Site visit inspection report on compliance with HTA minimum standards

Queen's Medical Centre

HTA licensing number 11035

Licensed for the

- **procurement, testing, storage and distribution of human tissues and cells for human application under the Human Tissue (Quality and Safety for Human Application) Regulations 2007 (as amended)**

13th & 14th February 2019

Summary of inspection findings

The HTA found the Designated Individual, the Licence Holder and the premises to be suitable in accordance with the requirements of the legislation.

Although the HTA found that Queen's Medical Centre, (the establishment) had met the majority of the HTA standards, seven minor shortfalls were found in relation to governance and quality systems, and premises, facilities and equipment. The shortfalls relate to the establishment's assessment of donor medical history, validation of the transport kits, inconsistencies of standard operating procedures (SOPs), absence of temperature monitoring, retention of raw data for the required time period, records of products coming into contact with tissue, and risk assessments for the use of test kits stored outside of the validated temperature range.

The HTA's regulatory requirements

The HTA must assure itself that the Designated Individual, Licence Holder, premises and practices are suitable.

The statutory duties of the Designated Individual are set down in Section 18 of the Human Tissue Act 2004. They are to secure that:

- the other persons to whom the licence applies are suitable persons to participate in the carrying-on of the licensed activity;
- suitable practices are used in the course of carrying on that activity; and
- the conditions of the licence are complied with.

The HTA developed its licensing standards with input from its stakeholders. They are designed to ensure the safe and ethical use of human tissue and the dignified and respectful treatment of the deceased. The HTA inspects the establishments it licences against four groups of standards:

- consent
- governance and quality systems
- premises facilities and equipment
- disposal.

This is an exception-based report: only those standards that have been assessed as not met are included. Where the HTA determines that a standard is not met, the level of the shortfall is classified as 'Critical', 'Major' or 'Minor' (see Appendix 2: Classification of the level of shortfall). Where HTA standards are fully met, but the HTA has identified an area of practice that could be further improved, advice is given to the DI.

Reports of HTA inspections carried out from 1 November 2010 are published on the HTA's website.

Licensable activities carried out by the establishment

'E' = Establishment is licensed to carry out this activity.

'E*' = Establishment is licensed to carry out this activity but is not currently carrying it out.

'TPA' = Third party agreement; the establishment is licensed for this activity but another establishment (unlicensed) carries out the activity on their behalf.

Tissue Category; Tissue Type	Procurement	Processing	Testing	Storage	Distribution	Import	Export
Musculoskeletal, Bone; Bone	**E**		**TPA**	**E**	**E**		
Musculoskeletal, Tendon & Ligament; Tendons				**E**			
Musculoskeletal, Tendon & Ligament; Ligaments				**E**			
Musculoskeletal, Bone; Acellular bone				**E**			
Membrane, Amniotic				**E**			
Other Limbal Stem Cells (ATMP)	**E***		**TPA**				

Background to the establishment and description of inspection activities undertaken

The licensable activities of the Nottingham Tissue Bank take place at Queen's Medical Centre Hospital (the hub; QMC) and City Hospital, which is a satellite site. The activities covered under the licence are procurement, donor testing, storage and distribution of human tissues and cells under the Human Tissue (Quality and Safety for Human Application) Regulations 2007 (as amended). The majority of licensable activities under this license relate to femoral heads procured from patients undergoing elective hip replacement surgery at City Hospital. Besides procured bone, the tissue bank stores commercially supplied amniotic membrane, tendons and acellular bone products. The licence covers procurement of limbal stem cells for Advanced Therapy Medicinal Product (ATMP) manufacturing; however, this activity is currently not taking place.

The donor selection and consenting takes place at City Hospital. Patients undergoing elective hip surgery are assessed and consented for bone donation by specialist nurses who also take the medical and social history. On the day of surgery blood samples for the mandatory serological testing are taken by the anaesthetist. Two bone swabs and a bone chip are taken from the procured bone for microbiology testing. Testing takes place at the microbiology and virology laboratory at QMC. Serology samples received at the testing laboratory out of normal working hours are kept in a fridge for a maximum of 120 hours. For confirmatory testing, the bloods are sent to other licensed testing laboratories for further testing on different platforms.

