Venepuncture: a mastery learning approach.

BACKGROUND

Venepuncture is an essential skill for graduates and is primarily taught in undergraduate curricula using part task trainers in a simulated environment. This is an appropriate place to start the development of the skill, especially the psychomotor elements, but there is then a gap between application of the skill in a part task trainer and performing the skill safely in a (real) patient in a person centred way. During the course students will have opportunities to undertake this skill during their clinical attachments. There are several risks to the patient associated with this procedure including; discomfort, bruising and infection. It is therefore vital that the technique be carried out safely and effectively. Before students engage with supervised practice in any clinical attachment, ideally they should be able to perform it safely in both a simulated limb, and a healthy volunteer (peer). Moving practice from the part task trainers to healthy consenting peers addresses the identified gap by rehearsing both cognitive and technical skills, by allowing progression of the skill to improve 'transferability' of skills when taught using a mastery approach, accompanied by performance feedback.

Peer Venepuncture Session

WHO

Year 1 ScotGEM students will attend a timetabled venepuncture mastery learning session. There will be an "opt out" opportunity for students with strong feelings against participation in the peer venepuncture aspect of the session, or any student with a medical condition associated with increased risk eg prolonged bleeding. Any student who has not yet had OHSAS clearance cannot have blood taken, but can perform venepuncture and rehearse on part task trainers.

Staff

Qualified health care professionals, trained and competent in the procedure, will be present at all times.

WHEN

Timetabled teaching time within the clinical skills centre as part of week 9.

Session Structure

Pre-session work

- Video of procedure
- Completion of anatomy session covering venous drainage of the forearm
- Awareness of risk assessment for peer venepuncture
- Awareness of sharps and needlestick injury policies
- Awareness of infection control policy

Duration

- Up to 1.5 hours supervised practice on part task trainer with Direct Observation Procedural Skill (DOPS) formative assessment when student ready
- Up to 1.5 hours supervised peer practice

Tutors

1 tutor for each group of up to 8 students during part task trainer practice, One-to-one supervision for peer practice. Tutors will include 8 General Clinical Mentors (GCMs), clinical demonstrators and CliC tutors (all qualified in the procedure).

During the first part of the session students will practice on the part task trainers under supervision. Once they feel they have attained the skill in simulation they should be formatively assessed via a DOPS by the tutor. If the student has satisfactorily acquired the skill, they are ready to move onto peer venepuncture. If they require more practice they should be directed back to the part task trainers and be reassessed after further practice. To allow the session to run smoothly and in recognition that students will acquire the skill at different rates, tutors should start formative assessments as soon as the first student feels ready.

Equipment

- Clinical Hand washing facilities
- Clinical waste bin
- Sharps bin
- Disposable gloves and apron
- Gauze swabs
- Plasters
- Chair/couch/bed
- Needle and Barrel (Vacutainer system) as per current clinical use within NHS Fife/Tayside.
- Alcohol impregnated skin wipe

- Blood sampling bottles
- Materials tray

General points for tutors

(note – the term patient is used when referring to the student who is undertaking the patient role for this practice)

- Tutors should be aware of the risk assessment documents for the session
- Details about this teaching session will be provided to students two weeks before it is timetabled to take place. Attendance at the session is compulsory, however students who feel strongly that they cannot participate in the peer venepuncture element can opt out of that part of the session. Contact should be made with the tutor *in advance* of the session. In this circumstance students can continue to rehearse using part task trainers. All information shared between student and tutor will of course be confidential.
- All students participating in peer venepuncture will have OHSAS clearance before the session.
- All teaching sessions will be tutor led and closely supported throughout.
- Tutors should enquire if students have had any previous experience of adverse reaction to needle/sight of blood etc. (if so, then offer to carry out procedure while patient lies down on bed or couch).
- Tutors will keep a regular check on the students throughout the process to check for pallor/sweating which may indicate a tendency to faint.
- Ensure the patient is sitting/lying comfortably with arm supported.
- All specimens of blood must be taken with a good aseptic technique.
- All blood should be considered potentially infectious and handled accordingly.
- Disposable aprons and gloves must be worn for all procedures.
- Appropriate hand hygiene must be adhered to.
- Sharps and all blood specimens should be disposed of immediately in accordance with local waste disposal guidelines.

- Blood specimens must be 'labelled' at the bedside- students can label the bottle with a fictitious name and date of birth.
- All equipment used must be in date.

School of Medicine

Procedural Skills Checklist for Venepuncture

Preparation

- Hand hygiene
- Introduce self
- Identify patient
- Explain procedure and ask about preferred site /side
- Gain consent
- Ensure patient comfort
- Appropriate positioning and exposure of patient

Procedural Pause

- Equipment ready?
- Patient ready?

