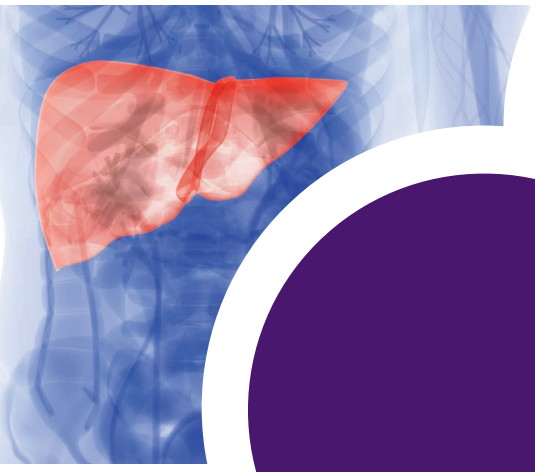
HTA
Human Tissue Authority

Code of practice 9
Research

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Code 9: Research

Contents

Introduction

The legislation and the Human Tissue Authority

1. The Human Tissue Act 2004 (HT Act) covers England, Wales and Northern Ireland with the exception of the provisions relating to the use of DNA, which also apply to Scotland. The HT Act established the Human Tissue Authority (HTA) to regulate activities concerning the removal, storage, use and disposal of human tissue. There is separate legislation in Scotland – the Human Tissue (Scotland) Act 2006.

2. The Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q&S Regulations) implement the European Union Tissue and Cells Directives (EUTCD). The HTA is the Competent Authority in the UK under the Q&S Regulations, which cover the whole of the UK, including Scotland.

3. The HTA is also the Competent Authority in the UK for the implementation of the European Union Directive 2010/53/EU on the standards of quality and safety of human organs intended for transplantation (the Directive). The requirements of the Directive are transposed into UK law via the Quality and Safety of Organs Intended for Transplantation Regulations 2012 (Q & S Organs Regulations).

4. The HTA's remit in Scotland is described in the Scottish Health Department letter issued on 20 July 2006 (Ref: NHS HDL (2006) 46) and the relevant codes of practice. Relevant guidance from Wales and Northern Ireland is referenced throughout the codes.

5. On 1 December 2015 an opt-out system for organ donation after death will become operational in Wales, the legislation on this is the Human Transplantation (Wales) Act 2013. The HTA has drafted a Code of Practice to provide advice and guidance on the Human Transplantation (Wales) Act. At the time of drafting this Code of Practice, the Code of Practice on the opt-out system in Wales had not yet gained Parliamentary or Welsh Assembly approval, however a copy of the draft document is available on the HTA website.

6. The Code of Practice on the Human Transplantation (Wales) Act 2013 should not be relied on until the law becomes operational on 1 December 2015. Up until that time the HTA's Code of Practice 2 is the relevant document.

About the codes of practice

7. The codes of practice give practical guidance to professionals carrying out activities which lie within the HTA's remit. They may also be of interest to members of the public. The first editions of the codes have been revised to reflect our experience of regulation and to update references to guidance from other organisations.

8. The codes are supplemented by other more detailed guidance, for example on licensing standards, which can be found on the HTA's website.

9. The HTA has now published nine codes of practice, which are listed below:

    1. Consent
    2. Donation of solid organs for transplantation
    3. Post-mortem examination
    4. Anatomical examination
    5. Disposal of human tissue
    6. Donation of allogeneic bone marrow and peripheral blood stem cells for transplantation
    7. Public display
    8. Import and export of human bodies, body parts and tissue
    9. Research

10. All nine codes of practice were originally brought into force by HTA Directions in September 2009.

Using the codes

11. In these codes, the word '**must**' refers to an overriding duty or principle, including all specific legal requirements derived from primary and secondary legislation – for example, the requirement to hold a licence to store human tissue for a scheduled purpose.

12. We use the word '**should**' when explaining how to meet the specific legal requirements. Establishments are expected to follow the guidance in the codes. Observance of the guidance in the codes is one of the ways in which the HTA assesses that establishments are complying with relevant legislation. Failure to follow a code of practice is not in itself a criminal offence under the HT Act but the HTA will carefully consider any breach of a code of practice and may take appropriate regulatory action.

13. The codes complement each other and should be read alongside other relevant advice and guidance, which is either referenced in the text or provided on the HTA's website. A glossary with terms specific to each code is available at the end of each document.

14. You can download and print copies of the codes from the HTA's website.

Other advice and guidance

15. A number of other organisations have also produced guidance on issues in the HTA's remit. Where this has been produced in collaboration with the HTA, it will appear on our website. The HTA's codes of practice and other guidance should, however, be used as the definitive source of information for issues within our remit. If you are in any doubt, please contact the HTA or seek your own legal advice. Regulated sectors should also keep up to date with other relevant legislation.

Scope of this code

16. The HT Act introduced a regulatory framework for the removal, storage and use of relevant material for research into disorders, or the functioning of, the human body. The framework requires research using 'relevant material' (also referred to in this code as human tissue) from either the living or deceased to be regulated through licensing of the storage of human tissue, subject to certain exceptions. In addition, research using human tissue can only be done where there is appropriate consent, again, subject to certain exceptions.

17. The storage, as opposed to the use, of human tissue for research is licensed by the HTA. However, the consent requirements [of the HT Act] apply to its storage and use.

18. The HTA's remit and licensing requirements in relation to research do not extend to Scotland. However, researchers in Scotland may find this code a useful reference for good practice. (although the offence of non-consensual DNA analysis applies across the whole of the UK).

19. This code should be read in conjunction with guidance issued by the following organisations:

    1. General Medical Council (GMC) on the ethical considerations relating to seeking patients' consent.
    2. Medical Research Council (MRC) which provides practical help with legislative and good practice requirements.
    3. Health Research Authority (HRA) on the use of human tissue in research.

