TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES (TSE): POLICY FOR INFECTION PREVENTION AND CONTROL

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Contents

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1. INTRODUCTION

Transmissible Spongiform Encephalopathies (TSEs), sometimes known as prion disease, are rare but fatal degenerative brain diseases, affecting the central nervous system (CNS) which occur in humans and certain other animal species. There are several recognised TSEs including Creutzfeldt-Jakob Disease (CJD) which can be classical, familial, iatrogenic and new variant; Gerstmann Sträussler Scheinker Syndrome (GSS); Fatal Familial Insomnia (FFI) and Kuru.

TSEs are caused by unconventional infectious agents currently thought to be infectious proteins, known as prions. They do not share the normal properties of bacteria and viruses. TSE agents are not uniformly distributed in tissues of infected individuals, and infectivity varies at different stages of incubation. However, in general, neural tissue poses the greatest risk. Blood and other body fluids including dental pulp are assumed to have a low level of infectivity. TSE agents are unusual in that they exhibit resistance to conventional chemical and physical decontamination methods.

Whilst the evidence available to date does not suggest that CJD can be spread from person to person through close contact, it is known that transmission can occur in specific situations associated with medical interventions e.g. neurosurgical procedures.

2. PURPOSE

The purpose of this policy and procedure is to provide concise guidance for all staff and to minimize the potential risks of infection and ensure prompt recognition of those patients who are at risk of infection.

3. SCOPE

This policy and procedure relates to all staff either employed or contracted within East Coast Community Healthcare CIC (ECCH).

4. DEFINITIONS *(if relevant)*

The following definitions are intended to provide a brief explanation of the various terms used within this policy.

Term	Definition
Policy	A policy is a formal written statement detailing an enforceable set of principles or rules. Policies set the boundaries within which we operate. They also reflect the philosophy of our organisation.
C.J.D.	Creutzfeldt-Jacob disease
C.N.S	Central Nervous System
C.O.S.H.H	Control of Substances Hazardous to Health
F.F.I	Fatal Familial Insomnia
Group E Waste	Items used to dispose of urine, faeces and other bodily secretions or excretions, which do not fall within Group A,

	including disposable bedpans or liners, incontinence pads, stoma bags and urine containers.
G.S.S	Gerstmann Straussler Scheinker Syndrome
KURU	A chronic, progressive, fatal central nervous system disorder due to a slow virus and transmissible to subhuman primates; seen only in the fore and neighbouring people of New Guinea
T.S.E	Transmissible Spongiform Encephalopathy
PrP	Prion Proteins

5. RESPONSIBILITIES

- **ECCH Employees** – Are responsible for the implementation of this policy and following the requirements of the policy.

- **Chief Executive of ECCH** – Overall responsibility for the enforcement of this policy lies with the Chief Executive of ECCH

- **ECCH Managers** – Are responsible for ensuring staff adhere to this policy

- **IPACC** – Is responsible for approving this policy

6. POLICY STATEMENT

This policy will be implemented to ensure adherence to safe practice.

7. PROCEDURE

a) Patient Risk Group

When considering measures to prevent transmission of TSE to patients or staff in the healthcare setting, it is useful to make a distinction between
Symptomatic patients i.e., those who fulfil the diagnostic criteria for definite, probable or possible CJD or vCJD or
Patients 'at increased risk' i.e. those with no clinical symptoms, but who are 'at increased risk' of developing CJD or vCJD, because of their family history or medical history.

It is the responsibility of the clinician to ensure that an assessment to determine risk is undertaken using the table below, in descending order of risk.

1. Symptomatic patients	1.1 Patients who fulfil the diagnostic criteria for definite, probable or possible CJD or vCJD. 1.2 Patients with neurological disease of unknown aetiology who do not fit the criteria for possible CJD or vCJD, but where the diagnosis of CJD is being actively considered.
2. Asymptomatic patients at risk from familial forms of CJD linked to genetic mutations	2.1 Individuals who have been shown by specific genetic testing to be at significant risk of developing CJD or other prion disease.

	2.2 Individuals who have a blood relative known to have a genetic mutation indicative of familial CJD. 2.3 Individuals who have or have had two or more blood relatives affected by CJD or other prion disease.
3. Asymptomatic patients at risk from iatrogenic exposure++	3.1 Recipients of hormone derived from human pituitary glands, e.g. growth hormone, gonadotrophin. In the UK, cadaver-derived human growth hormone was banned in 1989 but use of human-derived products may have continued in other countries. 3.2 Individuals who have received a graft of *dura mater*. (People who underwent neurosurgical procedures or operations for a tumour or cyst of the spine before August 1992 may have received a graft of *dura mater*, and should be treated as *at risk*, unless evidence can be provided that *dura mater* was not used). 3.3 Patients who have been contacted as potentially *at risk* including individuals considered to be: a) at risk of CJD/vCJD due to exposure to certain instruments used on a patient who went on to develop CJD/vCJD, or was at risk of vCJD, develop CJD/vCJD, or was at risk of vCJD. b) at risk of vCJD due to receipt of blood components or plasma derivatives. c) at risk of CJD/vCJD due to receipt of tissues/organs. d) at risk of vCJD due to the probability they could have been the source of infection for a patient transfused with their blood who was later found to have vCJD. 3.4 Individuals who have been identified prior to high risk surgery as having blood or blood components from 80 or more donors since January 1980.