Cleaning & Anaesthetising

- Identify if the patient requires local anaesthetic cream
- Organise gloves, tourniquet, gauze swabs/tape
- Take sharps bin to the bedside
- Put on disposable gloves and apron

Perform Procedure

- Select appropriate container(s), needle and vacu-barrel for procedure
- Apply tourniquet and select appropriate vein
- Swab skin with antiseptic wipe (70% isopropyl alcohol) for 30 secs and allow to dry for 30 secs
- Avoid any contamination of venepuncture site
- Ensure bevelled edge of needle is upmost
- Enter vein with needle at an angle of approximately 15° to the skin and avoid contamination of needle or insertion site with hands
- Collect blood in appropriate containers as per order of draw

If blood collection fails:

- **Release tourniquet**
- **Place a swab/cotton wool over the needle**
- **Remove needle**
- **Dispose of needle in sharps bin**
- **Apply pressure to vein for 30-60 seconds or until bleeding stops**
- **Explain to patient and try again at a different site/side**

- Release tourniquet
- Remove needle and cover area with swab/cotton wool

- Dispose of needle safely into sharps bin
- Apply pressure to site for 30-60 seconds or until bleeding stops, with swab/cotton wool
- Keep arm extended and elevated
- Ensure bottles are mixed as per manufacturer's guidelines
- Apply pre-printed labels or write details (name, DOB, CHI, ward, time, initial and date) on blood bottles at the bedside

Note: This is best practice guidance for NHS settings. In the context of peer practice for learning, simulated data could be used such as fictional name and date of birth, in order to both embed best practice for specimen labelling, whilst allowing students to avoid having specimens which could be potentially identifiable with student data. As the session will be supervised one-to-one at this stage, there is no opportunity for specimens to be removed from the site, as all will be disposed of by incineration as clinical waste.

- Place blood sample(s) into sealed polythene bag **(one bag per patient)**
- Check that bleeding has ceased

Post Procedure Care

- Provide required information to patient
- Ensure patient covered and comfortable
- Dispose of equipment safely
- Hand hygiene

Additional Information

- If the student/patient feels faint during the procedure, **STOP** immediately. Lay him/her flat and elevate legs. Tutor will stay with them until they feel well again or alert the first-aider.
- In the event of a needle stick injury the St Andrews policy will be followed.
- All blood specimens will be disposed of with sharps clinical waste. No tests or analysis will be performed on specimens. No specimens will be removed from the venue. All will be disposed into sharps bin immediately. Sharps bins are disposed of by incineration in line with local policy.
- Full risk assessment, sharps and needlestick injury policies are appended.
- Any adverse event or near miss will be recorded in line with local policy.

Dr Lysa Owen, Acting CLIC Lead

Christal Grierson Clinical Skills Manager

May 2018

Appendix

Sharps Policy pdf

Infection Control policy pdf

Approval Code:
(Official Use Only)

UNIVERSITY OF ST ANDREWS
TEACHING AND RESEARCH ETHICS COMMITTEE (UTREC)

ETHICAL APPLICATION FORM

Please Tick: (*click on the box then click 'Checked' for a cross to appear in the box)*

Undergraduate ☐ Postgraduate Research ☐ Postgraduate Taught ☐ Staff ☐

Lecturer/Course Controller on behalf of Taught module ☒ Module Code: MD2101

Researchers Name(s):	Lysa Owen		
Project Title: Taught session- peer venepuncture			
School/Unit: (Please indicate)	School of Medicine (ScotGEM programme)	Supervisor:	
Emails	l.e.owen@dundee.ac.uk	Date Submitted	22 May 2018

Project Description: Please give a concise description without technical terminology of **what** you are proposing to do; **Who** your participants are (eg. age, vulnerability, nationality, organisation); **Where** the research will take place (eg. site, country); **How** you are doing it, (eg. survey, interview). *(90 words for database reasons)*
This summary will be reviewed by UTREC and may be published as part of its reporting procedures.

Development of essential clinical skills for doctors, all medical students required by GMC to be competent at venepuncture (taking a blood sample). Normally introduced in model arms then followed up on an opportunistic basis by rehearsing and consolidating in NHS settings with real patients. For ScotGEM students this bridges the gap between model arms and (sick) hospital patients by offering students the chance to practice on healthy, consenting peers under close direct one-to-one supervision, *before* real patients.

