Site visit inspection report on compliance with HTA minimum standards

Queen's University Belfast

HTA licensing number 12044

Licensed under the Human Tissue Act 2004 for the

- **storage of relevant material which has come from a human body for use for a scheduled purpose**

14 August 2013

Summary of inspection findings

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

Queen's University Belfast was found to have met all HTA standards.

Particular examples of strengths and good practice are included in the concluding comments section of the report.

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.

Background to the establishment and description of inspection activities undertaken

This report describes the first site visit inspection of the research licence held by Queen's University Belfast. This establishment sponsors and hosts the Northern Ireland Biobank (NI Biobank) which was set up in 2011 for the purpose of facilitating cancer research studies utilising human tissue. The NI Biobank is a Research Tissue Bank (RTB) which has received recognised ethical approval in Northern Ireland and contains a number of different tissue types made available through prospective tissue collections, that involves storage of tumour

tissue made available after surgery. Only surplus tumour tissue is used and banked for research purposes with enduring consent. The decision to include such tissue is determined by NHS Pathology Services who review the tissue and decide whether there is enough tissue for diagnostic and research purposes. The biobank also contains retrospectively collected blocks and slides that have been made available as a result of pathology diagnosis. Research Nurses work across the NHS establishments and the University site and are responsible for obtaining informed consent from participants undergoing surgery. The Research Nurses are then responsible for storing the material within the -80^{0}C storage facility based in one of the departments of the establishment. The establishment also hosts research studies with project specific ethical approval. Human tissue samples are stored under the licence where ethical approval has lapsed as well as existing holdings (i.e human tissue stored prior to 1 September 2006).

The establishment uses two systems to capture tissue traceability. The NI Biobank is supported by bespoke I.T. software designed to support the needs of the biobank. At the time of the inspection it was noted that the software is undergoing regular review and adaptation to accommodate the development needs of the Biobank. The establishment also uses a tissue register system to capture all tissue that is stored under the various Human Tissue Authority licences held by the establishment. Both systems support each other and provide an interface between the NI Biobank and end users of tissue from the biobank.

The inspection comprised of a visual inspection of the storage locations, document review and interviews with the Designated Individual (DI) and key members of staff, such as Persons Designated (PDs), involved in licensable activities. The NI Biobank is situated in the basement of the CCRCB (Centre for Cancer Research and Cell Biology). The facility contains two dedicated -80^{0}C freezers; one containing non relevant material such as DNA and the other containing HTA relevant material. The freezers are monitored using a temperature monitoring software recently procured by the establishment, with the capability of providing real time temperature monitoring. This data is regularly monitored by one of the PDs located in the CCRCB. Both freezers also flag the minimum, maximum temperature ranges as well as the timeframes that will trigger an audible alarm.

Other areas visited during the visual inspection included CII (Infection and Immunity) which supports the storage of liquid Nitrogen dewars as well as an inspection of a bank of -80^{0}C freezers. The critical storage conditions of tissue held in liquid Nitrogen are not monitored using a temperature monitoring system, however a nominated staff member is responsible for monitoring the liquid Nitrogen levels by measuring the levels on a weekly basis. A record sheet is completed to reflect dewars that have been filled. The nominated staff member also notifies the researcher who is the custodian of the dewar if they are not functioning correctly. All storage areas have contingency arrangements in place in the event of mechanical freezer failure, which are documented clearly in a standard operating procedure (SOP).

An audit trail of six tissue samples was carried out comprising of; two breast tissue samples from the NI Biobank which had not been allocated for research use, an example of a breast tumour sample that had been transferred from the NI Biobank for research use within the CCRCB, an oesophageal tissue sample that was held under existing holdings, slides containing lavage samples from an ethically approved study that had closed and a tissue block allocated from the retrospective pathology collection. All tissue samples were fully traceable from their respective storage locations and electronic records. The electronic systems also demonstrated evidence that, where necessary, consent had been sought from the donors. No discrepancies were found.

Inspection findings

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

Compliance with HTA standards

All applicable HTA standards have been assessed as fully met.

