Positioning paper: Resourcing of surgical technicians for rodent surgery – August 2016 amended.

In all animal units within the University of Cambridge where rodent surgical procedures are carried out specially trained animal technicians [surgical technicians] are employed. These staff are trained to provide a consistent and efficient specialist support function to researchers. Although initially resisted the benefits from working with surgical technicians are now widely acknowledged by those who use their services.

The Home Office produced the attached **Minimum Standards of Aseptic Surgery for Rodents** guide. This clearly states the ***minimum standards*** they consider acceptable when surgical procedures are undertaken. The Home Office has stated that these are not standards to aspire to but are the ***minimum standards*** inspectors would expect to encounter. Home Office thematic inspections include a focus on inspecting surgical procedures. If standards are found to be below their minimum standards surgery is likely to be stopped and further measures may be taken.

From 1st October 2015, UBS assumed full responsibility for all University bio-facilities. In so doing UBS has assumed full responsibility for setting up and maintaining each surgical suite to the standards required by the Home Office for aseptic surgical procedures. This means UBS has committed to providing:

a) clean and well maintained surgical suites (this includes not only daily setting up and cleaning down the surgery and surgical stations but also repair and redecoration when required),
b) core equipment such as autoclaves and anaesthetic machines that require regular servicing,
c) essential consumables (e.g. gowns, gloves, swabs, q-tips, drapes, suture materials, needles and syringes), equipment (e.g. basic surgical kits, operating microscopes, scales) and drugs (e.g. anaesthetic and analgesic agents, antibiotics, tissue glue, eye ointment) as required by the majority of researchers who use the facility.

Centralising services will enable the UBS to provide a standardised service across the University and will facilitate central purchasing of services and consumables which, through unified equipment service agreements and bulk purchasing of consumables, should result in better prices which can be passed on to research groups. However UBS is mindful that different facilities support different types of research work. This means that, while there will be provision of a basic standard facility (surgical stations equipped with anaesthetic machines), some of the more specialised equipment, drugs and consumables will need to be tailored to the major type of research work undertaken in each UBS unit. For example, some surgical suites will have stereotaxic frames as standard equipment and others will not. Researchers should therefore expect to supply any equipment, drugs or consumables that are specifically required for their research. If researchers ask UBS staff to purchase non-standard equipment, drugs or consumables, that other users do not require, they should expect to be invoiced accordingly.

UBS will provide surgical technicians who will be available to:

1. Setup and maintain the surgical suite ready for researchers (e.g. all equipment is present and working, ensure anaesthetic and analgesia drugs and sterile equipment packs are available, the workspace is properly prepared and the post-operative equipment is available and functioning),
2. Collect or arrange the movement of animals requiring surgery from the holding room,

3. Prepare animals before surgery (in some units this includes administering premedication, induction of anaesthesia and the administration of analgesics, clipping and skin preparation prior to moving the animal to the surgery),
4. Assist the surgeon prepare for surgery – for example help with gowning,
5. Open bags of sterile instruments/materials avoiding their contamination so the surgeon does not need to interrupt their work or touch non sterile items which would require that they re-glove,
6. Clean, bag and sterilise equipment throughout the day ensuring a constant supply of sterile equipment,
7. Adjust non sterile equipment such as anaesthetic equipment and help to monitor the depth of anaesthesia and undertake routine procedures (e.g. vasectomies),
8. Monitor animals during the recovery period and provide additional support as necessary.

It was clear from the user consultation exercise in the first half of 2016 that some research groups felt there should be some flexibility in the use of surgical technicians and cautioned against making their use mandatory. The University expects researchers to ensure at least the Home Office minimum standards are attained at all times work. This is the reason time and effort has been given to training and supplying good facilities and trained surgery technicians. With both these points in mind the proposal has been revised.

Surgical technicians will still be available in each unit; however researchers will have the choice of using their services or not. If surgical technicians are not available or are not required by a researcher, the researcher must be assisted by another person who has completed the University aseptic surgery training, unless an NVS has determined otherwise. That person must be either known to the Unit NACWO or Unit surgical technician as competent or can demonstrate through their records that they have been signed off as competent to undertake aseptic surgical procedures.