20. For guidance on how to comply with the HTA's consent and disposal standards, please also refer to the code of practice on consent and code of practice on disposal of human tissue. Further guidance about licensing under the HT Act is set out in the Guide to licensing for Designated Individuals and Licence Holders.

Structure and navigation

21. The first section of this code explains what is meant by research and covers the specifics relating to tissue from the living and tissue from the deceased.

22. The code then sets out the consent and licensing requirements relevant to the research community and offers guidance on what tissue falls under the remit of the HTA.

23. At the end of this code there is a section on HTA standards and how establishments are expected to demonstrate compliance.

Status of this code

24. Amendments were made to Code of Practice 9 – Research in July 2014. These amendments were made to remove factual inaccuracies stemming from changes to the law, HTA policy decisions, and legal advice on the interpretation of the HTA's statutory remit. These amendments have not received Parliamentary approval, which will not be sought until the next full review of all HTA Codes of Practice. This is currently planned for 2015. The Department of Health, the Welsh Government and Department of Health, Social Services and Public Safety in Northern Ireland were consulted on these amendments. A copy of Code 9 as approved by Parliament is available on request from the HTA.

Human tissue and research

What is research?

25. The HT Act does not contain a definition of research but for the purposes of what falls within the HTA's remit, the following definition applies:

26. A study which addresses clearly defined questions, aims and objectives in order to discover and interpret new information or reach new understanding of the structure, function and disorders of the human body. Research attempts to derive new knowledge and includes studies that aim to generate hypotheses, as well as studies that aim to test them or develop practical applications or new knowledge.

27. The HTA also endorses the definition provided by the Department of Health and the Welsh Assembly Government, which is as follows:

28. Research can be defined as the attempt to derive generalisable new knowledge by addressing clearly defined questions with systematic and rigorous methods.

What is human tissue?

29. Relevant material is that which consists of, or contains, cells. Guidance on the definition of relevant material for research can be found on the HTA's website.

Access to tissue from the living

30. Tissue from the living means tissue taken while the person was alive, and this definition persists after their death.

31. Diagnostic archives do not need to be stored under an HTA licence, providing all the samples are for diagnosis. If one or more samples are stored for research, the archive must be stored on HTA-licensed premises.

32. Tissue that was taken from the living for diagnosis and subsequently stored in a diagnostic archive can be valuable for use in research in connection with the disorders, or the functioning of, the human body. Diagnostic tissue can only be released for research under the following circumstances:

    1. When the patient has given consent for use of their tissue in research (the preferable scenario); or
    2. When the tissue will be released to the researcher in a non-identifiable form; and
    3. When the tissue will be used in a project that has approval by a recognised research ethics committee (for more information on recognised ethics committees, see paragraph 53).

33. Example – A researcher wishes to use paraffin-embedded blocks of surgically removed thyroid tissue stored in the archives of a pathology department after its use for diagnosis. As the patient had not given their consent for the use of their tissue for research, it can only be released from the diagnostic archive if it does not identify the patient and is used in a specific project that has been approved by a research ethics committee (REC).

34. Example – A researcher requires whole blood for a research project. She is able to access blood samples from a diagnostic archive in a hospital biochemistry laboratory which have been stored for the intended purpose of diagnosis and screening. The researcher can use these samples without the patients' consent provided the samples are not identifiable to her and the project has been approved by a REC.

35. Once tissue is released from a diagnostic archive for research, it must be stored on HTA-licensed premises, unless it is for a specific project approved by a REC, or where any of the exceptions described in paragraphs 47-59 apply. Further

information about diagnostic archives releasing tissue for research is available on the HTA's website.

36. On rare occasions, tissue may be removed from the living for transplantation and not used. Such tissue can be used for research where consent is in place for that purpose or the tissue will not be identifiable to the researcher and used in a specific project approved by a recognised research ethics committee.

37. If a person has made known their objection to the use of tissue for purposes other than medical care, this should be respected.

Access to tissue from the deceased

38. Human tissue removed from the deceased must only be retained for use in research if appropriate consent has been given. You can find more information about appropriate consent in the code of practice on consent. See also the code of practice on post-mortem examination

39. Once tissue from the deceased is stored for research it must be held on HTA-licensed premises unless it is being used in a specific project approved by a REC (or where approval is pending), or where any of the exceptions described in paragraphs 47-59 apply.

Fetal tissue

40. When undertaking research on fetal tissue there are specific considerations to take into account. For more information refer to the section on fetal tissue in the code of practice on consent.

Consent

Obtaining consent

41. The giving of consent is a positive act. The HT Act requires that consent must be obtained for the removal, storage and use of human tissue for certain scheduled purposes, including research in connection with disorders, or the functioning, of the human body, subject to the exceptions set out below.

42. Although the HT Act deals with removal of tissue from the deceased, consent to treatment and examination is covered by the common law and the Mental Capacity Act (MC Act) 2005 where appropriate. Trusts should have local policies

in place for obtaining consent to treatment and the legal position is set out in the Department of Health's guidance.

43. Guidance for healthcare professionals in Wales is available in the Welsh Assembly Government's Reference guide to consent for examination and treatment. The Department of Health, Social Services and Public Safety (DHSSPS) (Northern Ireland) has published its own reference guide to consent for examination, treatment or care.

44. Not all adults whose human tissue may be used in research have the capacity to consent themselves. However, medical research involving adults who lack mental capacity can lead to innovations in healthcare which could substantially improve their health and quality of life, and that of others with similar conditions. It is therefore important that these adults are given the opportunity to participate in such research. However, certain safeguards need to be in place to ensure that this vulnerable group are protected when they do participate in research. For detailed information about medical research involving adults who cannot consent, refer to the MRC Ethics guide and the MC Act 2005. For information about the broad provisions of the MC Act and its key principles see the code of practice on consent.