Advice

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

No.	Standard	Advice
1.	GQ2	The establishment has a well planned audit schedule as well as conscientious approach to audits that are lead by the Research Governance team. The DI should also consider an approach which supports PDs auditing each other's respective areas alongside the Research Governance team, to promote shared learning. The DI is also advised to review the procedure for formally closing CAPAs. An example of a completed and closed CAPA plan was reviewed for a research area during the inspection and it did not clearly demonstrate that the actions had actually been completed leading to formal closure of the CAPA plan. Failure to capture this information may incorrectly indicate that CAPAs have not been actioned or are pending.
2.	GQ6	The establishment uses a tissue register to capture traceability of all tissue stored under the various HTA licences. The establishment is also in the process of developing a bespoke software system to support the NI

		Biobank. This system is in the process of evolving and receives regular updates. Owing to this the DI is advised to ensure that there are appropriate back up for records to avoid loss of traceability should the system encounter technical problems.
3.	PFE3	The liquid Nitrogen dewars are monitored on a weekly basis and filled by a nominated staff member when levels are low. A paper record is maintained and every time the liquid Nitrogen levels are checked the record is updated. The establishment has recently changed its approach from 'ticking' the record sheet to actually writing down the liquid Nitrogen level measured. As this has not been a consistent approach so far, the DI is advised to formalise this procedure so that the measured levels are recorded. The benefit of capturing this information will enable trend analysis and demonstrate if the dewars are maintaining liquid Nitrogen levels. The DI should also consider removing all extraneous labels that have been added to the dewars over the years.

Concluding comments

The establishment has worked hard to ensure oversight of human tissue storage and use. There are appropriate governance structures in place as well as systems to ensure that researchers are aware of the HTA's regulatory requirements. An example of this is the HTA Steering Committee where the DI, PDs and relevant staff discuss HTA related activities for all of the licences that Queen's University holds.

A number of examples of good practice were observed during the inspection. The DI trains all users of the NI Biobank and provides each individual with a Biobank training competency checklist which allows that trainee to document that they have read the required SOPs. The establishment has a focussed approach to staff training, where all staff involved in human tissue research are required to have HT Act training and regular refresher training. Certificates are provided to researchers that attend and remain valid for three years at which point refresher training is required. The establishment plans to develop on line refresher training in future. Another area of good practice is the establishment's approach to audits. The establishment carries out audits that focus on meeting research governance standards as well as a premises audit which is specific to human tissue storage. Non conformances that arise from the audits are reported directly to the researcher along with corrective and preventative action plans.

Report sent to DI for factual accuracy: 9 September 2013

Report returned from DI: 23 September 2013

Final report issued: 24 September 2013

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.

Consent standards
C1 Consent is obtained in accordance with the requirements of the Human Tissue Act 2004 (HT Act) and as set out in the code of practice
• Consent forms comply with the HTA's Code of Practice • Consent forms are in records and are made accessible to those using or releasing relevant material for a scheduled purpose • If the establishment obtains consent, a process is in place for acquiring consent in accordance with the requirements of the HT Act 2004 and the HTA's Codes of Practice • Where applicable, there are agreements with third parties to ensure that consent is obtained in accordance with the requirements of the HT Act 2004 and the HTA's Codes of Practice • Consent procedures have been ethically approved
C2 Information about the consent process is provided and in a variety of formats
• Standard operating procedures (SOPs) detail the procedure for providing information on consent • Agreements with third parties contain appropriate information • Independent interpreters are available when appropriate • Information is available in suitable formats, appropriate to the situation • Consent procedures have been ethically approved
C3 Staff involved in seeking consent receive training and support in the implications and essential requirements of taking consent
• Standard operating procedures (SOPs) detail the consent process • Evidence of suitable training of staff involved in seeking consent • Records demonstrate up-to-date staff training • Competency is assessed and maintained

Governance and quality system standards
GQ1 All aspects of the establishments work are supported by ratified documented policies and procedures as part of the overall governance process
• Policies and procedures are in place, covering all activities related to the storage of relevant material for research in connection with disorders, or the functioning, of the human body • Appropriate risk management systems are in place • Regular governance meetings are held; for example, health and safety and risk management committees, agendas and minutes • Complaints system
GQ2 There is a documented system of quality management and audit
• A document control system, covering all documented policies and standard operating procedures (SOPs). • Schedule of audits • Change control mechanisms for the implementation of new operational procedures
GQ3 Staff are appropriately qualified and trained in techniques relevant to their work and are continuously updating their skills
• Qualifications of staff and training are recorded, records showing attendance at training • Orientation and induction programmes • Documented training programme, (e.g. health and safety, fire, risk management, infection control), including developmental training • Training and reference manuals • Staff appraisal / review records and personal development plans are in place
GQ4 There is a systematic and planned approach to the management of records
• Documented procedures for the creation, amendment, retention and destruction of records • Regular audit of record content to check for completeness, legibility and accuracy • Back-up / recovery facility in the event of loss of records • Systems ensure data protection, confidentiality and public disclosure (whistle-blowing)