Upon procurement at City Hospital femoral heads are washed in sterile saline and placed in a sterile tamper-evident screw-capped pot. A unique bone bank number is written on the pot and a patient detail sticker affixed to it before being double-bagged and stored in a -80°C freezer within the theatre area. At the time of the inspection newly procured bone was kept within a separate compartment of the 'release' freezer due to a recent breakdown of the quarantine freezer. The freezer may also be used for bones for specific patients and Rhesus negative femoral heads for emergency surgery. The paperwork of quarantined and released bone is visibly different in colour.

Newly procured femoral heads are stored at City Hospital until collection. A courier company transports them to the hub in validated insulating boxes with frozen cool packs provided by the hub. Upon receipt at the hub, the femoral heads are weighed and placed into a quarantine freezer (-80°C). Details of each procurement are entered into the bone bank register and an electronic database. The establishment also determines the blood group and Rhesus status of all donors, in the event a femoral head is used in recipients of childbearing age. Once the initial serology and microbiology tests are confirmed to be negative, femoral heads are moved from the quarantine freezer to the bottom half of a second -80°C freezer, and the bone bank register and electronic database are updated. Any samples with a positive result are disposed of according to the Trust's disposal policy. The reason for disposal is documented.

In order to arrange for the 180-day serology blood, the DI writes to the patient. The blood sample is taken either during the post-operative review appointment or at the patient's home visited by a phlebotomist. Once this second serology result is received and test results are negative, the bone is moved into the upper "release" compartment of the same freezer. As part of the release procedure a "Tissue acceptance and release form" is filled in which includes a comprehensive checklist including the graft number, the packaging being intact, verification that the serology and microbiology test results are negative, and that the tissue has been authorised for clinical use.

The Single European Code (SEC) is generated by the DI for each released bone, and four barcode stickers stating the SEC and unique bone bank number are printed. One sticker is

affixed to the pot and one is affixed to the release paperwork. The two other stickers are for the recipient's records and the records held by the DI, respectively. Upon release of bone to the orthopaedic teams at QMC or City Hospital, the SEC number on the pot is visually cross-checked against the release form and also using a barcode scanner which shows an alert in case of a discrepancy.

Adjacent to the orthopaedic theatres at QMC, a -80°C freezer holds a small number of ready for release femoral heads for trauma surgery. This freezer is temperature-monitored and alarmed. The freezer is in a secure area; it is unlocked and all trained theatre personnel have access.

Occasionally the establishment procures ribs for autologous use in spinal surgery. These are stored on a separate shelf in the -80°C quarantine freezer, and records are maintained in a separate register. The same set of serology testing is performed as for allogeneic bone. The hub also stores tendons and ligaments purchased from licensed tissue suppliers in a separate section of the second freezer.

Amniotic membrane for ocular surgery is stored at the establishment in a room adjacent to the ophthalmology theatres. It is purchased from another HTA-licensed tissue supplier. The establishment maintains a traceability register for every tissue used in patients by recording the size and product code, SEC, patient identity, date of order, fate of tissue, and the surgeon involved in the operation. The product label is affixed against this information.

The establishment has taken part in a clinical trial using autologous cultivated limbal stem cell transplantation in patients with ocular injuries. While the activity is currently not carried out by the establishment the ophthalmology team plans to recommence it. Donor selection, consent and procurement will take place at the hub, and serology and microbiology testing will be done in the microbiology laboratory at QMC. The cell processing and culture will take place in Italy before the product is returned to QMC for autologous use.

The establishment has been licensed by the HTA since January 2007. This report describes the establishment's sixth routine inspection. The inspection included discussions with the Designated Individual (DI), the bone bank research technician at the hub, a senior theatre nurse at the hub and a senior theatre nurse at City Hospital who are all Persons Designate (PDs) on the licence, and key staff at the testing laboratories during the visual inspection. A review of documentation relevant to the establishment's licensable activities and a visual inspection of the areas of the establishment where tissue storage (at QMC and City Hospital), and microbiology and serology testing take place were also undertaken as part of the inspection.

Audits of traceability were carried out and included a review of the storage locations of two femoral heads in the quarantine freezer, and two femoral heads, one cortical strut, and one extensor mechanism allograft kept in the "ready for release" section of the second freezer. All items were cross-checked against the bone bank register. In addition, the patient files of four femoral head donor and recipient files were reviewed to ensure that they contained all the relevant documentation, including serology and microbiology test results. No discrepancies were found.

Inspection findings

The HTA found the Designated Individual and the Licence Holder to be suitable in accordance with the requirements of the legislation.