45. Subject to the exceptions in the section below, consent must be obtained from healthy volunteers, for example, employees or students, to use their tissue for research.

46. Example – Students on a sports science course are being asked to give a blood sample in order to take part in research into the link between stress and exercise. For the consent to be valid, the students must be given sufficient information so they can give their consent voluntarily, having made an informed choice about whether they want to participate in the research or not.

Consent exceptions

47. The consent requirements of the HT Act are not retrospective. This means that legally it is not necessary to obtain consent under the HT Act to store or use an 'existing holding' for a scheduled purpose. An existing holding is material from the living or deceased that was already held at the time the HT Act came into force on 1 September 2006.

48. Although there is no statutory requirement to obtain consent for storage or use of tissue that is an existing holding, it does not mean that all such human tissue can be used freely and without regard to issues of consent or other ethical considerations. If practical, the consent of the participant should be sought and

the views of the deceased person or of their family (if known) must be respected. In addition, the potential benefits of the research should outweigh any potential harm to donors of the samples.

49. Whatever the date the tissue was donated for research, if more than 100 years have elapsed since a person's death, consent to undertake research on their tissue is not required under the HT Act.

50. In terms of research, the consent provisions of the HT Act do not apply to imported material. However, the HTA considers it good practice for there to be mechanisms in place to provide assurance that the tissue has been obtained with valid consent. Guidance for those wishing to import human bodies, body parts and tissue from abroad into England, Wales and Northern Ireland, is set out in the code of practice on import and export of huiman bodies, body parts and tissue.

51. There is a further statutory consent exception for the use and storage of human tissue for research where all of the following criteria apply:

    1. tissue is from a living person; and
    2. the researcher is not in possession, and not likely to come into possession of information that identifies the person from whom it has come; and
    3. where the material is used for a specific research project approved by a recognised research ethics committee.

52. There may be occasions when a clinician involved in research may also have access to a secure database that would permit identification of a sample used in research and the identity of the patient whose material is being used. Providing the research material is not identifiable to the researcher (e.g. coded by a laboratory accession number) and the researcher does not seek to link the sample to the patient, it will still be regarded as non-identifiable and the research will be permissible without consent if approved by a recognised research ethics committee.

53. The HTA's remit does not include ethical approval of research on human tissue, which must be applied for using the guidance provided by the Health Research Authority (HRA) and the GMC. Ethical approval can only be given by a recognised research ethics committee which is either:

    1. a Research Ethics Committee (REC) established under and operating to the standards set out in the governance arrangements issued by the UK Health Departments
    2. an ethics committee recognised by United Kingdom Ethics Committee Authority (UKECA), to review clinical trials of investigational medicinal

products under the Medicines for Human Use (Clinical Trials) Regulations 2004.

54. Further information about the link between ethical approval and the licensing and consent exceptions is provided in Appendix B.

55. For the purposes of the HT Act, recognised ethics committees include all RECs within the Research Ethics Services of the four UK countries (although the HTA does not license storage of tissue for research in Scotland) as well as the ethics committees established outside the NHS to review Phase 1 clinical trials in healthy volunteers. Within the UK Research Ethics Services, the term 'favourable opinion' is used to mean ethical approval. Details of all recognised committees and general information about ethical approval can be found on the Health Research Authority (HRA) website.

56. A university ethics committee is not, for the purpose of the consent exception considered to be a recognised research ethics committee. Therefore, consent is still required for tissue to be used in a research project approved by a university ethics committee, even if it uses tissue from the living and the researcher is not in possession, and not likely to come into possession, of information identifying the participant.

57. Recognised RECs will accept all applications relating to research involving the use of human tissue even where this is conducted outside the NHS.

58. To facilitate the use of valuable human tissue in research, the HTA advises, in line with the MRC and HRA that consent should be generic because this avoids the need to obtain further consents. It is still important however that consent is valid. If the intention is to store the tissue for an as yet unknown research purpose or as part of a tissue bank for research then this should be explained, setting out the types of research that may be involved, any wider implications and the circumstances under which the tissue will be disposed of.

59. It is important for those involved in research to be aware that in addition to the consent provisions of the HT Act they will need to adhere to other legal requirements such as the Data Protection Act 1998 and the common law duty of confidentiality.

The offence of non-consensual DNA analysis

60. Although the HTA does not license establishments in Scotland under the HT Act, the offence of non-consensual analysis of DNA applies to the whole of the UK including Scotland.

61. DNA (as opposed to the bodily material from which it originates) is not considered to be relevant material under the HT Act.

62. Bodily material differs from relevant material as it includes hair and nails from the living as well as the deceased. It also includes gametes.

63. The results of DNA analysis can be used for research without consent, providing the bodily material from which the DNA is extracted:

    1. is from a living person; and
    2. the researcher is not in possession, and not likely to come into possession of information that identifies the person from whom it has come; and
    3. the material is used for a specific research project with recognised ethical approval.

64. Although no offence will be committed in this situation, the HTA recommends that, where practical, consent is obtained. Information about recognised research ethics committees is provided in paragraph 53.

65. An offence will be committed where somebody has bodily material intending to analyse its DNA and use the results for research without consent for non-excepted purposes. For more information on excepted purposes, see the section on consent and use of DNA in the code of practice on consent.

66. Example – a researcher is using the results of DNA analysis extracted from tissue biopsies from living people as part of a research project that has been approved by a REC. The researcher will not come into possession of any patient identifiable information. No offence will be committed if consent is not obtained.

Licensing

67. This section explains where, in the context of research, a licence from the HTA is needed and where exceptions to licensing requirements apply.

68. Imported tissue stored for research should be treated in the same way as tissue originating from participants in England, Wales or Northern Ireland. This means that the same exceptions to licensing apply. (See paragraph 50 for information about imported material and consent.)