(Table available from: PART 4 (publishing.service.gov.uk) p9)

The CJD Section, UKHSA provides national advice and support and can be contacted via

CJD Section, Public Health England
CJD Section
Public Health England
61 Colindale Avenue
London NW9 5EQ
Tel 0208 327 6090
Email: cjd@phe.gov.uk or PHE.cjd@nhs.net

Web: https://www.gov.uk/government/collections/creutzfeldt-jakob-disease-cjd guidance-data-and-analysis

The CJD Section is based in Colindale, London. The CJD Section provides national advice and support to prevent the potential spread of CJD in healthcare settings. The CJD Section aims to:

• monitor the transmission of CJD to people identified as having an increased risk of infection
• reduce the risk of iatrogenic transmission of the CJD agent between patients
• describe the prevalence of CJD in the UK through studies of abnormal prion protein
• provide information for planning and evaluating risk reduction Policies

To achieve these aims, the CJD section:
• provides advice to local trusts, health boards and health protection teams on the implementation of the CJD incidents guidance
• co-ordinates studies of the prevalence of abnormal prion protein
• performs enhanced surveillance on patients at increased risk of CJD

Untitled (publishing.service.gov.uk) p31

b) Infection Control for Patients in Risk Groups

Current available evidence identifies that normal social or routine clinical contact with a TSE patient does **not** present a risk to healthcare workers, relatives or others.
Isolation of patients with TSE is not necessary. However, strict adherence to standard infection control procedures (as with all patients) is required.
Certain invasive interventions may potentially allow exposure to the infective agents of TSEs. The tissues that present the highest risk of exposure are:
• the brain;
• the spinal cord;
• Intracranial secretions of cranial nerves or procedures in which human dura mater was implanted in a patient prior to 1992
• the eye.

It is important to ensure that only trained staff, who are aware of the hazards, carry out invasive procedures that may lead to contact with medium or high risk tissue.

Body secretions, bodily fluids (including saliva, blood and cerebrospinal fluid (CSF) and excreta) are all low risk for TSE. There is currently no evidence of infectivity in saliva, body secretions or faeces. Therefore, it is likely that the majority of samples taken will be low risk.

Blood and body fluid samples from patients with, or “at increased risk” of, CJD should be treated as potentially infectious for blood-borne viruses and handled with standard infection prevention and control precautions as for any other patient, i.e.;
• use of disposable gloves and eye protection where splashing may occur;
• avoidance of sharps injuries and other forms of parenteral exposure;
• safe disposal of sharps and contaminated waste in line with locally approved arrangements; and
• single-use disposable equipment should be used wherever practicable.

Hand washing, as with all patient care remains of paramount importance.

All staff responsible for care of patients in any of the risk groups should be fully aware of the recommendations of the report of the Advisory Committee on Dangerous Pathogens – Spongiform Encephalopathy Advisory Committee (DoH 2003).

c) Minor Surgery, Dentistry, Podiatry and Other Minor Invasive Procedures Tissue Infectivity

The following tissues have been categorised according to their CJD/vCJD infectivity:

- High risk – Brain, Spinal cord, Posterior eye, Intracranial secretions of cranial nerves;
- Medium risk – Olfactory epithelium plus gastro-intestinal Lymphoid tissue only in a case of vCJD
- Low / no detectable risk – Anterior eye and cornea and other tissues

It is considered that all procedures undertaken in Primary Care will fall into the low/no detectable risk category. However, if staff have a query about the risk category for **ANY** procedure that is undertaken they must contact the Health Protection Nurse/Consultant at the local UKHSA for further advice. 03003038537

Sample Collection and Labelling

Specimens containing potentially infectious TSE material (e.g. blood, CSF) should be labelled in accordance with your local trust policy and marked with a Biohazard label. Samples must be securely sealed and the laboratory form completed with all the necessary patient details, including the patient's clinical history of their known, suspected or at risk TSE status. In the laboratory setting these specimens are dealt with in a level 2 cabinet.

Samples must be transported in a sealed plastic specimen bag.

The request form must accompany the specimen but must be placed within the appropriate separate pouch of the bag. It is advisable to inform the laboratory in advance that a sample is being sent.

Care and Decontamination of Instruments

Single-use disposable surgical instruments and equipment should be used where possible.
The risks of transmission of infection from minor surgical/dental/podiatry instruments are thought to be **very low** provided optimal standards of infection control and decontamination are maintained. This low risk will be the same for other minor invasive procedures undertaken by any other healthcare workers.
Such instruments used on patients can be handled in the same way as those used in any other low risk surgery i.e. taking a precautionary approach.
These instruments can be reprocessed according to best practice and returned to use. Optimal reprocessing standards must be observed. Effective tracking of reusable instruments should be in place, so that instruments can be related to use on a particular patient

Additionally, practitioners are reminded that any instruments labelled by manufacturers as "single use" should not be re-used under any circumstances.

d) Standard Precautions

CJD does not present a risk to others through routine clinical or normal social contact. Families and friends are not to be discouraged from ordinary contact.