Compliance with HTA standards

Governance and Quality

Standard	Inspection findings	Level of shortfall
GQ1 All aspects of the establishment's work are supported by ratified documented policies and procedures as part of the overall governance process.		
b) There are procedures for all licensable activities that ensure integrity of tissue and / or cells and minimise the risk of contamination.	The SOPs are not sufficiently detailed to ensure consistency of practices described. For example: • The SOP for storage of amniotic membrane does not include the correct storage temperature range as recommended by the manufacturer. • The establishment's documentation for use of bone does not state the procedure for bone that has been taken out of the freezer but is not used during the operation. • The electronic records that need updating upon the release of bone are not specified within the relevant SOP. • No SOP is in place which describes the packing of procurement kits, which include blood collection tubes, swabs, and pots. • The SOP for retrieval of bones does not document procedures for serology samples obtained out of hours or after procurement. The SOP does not state into which freezer newly procured bone is placed. • The SOP for reception of serology samples in the microbiology laboratory does not detail how and where whole blood is stored if it is not processed straightaway. • The SOP for receipt of serology results does not specify whether inconclusive serology results that required confirmatory testing result in release or disposal of the allograft.	**Minor**

GQ4 There is a systematic and planned approach to the management of records.		
h) Raw data which are critical to the safety and quality of tissues and cells are kept for 10 years after the use, expiry date or disposal of tissues and / or cells.	The testing laboratory's SOP states an incorrect retention time for raw data.	**Minor**
j) Records are kept of products and material coming into contact with the tissues and / or cells.	The establishment does not record batch numbers of the saline that comes into contact with the tissue.	**Minor**
GQ5 There are documented procedures for donor selection and exclusion, including donor criteria.		
a) Donors are selected either by the establishment or the third party acting on its behalf in accordance with the criteria required by Directions 002/2018.	The establishment does not sufficiently assess the risk of the donor acquiring an infectious disease based on travel history.	**Minor**
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately.		
a) There are documented risk assessments for all practices and processes.	During the inspection is was noted that kits in the testing laboratory's fridge were, on occasions, being stored at temperatures exceeding the limits set by the manufacturer. No documented procedure for handling such temperature excursions was in place and the establishment was not able to evidence that appropriate consideration has been given as to whether the kits remained suitable for use.	**Minor**

Premises, Facilities and Equipment

Standard	Inspection findings	Level of shortfall
PFE3 There are appropriate facilities for the storage of bodies, body parts, tissues, cells, consumables and records.		
c) Tissues and / or cells are stored in controlled, monitored and recorded conditions that maintain tissue and / or cell integrity.	The room in which amniotic membrane is stored is not temperature-monitored.	**Minor**
PFE4 Systems are in place to protect the quality and integrity of bodies, body parts, tissues and cells during transport and delivery to a destination.		
g) Critical transport conditions required to maintain the properties of tissue and / or cells are defined and documented. h) Packaging and containers used for transportation are validated to ensure they are fit for purpose.	The basis for temperature limits during transport of samples between the satellite and hub has not been justified and documented. Furthermore, the basis for the upper temperature limit used in the establishment's validation of its transport kits has not been documented. The thermometer used for the validation of the transport box was unsuitable as it does not record temperatures below -40°C.	**Minor**

Advice

The HTA advises the DI to consider the following to further improve practices:

No.	Standard	Advice
1.	C3a	The DI is advised to define the period in which training and competency assessments of new staff need to be completed.
2.	GQ1b	The DI is advised to carry out a two-person check and sign-off together with a PD for releasing bone from quarantine.
3.	GQ1c	The DI is advised to ensure more staff from the testing laboratories and the ophthalmology department take part in governance meetings.
4.	GQ1p	The DI currently has a third party agreement in place with the testing laboratory at QMC. Since the laboratory is no longer part of an external organisation but QMC, such an agreement is not necessarily required. The DI must put measures in place that allow her to have full oversight of the laboratory's activities under the licence.

5.	GQ4f	The DI is advised to implement appropriate procedures to ensure they are alerted to bone donors in whom blood samples were taken after possible haemodilution.
6.	GQ4g	The DI is advised to remove patient names from a whiteboard attached to the bone bank release freezer as the room can be accessed by research personnel.
7.	GQ4h	For two weeks in 2018 freezer temperatures in the bone bank were not recorded electronically and only checked visually. If a technical issue occurs again the DI is advised to formally document temperatures to maintain a complete record.
8.	GQ7	Temperature excursions of fridges and freezers in the testing laboratory are documented but unexplained. The DI is advised to review such temperature excursions which need to be documented and explained.
9.	PFE2a	The DI is advised to provide differently coloured labels for the packed femoral heads to staff at City Hospital to aid visual discrimination between quarantined and released femoral heads in case only one freezer is in use due to freezer breakdown.
10.	PFE3a	The DI should ensure plug switches are covered to ensure the switches are secure and that they are protected from accidental disruption of the power supply.