69. The HT Act does not define the term storage. Neither does it give any minimum or maximum term for storage of human tissue for research. Therefore, the HTA considers storage to be when tissue is kept for any period of time for the purpose

of research, subject to the exceptions set out in the paragraphs below. The HTA expects relevant material for research to be held under the governance of ethical approval or an HTA licence. Where the ethical approval is not by a recognised research ethics committee, relevant material should be held under the governance of both. For more information about recognised research ethics committees see paragraph 53.

70. A licence is not required to store human tissue for research if it is from a person who died over 100 years ago.

71. Under the HT Act, where human tissue is in storage pending transfer elsewhere, providing it is held for a matter of hours or days and certainly no longer than a week, the HTA takes the view that the storage is incidental to transportation and an HTA licence is not required.

72. Example – Skin biopsies for use in research are collected across a number of sites and batched before being sent to an establishment licensed by HTA for storage for research. The multiple sites collecting the biopsies do not need to be licensed as the storage is pending transportation to a licensed establishment.

73. Where human tissue is being held whilst it is processed with the intention to extract DNA or RNA, or other subcellular components that are not relevant material (i.e. rendering the tissue acellular), the HTA views this as analogous to the incidental to transportation exception. A licence is not therefore required, providing the processing takes a matter of hours or days and certainly no longer than a week.

74. Example – A researcher wants to undertake a study looking into immunological responses to breast cancer. To do this clotted blood samples will be spun down to collect the serum. As the blood will be spun down within a matter of days and any residual cells disposed of to leave serum that is not relevant material, the blood does not need to be stored under an HTA licence.

75. For the purpose of research that does not involve any application of tissues or cells into humans, material that is created outside the human body does not fall under the remit of the HTA. For more information about the interface between research and human application, see paragraphs 88–94.

76. Cell cultures are relevant material if they contain cells that were created inside the human body e.g. if the culture contains original cells from a biopsy or blood sample. Individual researchers will need to make a judgment as to when cells in culture no longer contain original cells.

77. In addition to the exceptions above, there is a broader exception set out in the HT Act 2004 (Ethical Approval, Exceptions from Licensing and Supply of Information about Transplants) Regulations 2006 (the Regulations).

78. The Regulations allow human tissue held for a specific research project approved by a recognised research ethics committee (or where approval is pending) to be stored on premises without an HTA licence. For more information about ethical approval by recognised research ethics committees, see paragraph 53.

79. An application for ethical approval is pending from the point it has been submitted until the decision of the committee has been communicated to the applicant.

80. The HTA advises researchers to gain ethical approval before embarking on any research. An HTA licence should not be viewed as an alternative to ethical approval by a recognised research ethics committee.

81. Once human tissue is no longer being used for a project approved by a recognised research ethics committee [or one where such approval is pending], it must be stored on HTA-licensed premises if it is intended for a scheduled purpose. Where it is to be used for further research that does not have research ethics committee approval, the research must be in accordance with the initial consent obtained or, if appropriate, further consent should be obtained.

82. Some specific RECs have been authorised to give broad ethics approval for research tissue banks which will then be required to work under NRES standard operating procedures (SOPs). This means that a specified remit of work is permitted without the need for further individual project specific approvals. The tissue in these research tissue banks must be stored on HTA-licensed premises.

83. REC-approved banks can provide human tissue to researchers; the recipients of the tissue do not need to store it under an HTA licence during the period of the research project, subject to certain requirements. If the research is not carried out in accordance with these requirements, specific project approval by a recognised research ethics committee will be required or, alternatively, the samples will need to be stored under an HTA licence. Information about the requirements governing the release of tissue can be found on the Health Research Authority (HRA) website.

84. If tissue in the research tissue bank is stored on HTA-licensed premises but does not have broader ethics approval, each researcher acquiring human tissue from the bank must apply to the HTA for a licence to store human tissue, or apply for their own specific project approval by a REC.

85. On completion of research using tissue from a REC-approved research tissue bank, the individual researcher must transfer the tissue back to the bank or to an alternative HTA-licensed establishment; apply for their own HTA licence; apply for specific project approval by a REC; or dispose of the human tissue.

86. Example – A Dental Teaching Hospital establishes a bank of human teeth to carry out research into tooth erosion, wear and hypersensitivity; and control of dental plaque and staining. The teeth will be donated with consent from the donor after routine dental extraction. The hospital obtains a storage licence from the HTA as well as ethical approval as a research tissue bank. An individual researcher receiving teeth from the bank does not need to make further applications for project specific ethical approval or for an HTA licence, provided the research project falls within the research aims, material disposal terms, and terms of donor consent specified in the hospital's research tissue bank ethics approval. In this way, valuable human tissue for research is controlled and made more accessible to a number of research projects.

87. Tissue may need to be disposed of because, for example the consent does not permit its broad use for research, or (in rare instances) consent has been withdrawn. Such disposal must be in accordance with the guidance set out in the code of practice on Disposal of human tissue. For more information about the withdrawal of consent see the code of practice on consent.

Interface between research, human application and clinical trials

Tissue and cells, including stem cells and cell lines

88. The use of tissues and cells in human application and clinical trials is a rapidly developing field. As the boundaries between research and human application are continually shifting the potential for cross-over between the sectors is significant. To ensure that you are up to date with the regulatory requirements, you are advised to keep abreast of information provided by the HTA via the e-newsletter and website.

89. Human tissue for research in vitro – i.e. will not be transplanted into humans (referred to as human application) – must be stored under an HTA licence, subject to the exceptions set out in the licensing section of this code.

90. Tissue or cells, including cell lines, which may be transplanted into humans, even where it is for research, must be licensed by the HTA under the Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q & S Regulations). For detailed information about the licensing requirements see the HTA's website or contact a member of HTA staff.