GQ5 There are documented procedures for distribution of body parts, tissues or cells
• A process is in place to review the release of relevant material to other organisations • An agreement is in place between the establishment and the organisation to whom relevant material is supplied regarding the tracking and use of material and eventual disposal or return
GQ6 A coding and records system facilitates traceability of bodies, body parts, tissues and cells, ensuring a robust audit trail
• There is an identification system which assigns a unique code to each donation and to each of the products associated with it • An audit trail is maintained, which includes details of when and where the relevant material was acquired, the consent obtained, the uses to which the material was put, when the material was transferred and to whom
GQ7 There are systems to ensure that all adverse events are investigated promptly
• Corrective and preventive actions are taken where necessary and improvements in practice are made • System to receive and distribute national and local information (e.g. HTA communications)
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately
• Documented risk assessments for all practices and processes • Risk assessments are reviewed when appropriate • Staff can access risk assessments and are made aware of local hazards at training

Premises, facilities and equipment standards
PFE1 The premises are fit for purpose
• A risk assessment has been carried out of the premises to ensure that they are appropriate for the purpose • Policies in place to review and maintain the safety of staff, authorised visitors and students • The premises have sufficient space for procedures to be carried out safely and efficiently • Policies are in place to ensure that the premises are secure and confidentiality is maintained

PFE 2 Environmental controls are in place to avoid potential contamination
• Documented cleaning and decontamination procedures • Staff are provided with appropriate protective equipment and facilities that minimise risks from contamination • Appropriate health and safety controls are in place
PFE3 There are appropriate facilities for the storage of bodies, body parts, tissues and cells, consumables and records.
• Relevant material, consumables and records are stored in suitable secure environments and precautions are taken to minimise risk of damage, theft or contamination • Contingency plans are in place in case of failure in storage area • Critical storage conditions are monitored and recorded • System to deal with emergencies on 24 hour basis • Records indicating where the material is stored in the premises
PFE 4 Systems are in place to protect the quality and integrity of bodies, body parts, tissues and cells during transport and delivery to a destination
• Documented policies and procedures for the appropriate transport of relevant material, including a risk assessment of transportation • A system is in place to ensure that traceability of relevant material is maintained during transport • Records of transportation and delivery • Records are kept of any agreements with recipients of relevant material • Records are kept of any agreements with courier or transport companies
PFE5 Equipment is appropriate for use, maintained, quality assured, validated and where appropriate monitored
• Records of calibration, validation and maintenance, including any agreements with maintenance companies • Users have access to instructions for equipment and receive training in use and maintenance where appropriate • Staff aware of how to report an equipment problem • Contingency plan for equipment failure

Disposal Standards
D1 There is a clear and sensitive policy for disposing of human organs and tissue
• Documented disposal policy • Policy is made available to the public • Compliance with health and safety recommendations
D2 The reason for disposal and the methods used are carefully documented
• Standard operating procedures (SOPs) for tracking the disposal of relevant material detail the method and reason for disposal • Where applicable, disposal arrangements reflect specified wishes

Appendix 2: Classification of the level of shortfall

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 risk to human safety and/or dignity or is a breach of the Human Tissue Act 2004 (HT Act) or associated Directions

or

A combination of several major shortfalls, none of which is critical on its own, but which together could constitute a critical shortfall and should be explained and reported as such.

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 that:

- poses a risk to human safety and/or dignity, or
- indicates a failure to carry out satisfactory procedures, or
- indicates a breach of the relevant CoPs, the HT Act and other relevant professional and statutory guidelines, or
- has the potential to become a critical shortfall unless addressed

or

A combination of several minor shortfalls, none of which is major on its own, but which, together, could constitute a major shortfall and should be explained and reported as such.

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, but which indicates a departure

from expected standards.

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 or site visit.

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.