

Overview of training opportunities with the BBTS & BATB Specialist Certificate

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Challenges

- Tissue banking is a small scale activity that requires specialised skills
- Limited demand for formal training courses/qualifications
- Through necessity, much training has to be 'on the job'
- Recruitment & retention



Knowledge and Skills required

- **Clinical staff: Nurses**

- Consent
- Human Tissue Act
- Donor Selection guidelines (exclusions)
- Donation and reconstruction
- Storage
- Clinical use of tissue

- **Technical staff: Scientists**

- Anatomical knowledge and dissection skills
- Aseptic technique
- Biological aspects of tissue healing
- Clinical use of tissues
- Knowledge of the legal/regulatory framework

Recruitment strategy

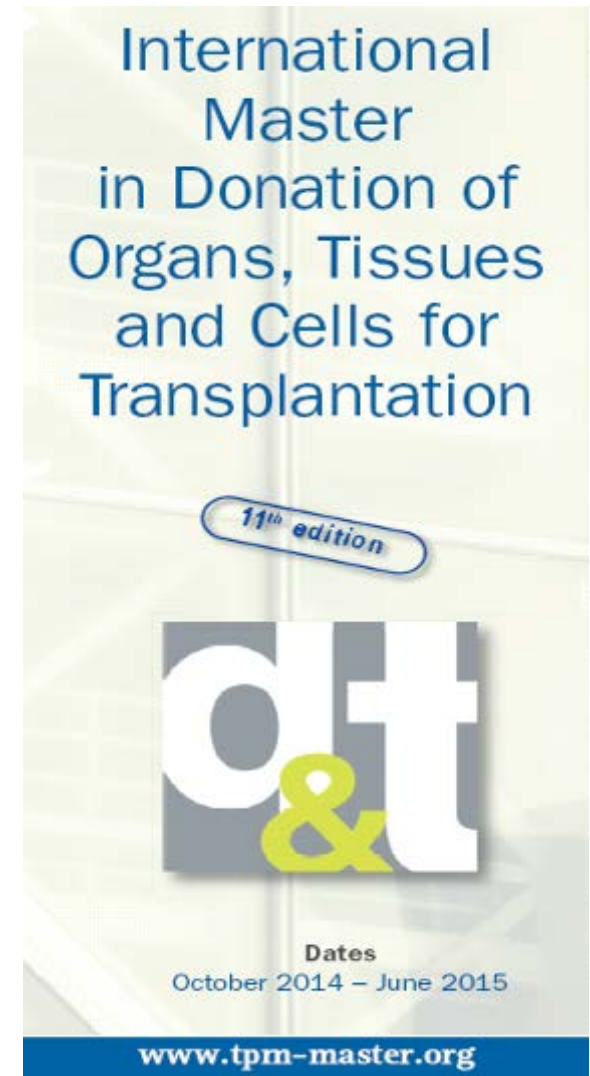
- **Nurses:**
 - Clinical experience
 - ITU, A&E, blood service
- **Technical staff:**
 - Individuals with knowledge/experience of:
 - Human anatomy
 - Clean room operations
- Graduate or post-graduate level qualification in biological sciences helpful
- Recruitment of staff with previous experience of tissue banking unlikely



Academic options

Knowledge:

- European course (University of Barcelona). Incorporates practical aspects
- National course (UK BBTS/BATB Specialist Certificate). Fully academic
- International accreditation/training: AATB Certified Tissue Banker Program
- MSc Transfusion & Transplantation



Drawbacks of Academic Options

- International courses may not accurately reflect national regulations or local practices
- Limited 'hands on' training
- Cost
- In practice, international training courses are rarely used
- Transfusion biased – ? for discussion

NHSBT Practice (technical staff)

Skills:

- Task based training to controlled protocols; peer assessment of competence
- Use of gowning qualification and sterile fill protocols to assess aseptic technique
- Use of animal tissues (where appropriate) to practice/assess dissection protocols
- Competency assessment

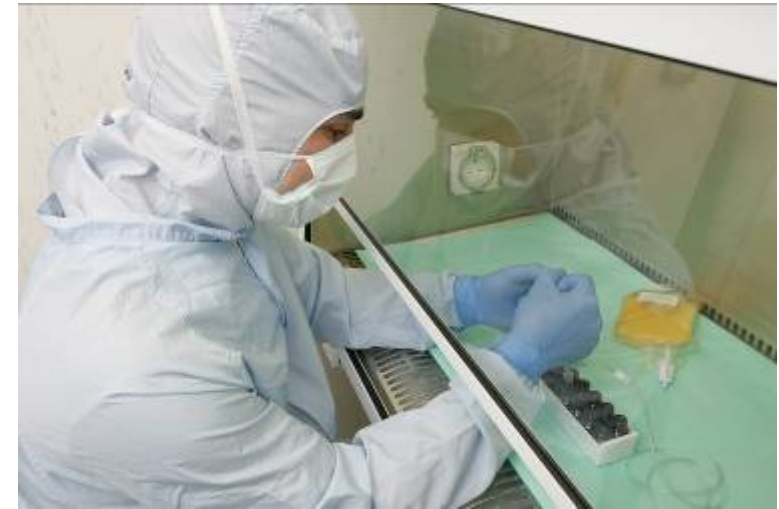
Gowning Qualification

- Applies to all staff who work in clean rooms
- After fully gowning, contact plates are applied to the outer clothing
- Must be completed in triplicate
- Repeated every 6 months to ensure aseptic technique is maintained