91. Tissues and cells for transplantation into patients, including stem cells and cell lines, are regulated by three regulatory bodies for human application:

    1. The Human Fertilisation and Embryology Authority (HFEA) regulates the creation and use of embryos in the derivation of embryonic stem cell lines. The HFEA's remit ceases at the point the embryo is dissociated, at which point the HTA's remit begins.
    2. The HTA regulates the procurement, testing, processing, storage, distribution and import / export of tissues and cells, including cell lines, intended for human application.
    3. The Medicines and Healthcare products Regulatory Agency (MHRA) regulates when a cell therapy is deemed to be a Medicinal Product (MP) or Investigational Medicinal Product (IMP).

92. Researchers planning to work with tissue and cells with a reasonable expectation that those cells will be used in patients, should contact the MHRA for a decision as to whether the product could be a MP or an IMP.

93. Treatments classed as MPs or IMPs are regulated by the HTA only for procurement and testing of tissue. The subsequent steps are regulated by the MHRA. If a treatment containing human tissue or cells is not considered an MP or IMP by the MHRA, it will be regulated entirely by the HTA under the Q&S Regulations.

94. The HTA has produced statements in conjunction with the MHRA and HFEA which explain their regulatory remits in regulating stem cells and Advanced Therapy Medicinal Products A regulatory route map is also available on the HTA's website.

Clinical trials

95. The storage of human tissue as part of a clinical trial (where the material itself will not be used in human application) must take place on HTA-licensed premises, subject to the exceptions set out in the licensing section of this code.

96. Establishments using tissues or cells for human application as part of a clinical trial must be licensed under the Q&S Regulations. It is important to note that where tissue or cells are used for human application as part of a clinical trial approved by a UKECA - recognised ethics committee, licensing under the Q&S Regulations still applies.

HTA standards

97. In order to obtain an HTA licence, an establishment must demonstrate that it meets a number of core standards. These relate to the consent provisions of the HT Act and the regulatory requirements for governance and quality systems, suitable premises and appropriate arrangements for disposal.

98. The HTA undertakes inspection of HTA-licensed establishments and will assess the suitability of the Licence Holder (LH), the DI, the practices and the premises during these inspections.

99. The code of practice on consent and code of practice on disposal of human tissue provide advice and guidance on how to meet the requirements of the HT Act and licensing standards in these particular areas. Guidance on understanding the requirements relating to the HTA standards on governance and quality systems and premises, facilities and equipment is provided below.

100. Storage of human tissue for research must be carried out on premises licensed by the HTA (subject to the exceptions set out the licensing section of this code). The storage must also be carried out in accordance with the conditions of the licence. The person with statutory responsibility under the HT Act – the DI – has a duty to ensure that people working under the licence are suitable and that they follow suitable practices. The DI must also ensure that the conditions of the licence are being complied with.

101. Tissue stored for a specific research project approved by a recognised research ethics committee (see paragraph 53) does not need to be stored under an HTA licence. However, where the approval expires, or no further approval is pending, legally the tissue must be stored under an HTA licence.

102. In order to assess the suitability of the DI as well as the practices taking place at an establishment and the premises on which they take place, the HTA has developed a number of standards with which the establishment must comply. The standards were developed in consultation with representatives from the research sector.

103. The HTA standards are grouped under the headings: Consent (C); Governance and quality systems (GQS); Premises, facilities and equipment (PFE); and Disposal (D).

Governance and quality systems

104. The HTA standards on governance and quality focus on the establishment's internal systems and processes that are in place to support staff in the delivery of high quality output.

105. Some establishments will have reviewed their working practices more frequently than others. The HTA regulatory process encourages those involved in research to regularly review their procedures and make improvements where areas of deficiency are identified.

106. The work of the staff at the establishment undertaking research must be subject to a system of governance. This means that there should be clear reporting lines and accountability (particularly with regard to the individual researchers and the DI), documented roles and responsibilities, a system of staff appraisal, and training and development.

107. All staff working under the HTA licence should be aware of the governance arrangements in place, and they should be represented at governance meetings. Evidence for HTA inspection purposes could include team meeting minutes.

108. There must be documented policies and procedures covering all aspects of activity relating to the storage of human tissue for research; for example, how to obtain consent. These should be up to date, subject to regular review and reflective of good practice.

109. All establishments should identify the risks inherent in the key activities, and procedures should be developed in consideration of and to mitigate these potential risks where appropriate.

110. Risk assessments should be undertaken by a suitably trained person who is able to take an objective view. In any event, the results of risk assessments should be shared with staff so that they have an understanding of the issues identified.

111. The HTA expects DIs to be committed to improving quality. This could be demonstrated by, for example, a programme to audit human tissue stored under the licence, and staff being given training and development opportunities to update their skills.

112. Access to advice and guidance from organisations such as the HTA, GMC and HRA should be freely available to staff working under the HTA licence, and there should be a commitment from management to provide the means by which improvements can be made.

113. Records must be kept that document consent and allow traceability to the tissue stored for research. The procedures relating to record-keeping should reference the establishment's system of labelling human tissue for research.

114. The HTA standards require all human tissue to be uniquely identifiable in order to ensure traceability.

115. The system of record-keeping must include the location of human tissue stored under the licence (i.e. which cupboard / fridge / freezer it is stored in) and the name of the researcher. The records may include a description of the tissue, the project it is currently being used for and who the lead researcher is, and whether consent is specific for the project or for wider use in research.

116. The DI must be aware of the need to ensure the safety of staff undertaking research. This should be covered by a documented risk assessment.

117. All establishments licensed by the HTA are required to have an internal system for reporting adverse events and, where necessary, instigating an investigation or root cause analysis. In a research environment, the focus may be on non-compliance with the HT Act and codes of practice or damage to the tissue integrity; for example, through inappropriate storage.