Ethical Considerations: You should give an overview of the important ethical issues raised by your research including **how** you will obtain voluntary informed consent (especially where you are gathering audio/video data); **What** type of data you will be collecting (anonymous, coded, attributable); **How** you will handle, store and retain/destroy data. *(90 words for database reasons) You should elaborate on these issues in Q28.*
This summary will be reviewed by UTREC and may be published as part of its reporting procedures.

Data handling: No data will be collected. No blood samples will analyzed or stored.
Safety: see risk assessment
Consent: opt in session- see proposal

APPLICATIONS MUST BE SUBMITTED TO THE RELEVANT SCHOOL ETHICS COMMITTEE
https://www.st-andrews.ac.uk/utrec/SEC/SECMembers/ **PLEASE DO NOT SUBMIT DIRECTLY TO UTREC.**

- Please submit an electronic copy and one hard copy (with signatures) to the Secretary/Administrator. In the absence of a Secretary please submit to the SEC Convener.
- Applicants must be accompanied by the relevant supporting documents without which a full ethical assessment cannot be made.
- Please do not type out with the text boxes provided, note that the Text Boxes are fixed in size and will not allow any viewing beyond the word limit permitted.

If ethical approval has been obtained from the University of St Andrews for research so similar to this project that a new review process may not be required, please give details of the application and the date of its approval.
Approval Code:
Date Approved:
Project Title:
Researchers Name(s):

RESEARCH INFORMATION

1. Estimated Start Date:
01/09/2018

2. Estimated Duration of Project: Ongoing, annual

3. Is this research funded by any external sponsor or agency? **YES** ☐ **NO** ☒

If YES please give details:

For projects funded by ESRC please be aware of the Ethical and Legal Considerations found at http://www.esds.ac.uk/aandp/create/ethical.asp

ESRC Funded Studentships (postgraduate Students) please be aware of the requirements as outlined at (in particular in relation to Submission of data to the Economic and Social Data Service, ESDS

4. Does this research entail collaboration with researchers from other institutions and/or across other University Schools/Units? **YES** ☐ **NO** ☒

If YES state names and institutions of collaborators:

5. If the research is collaborative has a framework been devised to ensure that all collaborators, including all University Staff, External Researchers, and Students, are given appropriate recognition in any outputs? **N/A** ☒ **YES** ☐ **NO** ☐

6. Where projects raise ethical considerations to do with roles in research, intellectual property, publication strategies/authorship, responsibilities to funders, research with policy or other implications etc., have you taken appropriate steps to address these issues? **N/A** ☒ **YES** ☐ **NO** ☐

7. Location of Research Fieldwork to be conducted:

8. Are you using only library, internet sources or unpublished data *(with appropriate licenses and permissions)* and so have no human involvement such as interviewing of people? **YES** ☐ **NO** ☒

9. a. Who are the intended Participants (e.g. students aged 18-21) and how will your recruit them (e.g. advertisement)	ScotGEM graduate entry medical students
b. Estimated duration of Participant Involvement.	One afternoon

If you have answered YES to Q8 but the project has other Ethical Considerations please go to Q.28. If there are no other Ethical Considerations please sign and submit.

ETHICAL CHECKLIST

10. Have you obtained permission to access the site of research? **N/A** ☒ **YES** ☐ **NO** ☐

    If YES please state agency/authority etc. & provide documentation.
    If NO please indicate why in Q.28

11. Will inducement i.e. other than expenses, be offered to participants? **YES** ☐ **NO** ☒
    If YES, please give details of the inducement being offered and justify

12. Has ethical approval been sought and obtained from any external body e.g., REC(NHS)/LEA and or including other UK Universities? If YES, please attach a copy of the external application and approval. **N/A** ☐ **YES** ☐ **NO** ☒

13. Will you tell participants that their participation is voluntary? **YES** ☒ **NO** ☐

14. Will you describe the main project/experimental procedures to participants in advance so that they can make an informed decision about whether or not to participate? **YES** ☒ **NO** ☐

15. Will you tell participants that they may withdraw from the research at any time and for any reason, without having to give an explanation? **YES** ☒ **NO** ☐

16. Please answer either a. or b.
    a. Will you obtain written consent from participants? **YES** ☐ **NO** ☒
    b. *(ONLY: Social Anthropology, Geography/Geoscience, International Relations & Biology)*
    Will you obtain written consent from participants, in those cases where it is appropriate? **YES** ☐ **NO** ☐

17. Please answer either a. or b.
    a. If the research is photographed or videoed or taped or observational, will you ask participants for their consent to being Photographed, videoed, taped or observed? **N/A** ☒ **YES** ☐ **NO** ☐
    b. *(Social Anthropology & Biology ONLY)*
    Will participants be free to reject the use of intrusive research Methods such as audio-visual recorders and photography? **N/A** ☐ **YES** ☐ **NO** ☐