Concluding comments

There are a number of areas of practice that require improvement, including seven minor shortfalls in relation to governance and quality systems, and premises, facilities and equipment.

The HTA requires that the Designated Individual addresses the shortfalls by submitting a completed corrective and preventative action (CAPA) plan within 14 days of receipt of the final report (refer to Appendix 2 for recommended timeframes within which to complete actions). The HTA will then inform the establishment of the evidence required to demonstrate that the actions agreed in the plan have been completed.

The HTA has assessed the establishment as suitable to be licensed for the activities specified subject to corrective and preventative actions being implemented to meet the shortfalls identified during the inspection.

Report sent to DI for factual accuracy: 12th March 2019

Report returned from DI: 25th March 2019

Final report issued: 28th March 2019

Completion of corrective and preventative actions (CAPA) plan

Based on information provided, the HTA is satisfied that the establishment has completed the agreed actions in the CAPA plan and in doing so has taken sufficient action to correct all shortfalls addressed in the Inspection Report.

Date: 31 July 2019

Appendix 1: HTA standards

The HTA standards applicable to this establishment are shown below; those not assessed during the inspection are shown in grey text. Individual standards which are not applicable to this establishment have been excluded.

Human Tissue (Quality and Safety for Human Application) Regulations 2007 Standards

Consent

Standard
C1 Consent is obtained in accordance with the requirements of the HT Act 2004, the Human Tissue (Quality and Safety for Human Application) Regulations 2007 and as set out in the HTA's Codes of Practice.
a) If the establishment acts as a procurer of tissues and / or cells, there is an established process for acquiring donor consent which meets the requirements of the HT Act 2004 the Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q&S Regulations) and the HTA's Codes of Practice
c) The establishment or the third party's procedure on obtaining donor consent includes how potential donors are identified and who is able to take consent.
d) Consent forms comply with the HTA Codes of Practice.
e) Completed consent forms are included in records and are made accessible to those using or releasing tissue and / or cells for a Scheduled Purpose.
C2 Information about the consent process is provided and in a variety of formats.
a) The procedure on obtaining consent details what information will be provided to donors. As a minimum, the information specified by Directions 002/2018 is included.
c) Information is available in suitable formats and there is access to independent interpreters when required.
d) There are procedures to ensure that information is provided to the donor or donor's family by trained personnel.

C3 Staff involved in seeking consent receive training and support in the implications and essential requirements of taking consent.
a) Staff involved in obtaining consent are provided with training on how to take informed consent in accordance with the requirements of the HT Act 2004 and Code of Practice on Consent.
b) Training records are kept demonstrating attendance at training on consent.

Governance and Quality

Standard
GQ1 All aspects of the establishment's work are supported by ratified documented policies and procedures as part of the overall governance process.
a) There is an organisational chart clearly defining the lines of accountability and reporting relationships.
b) There are procedures for all licensable activities that ensure integrity of tissue and / or cells and minimise the risk of contamination.
c) There are regular governance meetings, for example health and safety, risk management and clinical governance committees, which are recorded by agendas and minutes.
d) There is a document control system to ensure that changes to documents are reviewed, approved, dated and documented by an authorised person and only current documents are in use.
e) There are procedures for tissue and / or cell procurement, which ensure the safety of living donors.
g) There are procedures to ensure that an authorised person verifies that tissues and / or cells received by the establishment meet required specifications.
h) There are procedures for the management and quarantine of non-conforming consignments or those with incomplete test results, to ensure no risk of cross contamination.
i) There are procedures to ensure tissues and / or cells are not released from quarantine until verification has been completed and recorded.
j) There are procedures detailing the critical materials and reagents used and where applicable, materials and reagents meet the standards laid down by the European directives on medical devices and in vitro diagnostic medical devices.
k) There is a procedure for handling returned products.
l) There are procedures to ensure that in the event of termination of activities for whatever reason, stored tissues and / or cells are transferred to another licensed establishment or establishments.
m) The criteria for allocating tissues and / or cells to patients and health care institutions are documented and made available to these parties on request.
o) There is a complaints system in place.
p) There are written agreements with third parties whenever an activity takes place that has the potential to influence the quality and safety of human tissues and / or cells.