118. Staff working under the HTA licence must understand what is meant by an adverse event and the procedure to follow when such an event occurs.

Premises, facilities and equipment

119. The HTA seeks to work with establishments through its inspection process, to help them make improvements where they can be made, and takes a proportionate and risk-based approach where scope for improvement has been exhausted.

120. Premises must be 'fit for purpose'. This means that areas used for storage of human tissue for use in research must provide an environment that is safe for those working under the licence and preserves the integrity of the tissue.

121. Human tissue must be stored in such a way that it minimises the risk of contamination to those working under the licence. If necessary, the DI should work with health and safety personnel to implement environmental controls and appropriate equipment to reduce the risk of contamination.

122. The DI, with the advice of health and safety personnel where applicable, must also consider risks to the human tissue such as theft or damage. Security measures should include the use of lockable storage facilities, alarm systems and

indelible identification marking of human tissue if appropriate. Consideration should also be given to mitigating damage caused by the human tissue being handled by those working under the licence. For example, storage environments may require continuous temperature monitoring and heating and cooling systems.

123. Where chemicals are used for preservation of human tissue, the area must be adequately ventilated to control exposure. Control of Substances Hazardous to Health (COSHH) or COSHH in Northern Ireland requires the exposure of formaldehyde to be minimised and below the maximum exposure limit (2 ppm). This may include monitoring of levels and continuous operating extract ventilation.

124. The establishment must be clean, well maintained and subject to a programme of planned preventative maintenance.

125. If applicable, staff must have access to the protective clothing, materials and equipment they need. Equipment must be regularly maintained to ensure that it is suitable for use. Equipment should be made of material that is easy to clean, impervious, non-rusting, non-decaying and non-staining. There should be a system for renewing items that are no longer suitable through wear and tear.

126. If applicable, staff working under the licence should be aware of and have access to guidance from the Health and Safety Executive (HSE) or HSE Northern Ireland on safe working and the prevention of infection.

127. If human tissue is transferred between establishments consideration must be given to minimising the likelihood of theft, damage or loss during transport. Some form of formal arrangement, for example, as part of a Material Transfer Agreements (MTA) should define how the human tissue is preserved, any potential contamination risks associated with it and who is responsible for disposal if applicable.

128. The establishment must have contingency arrangements in place should there be an emergency situation that renders the premises unusable for the storage of human tissue for research.

129. The HTA expects compliance with all its standards, even if human tissue is to be held only for a short period of time or if only a few items are held under the authority of a licence.

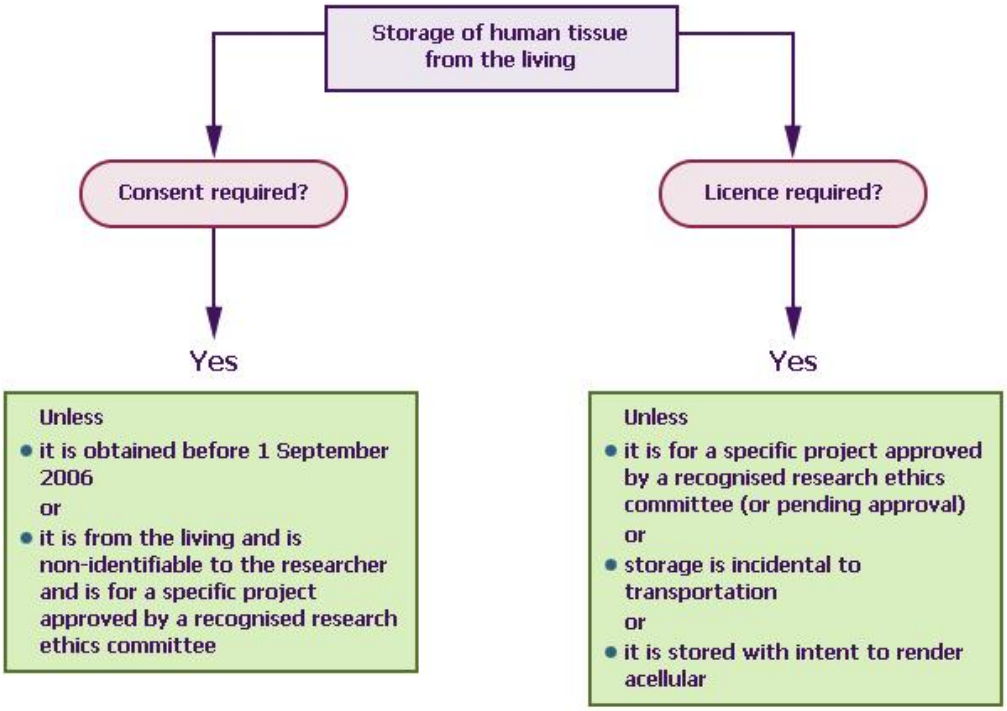
130. The HTA has published a guide to licensing for Designated Individuals and Licence Holders which sets out in detail the licensing arrangements under the HT Act. Included is a description of the role of the DI, which is of fundamental

importance to the HT Act's scheme of regulatory control and the HTA's licensing framework.