Blood or Body Fluid Spillage

When dealing with blood / bodily fluids staff and carers should always wear protective clothing i.e. gloves and apron, as per standard precautions which should be discarded as clinical waste.
Trust policy must be adhered to.

N.B. Standard infection control precautions should be used to clear up spillages as quickly as possible of all materials from patients with, or at "increased risk" of CJD/vCJD in a healthcare setting. 10,000ppm chlorine-releasing agent is recommended.

Spillages of blood and bodily fluids (faeces, vomit, pus, and urine)

Wearing appropriate personal protective equipment (disposable gloves and apron), absorb as much of the blood/ bodily fluids as possible using paper towels (e.g. kitchen roll) and discard in a orange clinical waste bag.

- Clean area thoroughly with hot soapy water and dry.
- Use disposable cloths and discard after use.
- Dispose of gloves, apron and used disposable equipment in an orange clinical waste bag.

Waste

Any waste (including cleaning tools such as mop heads, and PPE worn) should be disposed of as clinical waste.
General guidance on the safe management of clinical waste is given in the Department of Health's guidance HTM 07-01 Management and disposal of healthcare waste. Available from: NHS England » (HTM 07-01) Management and disposal of healthcare waste

Hand washing is very important after dealing with blood and/or bodily fluids

If there are any concerns regarding the risks and interventions required when caring for patients with CJD either in hospital or within the community staff should contact the Infection Prevention and Control Team on 01502 445361.

Out of hours contact the on-call consultant microbiologist via James Paget University Hospital switchboard, 01493 452 452

8. MONITORING AND REVIEW

This document will be reviewed by the **I**nfection Control Team, March 2025 or sooner if changes in legislation occur or new best practice evidence becomes available.

9. REFERENCES

- GOV.UK (2021) Minimise transmission risk of CJD and vCJD in healthcare settings. Available from: https://www.gov.uk/government/publications/guidance-from-the-acdp-tse-risk-management-subgroup-formerly-tse-working-group [Accessed 31.01.2023].
- NHS (2021) HTM 07-01 Management and disposal of healthcare waste. Available from: NHS England » (HTM 07-01) Management and disposal of healthcare waste [Accessed 07.02.2023]
- Advisory Committee on Dangerous Pathogens Spongiform Encephalopathy Advisory Committee.(1998) Transmissible Spongiform Encephalopathy Agents: Safe working and the prevention of infection. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260961/report.pdf [Accessed 31.01.2023].
- WHO Transmissible Spongiform Encephalopathies Transmissible Spongiform Encephalopathies (who.int) [Accessed 31.01.2023].

10. ASSOCIATED POLICIES & PROCEDURES *(To include but not limited to)*

- Standard Precautions

11. AUTHOR

Infection Prevention & Control Team

12. Equality & Diversity Impact Assessment

In reviewing this policy, the HR Policy Group considered, as a minimum, the following questions:
 Are the aims of this policy clear?
 Are responsibilities clearly identified?
 Has the policy been reviewed to ascertain any potential discrimination?
 Are there any specific groups impacted upon?
 Is this impact positive or negative?
 Could any impact constitute unlawful discrimination?
 Are communication proposals adequate?
 Does training need to be given? If so is this planned?

Adverse impact has been considered for age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex, sexual orientation.

13. DOCUMENT CONTROL SHEET

Name of Document:	Transmissible Spongiform Encephalopathies (TSE) Policy
Version:	8
File Location / Document Name:	ECCHO
Date Of This Version:	Version
Produced By (Designation):	Infection Prevention & Control Team
Reviewed By:	Infection Prevention & Control Team
Synopsis And Outcomes of Consultation Undertaken:	Changes relating to relevant committees/groups involved in ratification processes.
Synopsis And Outcomes of Equality and Diversity Impact Assessment:	No specific issues. National EIA gives more details on measures to reduce HCAIs
Ratified By (Committee):-	IPACC
Date Ratified:	March 2023
Distribute To:	Policies Team
Date Due For Review:	March 2025
Enquiries To:	infectionprevention@ecchcic.nhs.uk
Approved by Appropriate Group/Committee **Approved by Policy Group** **Presented to IGC for information**	☐ Date: ☐ Date: ☐ Date:

Version Control

Version Date	Version No.	Author/ Reviewer	Comments
March 2011	2	IPCT	Updated in line with new HPA guidance issued Jan 2011
February 2013	3	IPCT	
December 2014	4	IPCT	
February 2017	5	IPCT	
December 2018	6	IPCT	
June 2021	7	IPCT	
March 2023	8	IPCT	Update of tables & references