q) There is a record of agreements established with third parties.
r) Third party agreements specify the responsibilities of the third party and meet the requirements set out in Directions 002/2018.
s) Third party agreements specify that the third party will inform the establishment in the event of a serious adverse reaction or event.
t) There are procedures for the re-provision of service in an emergency.
GQ2 There is a documented system of quality management and audit.
a) There is a quality management system which ensures continuous and systematic improvement.
b) There is an internal audit system for all licensable activities.
c) An audit is conducted in an independent manner at least every two years to verify compliance with protocols and HTA standards, and any findings and corrective actions are documented.
d) Processes affecting the quality and safety of tissues and / or cells are validated and undergo regular evaluation to ensure they continue to achieve the intended results.
GQ3 Staff are appropriately qualified and trained in techniques relevant to their work and are continuously updating their skills.
a) There are clearly documented job descriptions for all staff.
b) There are orientation and induction programmes for new staff.
c) There are continuous professional development (CPD) plans for staff and attendance at training is recorded.
d) There is annual documented mandatory training (e.g. health and safety and fire).
e) Personnel are trained in all tasks relevant to their work and their competence is recorded.
f) There is a documented training programme that ensures that staff have adequate knowledge of the scientific and ethical principles relevant to their work, and the regulatory context.
g) There is a documented training programme that ensures that staff understand the organisational structure and the quality systems used within the establishment.
h) There is a system of staff appraisal.
i) Where appropriate, staff are registered with a professional or statutory body.
j) There are training and reference manuals available.
k) The establishment is sufficiently staffed to carry out its activities.
GQ4 There is a systematic and planned approach to the management of records.
a) There are procedures for the creation, identification, maintenance, access, amendment, retention and destruction of records.
b) There is a system for the regular audit of records and their content to check for completeness, legibility and accuracy and to resolve any discrepancies found.

c) Written records are legible and indelible. Records kept in other formats such as computerised records are stored on a validated system.
d) There is a system for back-up / recovery in the event of loss of computerised records.
e) The establishment keeps a register of the types and quantities of tissues and / or cells that are procured, tested, preserved, processed, stored and distributed or otherwise disposed of, and on the origin and destination of tissues and cells intended for human application.
f) There are procedures to ensure that donor documentation, as specified by Directions 002/2018, is collected and maintained.
g) There is a system to ensure records are secure and that donor confidentiality is maintained in accordance with Directions 002/2018.
h) Raw data which are critical to the safety and quality of tissues and cells are kept for 10 years after the use, expiry date or disposal of tissues and / or cells.
i) The minimum data to ensure traceability from donor to recipient as required by Directions 002/2018 are kept for 30 years after the use, expiry or disposal of tissues and / or cells.
j) Records are kept of products and material coming into contact with the tissues and / or cells.
k) There are documented agreements with end users to ensure they record and store the data required by Directions 002/2018.
l) The establishment records the acceptance or rejection of tissue and / or cells that it receives and in the case of rejection why this rejection occurred.
m) In the event of termination of activities of the establishment a contingency plan to ensure records of traceability are maintained for 10 or 30 years as required.
GQ5 There are documented procedures for donor selection and exclusion, including donor criteria.
a) Donors are selected either by the establishment or the third party acting on its behalf in accordance with the criteria required by Directions 002/2018.
b) The testing of donors by the establishment or a third party on behalf of the establishment is carried out in accordance with the requirements of Directions 002/2018.
c) In cases other than autologous donors, donor selection is carried out by authorised personnel and signed and reviewed by a qualified health professional.
d) There is a system in place either at the establishment or at a third party acting on its behalf to record results of donor selection and associated tests.
e) Testing of donor samples is carried out using CE marked diagnostic tests.
f) Samples taken for donor testing are clearly labelled with the time and place the sample was taken and a unique donor identification code.
GQ6 A coding and records system facilitates traceability of tissues and / or cells, ensuring a robust audit trail.
a) There is a donor identification system which assigns a unique code to each donation and to each of the products associated with it.