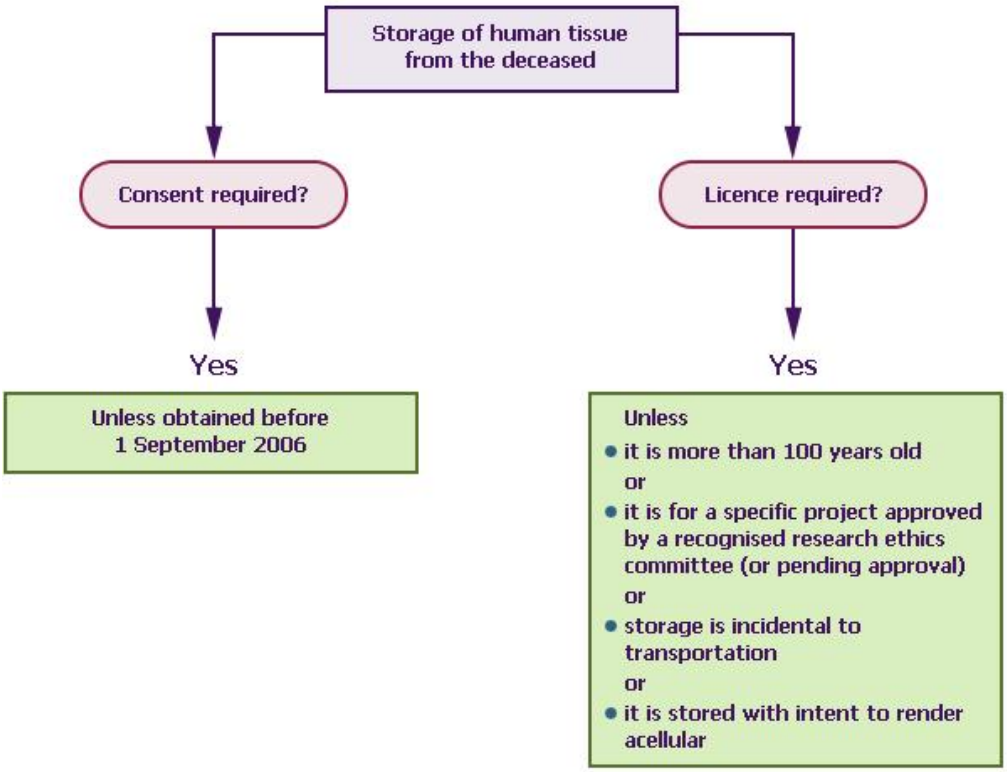
Appendix A

Licensing and consent flowcharts

Licensing and consent requirements for human tissue for research from the living:

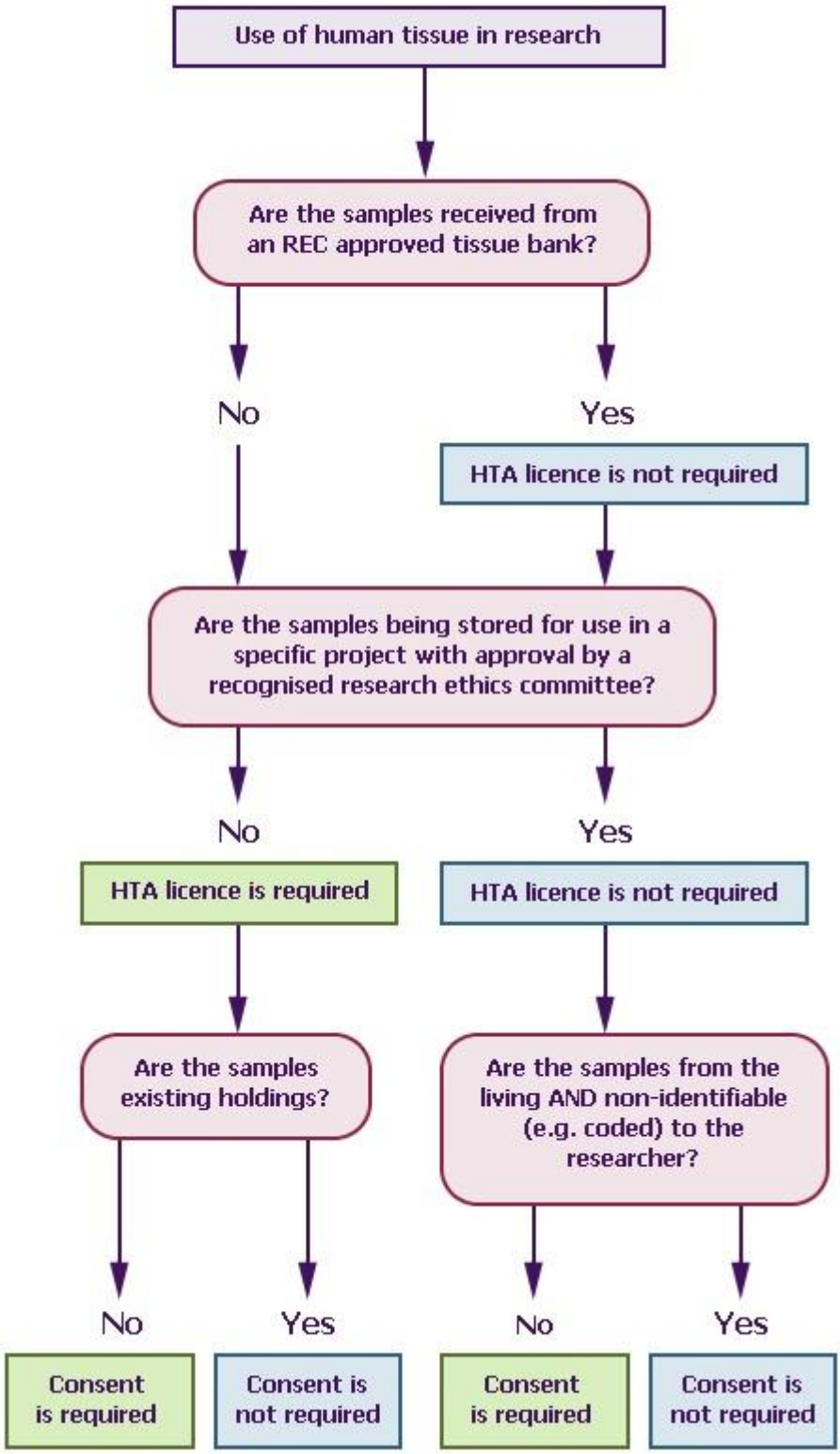


Licensing and consent requirements for human tissue for research from the deceased:



Appendix B

The link between ethical approval and the licensing and consent exceptions



References

References are listed in the order in which they appear in the code. Supplementary references are included at the end.