The University also accepts that, on occasion, some researchers need to work out of normal working hours, the procedure being undertaken or the researcher's technical expertise means that an assistant is not required. The University is prepared to consider, on a case by case basis, cases where researchers believe this applies. Therefore if a researcher believes the surgical procedure can be undertaken without assistance they must contact the NVS before starting the procedure alone for the first time. The NVS will be responsible for determining whether the researcher has the expertise and the procedure can be undertaken aseptically by one person. In cases where the NVS is satisfied that the procedure can be undertaken alone and by the researcher making the request, the NVS will provide the research worker with a written statement to this effect. When working out of hours the researcher must also comply with the Unit SOP for out of hours/lone working and the University "The Responsible Use of Anaesthetic Agents" policy.

When booking surgery space researchers will be asked to indicate whether or not they require surgical technician assistance. If the surgery technician is not required the name of the person who will be assisting must be provided and that person will be expected to complete all the tasks listed in bullet points 1 to 8 above. If the researcher plans to work alone they must provide the copy of the signed NVS statement and must undertake to complete all the tasks listed in the bullet points 1 to 8 above. If during surgery, where a researcher has opted not to use the surgery technician but then finds they require the assistance of the surgical technician the researcher should expect to be invoiced for the use of the surgery technician.

Surgery Charges from August 16

Research groups can opt to use their own staff, in accordance with this policy, as an alternative to a staffed service (surgery technician) to maintain asepsis.

Surgery (Rodent)	**Staffed (1 Tech)**	**Unstaffed**
1st Hour	£41.15	£32.82
Remaining Hours	£23.91	£7.23

UBS staff will be responsible for setting up and cleaning down after surgery to ensure consistent maintenance of the sterile surgical areas. Currently this is unmaintainable without the funding for these staff. In the above table this time has been included in the "Unstaffed" charges.

10/08/2016

Agreed and signed off by Dr M Vinnell and the UBS Directors on 19th August 2016 in accordance with 22nd July 2016 UBSGSC meeting action.

01/11/2018

Updated to correct one typographical error and to change the link to the second edition of the LASA Guiding Principles Aseptic Surgery document published in 2017.

Minimum Standards for Aseptic Surgery for Rodents

1. **Instruments***
    a. Instruments must be sterile (autoclaved) before starting aseptic surgery
    b. Use a fresh set for each operation
    c. If a fresh set is not available for batch surgery then a method of sterilizing instruments between each procedure must be in place
2. **Consumables:**
    a. All consumables (e.g. swabs, needles, suture materials) must be sterile. These can be ordered in advance from the Unit Manager.
3. **Animal preparation**
    a. Clip and prep the animal for surgery in a separate place from the operating field.
    b. Clip and disinfect the incision site adequately using organic iodine or chlorhexidine solutions. Avoid alcohol.
    c. Always cover the animal and bench with sterile drapes
4. **Surgeon preparation:**
    a. Use a clean gown (preferably sterile) or cover-all. These are available from the Unit Manager.
    b. Wash your hands and use sterile gloves

5. **During Surgery**
    a. Do not touch anything that is not sterile with sterile surgical gloves
    b. Only put down instruments on the sterile drape
    c. If you need to touch a non-sterile surface, e.g. anaesthetic machine, either change gloves immediately afterwards or use a sterile swab and immediately discard it

Do's and Don'ts of Aseptic Technique		
		
Plan	• Have all your surgical equipment ready in advance • If in doubt consult the NVS or NACWO before starting any surgery	• Do not arrive unprepared and expect everything to be available and ready
Instruments	• Use sterilized surgical instruments and consumables for each surgery*	• Alcohol/chlorhexidine does NOT sterilize the instruments. • Do not put sterile instrument down onto the bench
Animal Preparation	• Prepare the skin of the animal adequately** • Use sterile drapes	• Alcohol is ineffective for skin preparation • Don't contaminate the sterile field with non-sterile items
Surgeon	• Wear a clean gown or coverall • Wash your hands • Wear sterile gloves and change them if they become contaminated or punctured.	• DO NOT touch non-sterile surfaces after gloving up. This includes the fur of the animal, anaesthetic machine, consumables and your phone! • Do not allow the suture material to drag over a non-sterile surface

*** Autoclaving facilities and sterile consumables are available in the BSU. Contact the Unit Manager for further details**

**** Follow this link for the current LASA Guiding Principles for Preparing for and Undertaking Aseptic Surgery:**
http://www.lasa.co.uk/wp-content/uploads/2018/05/Aseptic-Surgery.pdf