b) An audit trail is maintained, which includes details of when the tissues and / or cells were acquired and from where, the uses to which the tissues and / or cells were put, when the tissues and / or cells were transferred elsewhere and to whom.
c) The establishment has procedures to ensure that tissues and / or cells imported, procured, processed, stored, distributed and exported are traceable from donor to recipient and vice versa.
d) The requirements of the Single European Code are adhered to as set out in Directions 002/2018.
GQ7 There are systems to ensure that all adverse events, reactions and/or incidents are investigated promptly.
a) There are procedures for the identification, reporting, investigation and recording of adverse events and reactions, including documentation of any corrective or preventative actions.
b) There is a system to receive and distribute national and local information (e.g. HTA regulatory alerts) and notify the HTA and other establishments as necessary of serious adverse events or reactions.
c) The responsibilities of personnel investigating adverse events and reactions are clearly defined.
d) There are procedures to identify and decide the fate of tissues and / or cells affected by an adverse event, reaction or deviation from the required quality and safety standards.
e) In the event of a recall, there are personnel authorised within the establishment to assess the need for a recall and if appropriate initiate and coordinate a recall.
f) There is an effective, documented recall procedure which includes a description of responsibilities and actions to be taken in the event of a recall including notification of the HTA and pre-defined times in which actions must be taken.
g) Establishments distributing tissue and / or cells provide information to end users on how to report a serious adverse event or reaction and have agreements with them specifying that they will report these events or reactions.
h) Establishments distributing tissues and / or cells have systems to receive notifications of serious adverse events and reactions from end users and notify the HTA.
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately.
a) There are documented risk assessments for all practices and processes.
b) Risk assessments are reviewed regularly, as a minimum annually or when any changes are made that may affect the quality and safety of tissues and cells.
c) Staff can access risk assessments and are made aware of local hazards at training.
d) A documented risk assessment is carried out to decide the fate of any tissue and / or cells stored prior to the introduction of a new donor selection criteria or a new processing step, which enhances the quality and safety of tissue and / or cells.

Premises, Facilities and Equipment

Standard
PFE1 The premises are fit for purpose.
a) A risk assessment has been carried out of the premises to ensure that they are fit for purpose.
b) There are procedures to review and maintain the safety of staff, visitors and patients.
c) The premises have sufficient space for procedures to be carried out safely and efficiently.
e) There are procedures to ensure that the premises are secure and confidentiality is maintained.
f) There is access to a nominated, registered medical practitioner and / or a scientific advisor to provide advice and oversee the establishment's medical and scientific activities.
PFE2 Environmental controls are in place to avoid potential contamination.
a) Tissues and / or cells stored in quarantine are stored separately from tissue and / or cells that have been released from quarantine.
c) There are procedures for cleaning and decontamination.
d) Staff are provided with appropriate protective clothing and equipment that minimise the risk of contamination of tissue and / or cells and the risk of infection to themselves.
PFE3 There are appropriate facilities for the storage of tissues and / or cells, consumables and records.
a) Tissues, cells, consumables and records are stored in secure environments and precautions are taken to minimise risk of damage, theft or contamination.
b) There are systems to deal with emergencies on a 24 hour basis.
c) Tissues and / or cells are stored in controlled, monitored and recorded conditions that maintain tissue and / or cell integrity.
d) There is a documented, specified maximum storage period for tissues and / or cells.
PFE4 Systems are in place to protect the quality and integrity of tissues and / or cells during transport and delivery to its destination.
a) There is a system to ensure tissue and / or cells are not distributed until they meet the standards laid down by Directions 002/2018.
b) There are procedures for the transport of tissues and / or cells which reflect identified risks associated with transport.
c) There is a system to ensure that traceability of tissues and / or cells is maintained during transport.
d) Records are kept of transportation and delivery.
e) Tissues and / or cells are packaged and transported in a manner and under conditions that minimise the risk of contamination and ensure their safety and quality.