Human Tissue Act 2004

Human Tissue (Scotland) Act 2006

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

Human Tissue (Scotland) Act 2006: A guide to its implications for NHS Scotland issued on 20 July 2006 (Ref: NHS HDL (2006) 46))

HTA codes of practice

HTA Directions

General Medical Council (GMC) guidance

Medical Research Council (MRC) publications

Health Research Authority guidance

HTA guide to licensing for DIs and LHs

HTA definition of relevant material

Mental Capacity Act (MC Act) 2005

Department of Health Consent guidance

Welsh Assembly Government Reference guide to Consent for examination or treatment

Department of Health, Social Services and Public Safety (DHSSPS) (Northern Ireland) Reference guide to Consent for examination, treatment or care

Department of Health guidance on governance arrangements for research ethics

Medical Research Council (MRC) Ethics guide

Medicines for Human Use (Clinical Trials) Regulations 2004

Data Protection Act 1988

The Human Tissue Act 2004 (Ethical Approval, Exceptions from Licensing and Supply of Information about Transplants) Regulations 2006

Human Fertilisation and Embryology Authority (HFEA) website

Medicines and Healthcare products Regulatory Agency (MHRA) website

HTA information on ATMP Regulation and Quality and Safety Regulations

HTA licensing guidance

Health and Safety Executive (HSE) Control of Substances Hazardous to Health (COSHH) regulations

Health and Safety Executive (HSE) publications

Health and Safety Executive Northern Ireland resources

Supplementary references

Welsh Assembly Government guidance on the Mental Capacity Act 2005

Welsh Assembly Government Consent documents

Welsh Language Act

HTA summary inspection reports

HTA guide to our key messages - which explains the HTA's roles and responsibilities

HTA e-newsletter – which provides regular news and updates about the HTA's work

Glossary

Appropriate consent: Defined in the HT Act by reference to the person who may give consent. This is broadly either the consent of the person concerned, their nominated representative or (in the absence of either of these) that of a person in a qualifying relationship to them immediately before they died.

Best interests: A test of a person's best interests takes into account not only the medical but also the wider emotional, psychological and social aspects of the potential procedure, as well as the risks.

Cells: Individual human cells or a collection of human cells when not bound by any form of connective tissue. For establishments licensed for human application this

includes cell lines grown outside the human body but not gametes, embryos outside the human body, or blood and blood components.

Donation: The act of donating human tissue, cells, organs or part organs for a scheduled purpose either during life or after death.

Donor: Every human source, whether living or deceased, of tissue, cells, organs or part organs.

Human application: In relation to tissue or cells, means use on or in a human recipient, including use in applications situated or occurring outside the body, but not including use when tissue and cells are removed from and applied in the same person within the same surgical procedure.

Licensing: A number of activities can only be carried out where the establishment is licensed under the HT Act by the HTA. Organisations whose activities involve the removal, storage or use of relevant material may need to work under an HTA licence. All establishments working under an HTA licence must work to specified standards set by the HTA.

Licensed premises: Where the licensed activity takes place. If the licensed activity will take place at more than one place, a separate licence will be issued for each place. Premises in different streets or with different postal codes are considered as being in different places. In contrast, different buildings on a hospital site could be regarded as the same place.

Lymphocytes: White blood cells that fight infection and disease.

Post-mortem examination: Dissection and examination of a body after death, principally in order to determine the cause of death or the presence of disease processes. A hospital post-mortem examination is carried out with appropriate consent to gain a fuller understanding of the deceased person's illness or the cause of death, and to enhance future medical care. Coroners' post-mortem examinations are carried out under the authority of the coroner and without consent to assist coroners in carrying out their functions.

Qualifying relationship: Person/s who can give consent for the deceased person if the deceased person has not indicated their consent nor appointed a nominated representative.

Relevant material: Defined by the HT Act as material other than gametes, which consists of, or includes, human cells. In the HT Act, references to relevant material from a human body do not include: (a) embryos outside the human body, or (b) hair

and nail from the body of a living person. See policy guidance on how to apply this definition on the HTA's website.

Research: A study which addresses clearly defined questions, aims and objectives in order to discover and interpret new information or reach new understanding of the structure, function and disorders of the human body. Research attempts to derive new knowledge and includes studies that aim to generate hypotheses, as well as studies that aim to test them or develop practical applications of new knowledge.

Recognised Research Ethics Committee:

- a Research Ethics Committee (REC) established under and operating to the standards set out in the governance arrangements issued by the UK Health Departments
- an ethics committee recognised by United Kingdom Ethics Committee Authority (UKECA), to review clinical trials of investigational medicinal products under the Medicines for Human Use (Clinical Trials) Regulations 2004.

Scheduled purposes: Under the provision of the HT Act consent must be obtained to remove, store or use bodies or relevant material for scheduled purposes. The purposes are divided into 2 parts:

- Part 1: Purposes requiring consent: General – anatomical examination; determining the cause of death; establishing after a person's death the efficacy of any drug or other treatment administered to him; obtaining scientific or medical information about a living or deceased person which may be relevant to any other person (including a future person); public display; research in connection with disorders; or the functioning; of the human body, transplantation.
- Part 2: Purposes requiring consent: Deceased persons – clinical audit, education or training relating to human health, performance assessment, public health monitoring, quality assurance.

Stem cell: A precursor cell that can develop into more than one kind of cell. For example, early bone marrow cells can develop into red blood cells, white blood cells or platelets.

Tissue: Any and all constituent part/s of the human body formed by cells.

Valid consent: Consent which has been given voluntarily, by an appropriately informed person who has the capacity to agree to the activity in question.