Sterile fill protocols

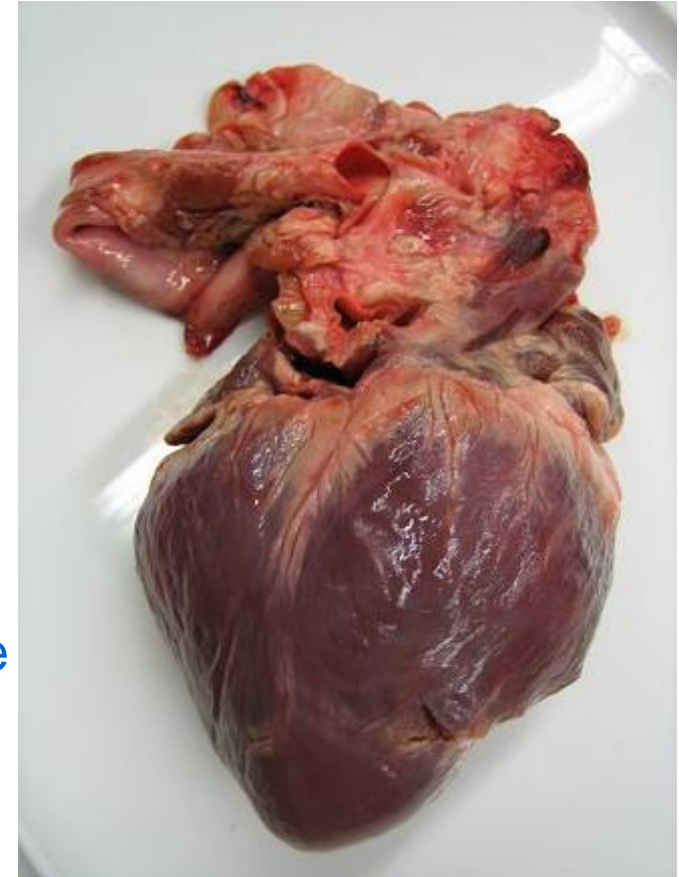
- Operatives are given a sterile 'dummy' product to manipulate according to a standard operating protocol
- After completion, samples of the dummy product are assessed for microbial contamination
- Initially, triplicate processes must be completed
- The process must be replicated (once) every six months



Above: Use of a dummy product (sterile broth) for the qualification of an operative in dispensing of serum eyedrops

Use of animal tissues

- Some tissues (e.g. heart valves) require skilled dissection
- It is not ethical or practical to practice these skills on donated hearts
- Porcine hearts have a similar size and anatomical structure to human hearts
- Obtained from a local abbatoir (50p each)
- Operatives can practice dissection, then must complete three successful valve dissections before being allowed to dissect human hearts



Barriers to Specialist Certificate

Outsiders view:

- Skills – without supporting knowledge
- Permanent posts- not training posts – no rotation – limited exposure
- Perception and reality
- Tissues or stem cells

Supporting the course: Internal Training Sessions

- Integrate education into Clinical Group Meeting - review yearly
- Journal club between morning and afternoon session
- Each session to focus on a selected topic of the Specialist Certificate book
- Invited expert speakers (either clinicians, or senior scientists)
- Model essay questions are set, following the specialist certificate format, for completion before the session
- Short answer questions , MCQs or quiz at the session

External: Master class

- Master classes run in conjunction with BATB (mostly linked to ASM) to support staff studying for the Specialist Certificate in Cell and Tissue Banking.
- Multiple expert speakers addressing different aspects of the Specialist Certificate book
- Open to all, including tissue bankers working in the wider NHS
- Includes lectures, and taught tutorials
- Tutorials are based around model essay questions set prior to the session

Good News

- 2012 : 4 appeared – 4 passed
- 2013 : 4 appeared- 4 passed one with distinction
- Move from Training to Education is challenging !!!

Tissue Services staff lead the way with accreditation

The first cohort of Tissue Service staff to undertake the 'Specialist Certificate in Cell and Tissue Transplantation Science' have passed, becoming the first to do so in the UK.

Lauren Dunne, Francesca Hook, Rebecca Denton and Chris Laughton have all been completing the BBTS/BATB Specialist Certificate, which was launched in 2007 for staff working in tissue banks and laboratories processing haemopoietic stem cells. Part of the certificate involves students being issued a sample exam question for submission to a bi-monthly educational forum at the Tissue Services Clinical Group Meetings, with group and individual feedback given during the day.

The regular forum was developed by Dr Akila Chandrasekar, Dr Richard Lomas and Amanda Ranson, for a specific topic to be reviewed with the help of internal and external Specialists.

What is the future?

- Basic (transfusion, stem cells, tissues, cellular therapy)
- Advanced :
 - ? Include viva and/or practical (scenario/ problem solving)?
 - ? Log book – basic skills and specialist for accreditation
 - ? Only for processing staff (American / European model tissue banking?)
 - Stem cells and cellular therapy
- General or scientific staff?
- Is it too specific?
- Joint posts?
- Expand to outside blood service? (like BBTS – where?)