equipment which is itself a source of electrical energy.

5.6 **Equipment Made Dead/Work on Live Conductors**

Where electrical equipment has been made dead, precautions must be taken to prevent danger; and while work is carried out on or near that equipment, from its becoming electrically charged. Precautions would include identifying the circuit and/or equipment, disconnection from every source of electrical energy with isolating gaps sufficient for the voltage levels present and preferably that switches are safely locked in the off position and isolation secured, ensuring that notices are posted at the place of isolation, proving the circuit and/or equipment is dead, suitably earthing all conductors if practicable and protecting for inadvertent contact with nearby live parts. In addition, permits to work may be necessary - especially on high voltage systems. Decommissioned equipment must be suitably marked and steps taken to ensure that it is dead and cannot inadvertently become re-energised or dangerously charged.

No person (i.e. not just an employee) must work on or near any live conductor (other than a conductor suitably insulated) unless it is unreasonable for it to be dead. If it is unreasonable to work dead, e.g. because diagnostic testing is being carried out, a risk assessment must first be carried out to see if it is reasonable to work near or on it whilst live and that suitable precautions, including the use of suitably insulated tools and personal protective equipment where necessary, can be taken to prevent injury. Work on or near live conductors will rarely be permitted.

5.7 **Competent Persons to Prevent Danger and Injury**

Work carried out requires a sufficiently competent person for the task. Electrical work can be as simple as changing a fuse or a light bulb, which require very little knowledge and can be carried out by most persons after very little training, or complex, such as testing and interpreting the results, where a far greater understanding is necessary.

5.8 **Inspection and Maintenance**

A regular inspection programme of equipment is an essential part of any maintenance programme. The law does not specify how often routine inspection and preventative maintenance must be carried out.

5.9 **Fixed Installations**

Fixed installations must normally be inspected at least once a year but the depth and frequency will be determined by factors including the type of installation, its use and operation, the frequency of maintenance and the environment. It may be appropriate for the installation to be fully tested at not less than five year intervals.

5.10 **User Checks**

A formal visual inspection does not usually require a qualified electrician. Visually check power leads are not split and equipment not visibly broken before use.

5.11 **Testing**

Fixed Installations

The electricity supply authorities require a 'Certificate of Compliance' before an electrical system can be initially connected to the mains supply. This is a certificate issued by an independent qualified electrician stating that the system has been inspected and is in a fit state to be connected.

After this initial certification the fixed wiring could need comparatively little attention. Re-testing at least every 3/5 years for industrial /care/hospitals under a full periodic inspection should suffice, unless there are circumstances shown by assessment to demand otherwise.

5.12 **Portable Appliances**

When an appliance is purchased, or first brought onto the premises, it should have already undergone tests for being suitable for the purpose it was made. That these tests have been carried out will be indicated by their being marked in some way. The BSI 'kite' and BEAB approval marks are well known examples. So long as the equipment is to be used for the job it was designed it is necessary to do very little initially. A user check will normally suffice. Note: only company approved and authorised portable electrical items may be used. Individuals are not permitted to bring in their own electrical equipment.

Equality and Human Rights Analysis

Title:

HS11 Electricity at Work

Area covered: Trust Wide

What are the intended outcomes of this work?

The procedures above are paramount to maintaining the health and safety and welfare of everyone who the Trust interacts with. To do this we need to think about what might cause harm to people and or the environment and to consider the procedures in place to provide this protection.

The Health and Safety at Work etc. Act 1974, the Management of Health and Safety at Work Regulations 1999 and the Construction (Design and Management) Regulations 2015 impose duties to safeguard the health and safety of those who are not in the employment of Mersey Care NHS Foundation Trust, but who may be affected by our activities. These duties also apply to a contractor or sub-contractor on Trust premises, in respect of safeguarding our employees, patients and visitors from their activities.

Who will be affected?

Staff, Patients, Service Users, Visitors, Contractors.

Evidence

What evidence have you considered?

The Procedures

Disability including learning disability

Risk assessments will consider a range of vulnerable groups including those who have disabilities.

Sex

| |
|--|
| No issues identified within discussions. |
| Race No issues identified within discussions. |
| Age Risk assessments will consider a range of vulnerable groups including younger/older people. |
| Gender reassignment (including transgender) No issues identified within discussions. |
| Sexual orientation No issues identified within discussions. |
| Religion or belief No issues identified within discussions. |
| Pregnancy and maternity Risk assessments will consider a range of vulnerable people including pregnant women/new mothers. |
| Carers Will be covered by the procedures above when visiting the Trust buildings. |
| Cross Cutting All groups of people will be subject to health and safety and protection. |
| Other identified groups No issues identified within discussions. |

| | |
|---|---|
| Human Rights | Is there an impact? How this right could be protected? |
| This section must not be left blank. If the Article is not engaged then this must be stated. | |
| Right to life (Article 2) | Human Rights Based Approach Supported. The above procedures aim to maintain the health and safety (including life) of all people using /working/visiting the Trust premises. |

| | |
|--|---|
| Right of freedom from inhuman and degrading treatment (Article 3) | No Issues identified within Discussions. |
| Right to liberty (Article 5) | No Issues identified within Discussions. |
| Right to a fair trial (Article 6) | No Issues identified within Discussions. |
| Right to private and family life (Article 8) | No Issues identified within Discussions. |
| Right of freedom of religion or belief (Article 9) | No Issues identified within Discussions. |
| Right to freedom of expression Note: this does not include insulting language such as racism (Article 10) | No Issues identified within Discussions. |
| Right freedom from discrimination (Article 14) | No Issues identified within Discussions. |
| Engagement and involvement | |
| N/A | |

Summary of Analysis

Eliminate discrimination, harassment and victimisation

The procedures above all relate to health and safety of all people using/ visiting/working the Trust.

**Pregnant women/ mothers of new born babies
People with Disabilities
Younger /older people are identified as vulnerable groups within
the procedures.**

**Advance equality of opportunity
N/A**

**What is the overall impact?
No negative/adverse impact detected.**

**Addressing the impact on equalities
N/A**

**Action planning for improvement
N/A**

**For the record
Name of persons who carried out this assessment:**

**Date assessment completed:
Mark Clayton
Carlton Brooks**

**Name of responsible Director/Lead Trust Officer
Executive Director of Communication and Corporate Governance**

**Date assessment was signed:
October 2018**

Action plan template

This part of the template is to help you develop your action plan. You might want to change the categories in the first column to reflect the actions needed for your policy.

| Category | Actions | Target date | Person responsible and their Division |
|---|----------------|--------------------|--|
| Other | | | |
| Data collection and evidencing | | | |
| Analysis of evidence and assessment | | | |
| Monitoring, evaluating and reviewing | | | |
| Transparency (including publication) | | | |