f) There are third party agreements with courier or transport companies to ensure that any specific transport conditions required are maintained.
g) Critical transport conditions required to maintain the properties of tissue and / or cells are defined and documented.
h) Packaging and containers used for transportation are validated to ensure they are fit for purpose.
i) Primary packaging containing tissues and / or cells is labelled with the information required by Directions.
j) Shipping packaging containing tissues and / or cells is labelled with the information required by Directions.
PFE5 Equipment is appropriate for use, maintained, quality assured, validated and where appropriate monitored.
a) Critical equipment and technical devices are identified, validated, regularly inspected and records are maintained.
b) Critical equipment is maintained and serviced in accordance with the manufacturer's instructions.
c) Equipment affecting critical processes and storage parameters is identified and monitored to detect malfunctions and defects and procedures are in place to take any corrective actions.
d) New and repaired equipment is validated before use and this is documented.
e) There are documented agreements with maintenance companies.
f) Cleaning, disinfection and sanitation of critical equipment is performed regularly and this is recorded.
g) Instruments and devices used for procurement are sterile, validated and regularly maintained.
h) Users have access to instructions for equipment and receive training in the use of equipment and maintenance where appropriate.
i) Staff are aware of how to report an equipment problem.
j) For each critical process, the materials, equipment and personnel are identified and documented.
k) There are contingency plans for equipment failure.

Disposal

Standard
D1 There is a clear and sensitive policy for disposing of tissues and / or cells.
a) The disposal policy complies with HTA's Codes of Practice.
b) The disposal procedure complies with Health and Safety recommendations.
c) There is a documented procedure on disposal which ensures that there is no cross contamination.

D2 The reasons for disposal and the methods used are carefully documented.
a) There is a procedure for tracking the disposal of tissue and / or cells that details the method and reason for disposal.
b) Disposal arrangements reflect (where applicable) the consent given for disposal.

Appendix 2: Classification of the level of shortfall (HA)

Where the HTA determines that a licensing standard is not met, the improvements required will be stated and the level of the shortfall will be classified as 'Critical', 'Major' or 'Minor'. Where the HTA is not presented with evidence that an establishment meets the requirements of an expected standard, it works on the premise that a lack of evidence indicates a shortfall.

The action an establishment will be required to make following the identification of a shortfall is based on the HTA's assessment of risk of harm and/or a breach of the HT Act or associated Directions.

1. **Critical shortfall:**

   A shortfall which poses a significant direct risk of causing harm to a recipient patient or to a living donor,

   Or

   A number of 'major' shortfalls, none of which is critical on its own, but viewed cumulatively represent a systemic failure and therefore are considered 'critical'.

   A critical shortfall may result in one or more of the following:

   (1) A notice of proposal being issued to revoke the licence

   (2) Some or all of the licensable activity at the establishment ceasing with immediate effect until a corrective action plan is developed, agreed by the HTA and implemented.

   (3) A notice of suspension of licensable activities

   (4) Additional conditions being proposed

   (5) Directions being issued requiring specific action to be taken straightaway

2. **Major shortfall:**

   A non-critical shortfall.

   A shortfall in the carrying out of licensable activities which poses an indirect risk to the safety of a donor or a recipient

   or

   A shortfall in the establishment's quality and safety procedures which poses an indirect risk to the safety of a donor or a recipient;

   or

   A shortfall which indicates a major deviation from the Human Tissue (Quality and Safety for Human Application) Regulations 2007 or the HTA Directions;

or

A shortfall which indicates a failure to carry out satisfactory procedures for the release of tissues and cells or a failure on the part of the designated individual to fulfil his or her legal duties;

or

A combination of several 'minor' shortfalls, none of which is major on its own, but which, viewed cumulatively, could constitute a major shortfall by adversely affecting the quality and safety of the tissues and cells.

In response to a major shortfall, an establishment is expected to implement corrective and preventative actions within 1-2 months of the issue of the final inspection report. Major shortfalls pose a higher level of risk and therefore a shorter deadline is given, compared to minor shortfalls, to ensure the level of risk is reduced in an appropriate timeframe.

3. **Minor shortfall:**

A shortfall which cannot be classified as either critical or major and, which can be addressed by further development by the establishment.

This category of shortfall requires the development of a corrective action plan, the results of which will usually be assessed by the HTA either by desk based review or at the time of the next inspection.

In response to a minor shortfall, an establishment is expected to implement corrective and preventative actions within 3-4 months of the issue of the final inspection report.

Follow up actions

A template corrective and preventative action plan will be sent as a separate Word document with both the draft and final inspection report. You must complete this template and return it to the HTA within 14 days of the issue of the final report.

Based on the level of the shortfall, the HTA will consider the most suitable type of follow-up of the completion of the corrective and preventative action plan. This may include a combination of

- a follow-up site-visit inspection
- a request for information that shows completion of actions
- monitoring of the action plan completion
- follow up at next desk-based or site-visit inspection.

After an assessment of your proposed action plan you will be notified of the follow-up approach the HTA will take.