18. Please answer either a. or b.
    a. Will you tell participants that their data will be treated with full confidentiality and that if published, it will not be identifiable as theirs? **YES** ☐ **NO** ☐
    b. Will you tell participants their work /contribution will be credited unless they specifically request anonymity? **YES** ☐ **NO** ☐

19. Will participants be clearly informed of how the data will be stored, who will have access to it, and when the data will be destroyed? **YES** ☐ **NO** ☐

20. Will you give participants a brief explanation in writing of the study? i.e. a debrief **YES** ☐ **NO** ☒

21. With questionnaires and/or interviews, will you give participants the option of omitting questions they do not want to answer? **N/A** ☒ **YES** ☐ **NO** ☐

If you have answered NO to any question 12- 21, please give a brief explanation in the statement of Ethical Considerations on Page 1 and expand in Q28 if necessary.
If you have answered YES, it must be clearly illustrated in the relevant paperwork which must be attached i.e. Participants Information Sheet, Consent Form, Debriefing Form, Questionnaire, Letters etc……

WORKING WITH CHILDREN AND OR VULNERABLE PEOPLE

Do participants fall into any of the following special groups?

22. a. Children (under the age of 16 in Scotland or 18 in England/Wales) **YES** ☐ **NO** ☒
    b. Vulnerable Adult, receiving care or welfare services **YES** ☐ **NO** ☒
    c. People with learning or communicative difficulties **YES** ☐ **NO** ☒
    d. Residents/Carers in a specific location, e.g. Care Home **YES** ☐ **NO** ☒

NOTE TO SCHOOL ETHICS COMMITTEE. If the researcher has answered YES to Q22 this application, with all supporting documentation, **must** be forwarded to UTREC for review and approval. Exempt: Geography and Geoscience, Medicine and Psychology

NOTES TO RESEARCHER. If you answer YES to Q.22 a.–d., you may be required to obtain Protection of Vulnerable Groups [PVG] *Disclosure* approval. 'Working with Children and or Vulnerable People' guidelines and procedures can be found on our webpage https://www.st-andrews.ac.uk/utrec/ethicalapplication/children/

For those planning to conduct research in England / Northern Ireland please obtain the equivalent police check. Disclosure and Barring Service (DBS), previously known as *CRB*. https://www.gov.uk/crb-criminal-records-bureau-check/overview

e. NHS Patients or Staff **YES** ☐ **NO** ☒
f. Institutionalised persons **YES** ☐ **NO** ☒

If you answer YES to Q 22.,e. or f., it is likely you will be required to obtain approval from the NHS. This **must** be sought prior to approval from the relevant SEC or UTREC.

g. People in custody **YES** ☐ **NO** ☒
h. People engaged in illegal activities, e.g., drug-taking **YES** ☐ **NO** ☒

If YES to Q22. g. or h., you should ensure that the relevant Risk Assessment Checklist has been completed. https://www.st-andrews.ac.uk/utrec/guidelines/riskassessment/

If you have answered NO to Q22 a–d please skip Q23 and proceed to Q24.

23. Have you lived/worked outside the UK in the last 12 months? **YES** ☐ **NO** ☒

If you have **lived outside the United Kingdom (UK) for a period of more than 6 months and answered YES to the Q22** you will be required to provide a police check from that country to cover that period. Further information and helpful links are available on our 'Working with Children and or Vulnerable People' webpage https://www.st-andrews.ac.uk/utrec/ethicalapplication/children/

ETHICAL RISK

This section is for ethical use only and does not replace the requirement to submit a Fieldwork Risk Assessment Form to the relevant Health and Safety/Risk Officer in your School. The University official procedures on Risk and Safety measures are linked from our webpage https://www.st-andrews.ac.uk/utrec/guidelines/riskassessment/

24. Are any of the participants in a dependant relationship with the investigator e.g. lecturer/student? If YES, give explanation in Q.28. **YES** ☒ **NO** ☐

25. Will your project involve deliberately misleading participants in any way? If YES, give details in Q.28 and state why it is necessary and explain how debriefing will occur **YES** ☐ **NO** ☒

26. Is there any significant risk to any paid or unpaid participant(s), field assistant(s), helper(s) or student(s), involved in the project, experiencing either physical or psychological distress or discomfort? If Yes, give details in Q.28 and state what you will do if they should experience any problems e.g. who to contact for help. **YES** ☒ **NO** ☐

27. Do you think the processes, including any results, of your research have the potential to cause any damage, harm or other problems for people in your study area? If YES, please explain in Q.28 and indicate how you will seek to obviate the effects. **YES** ☒ **NO** ☐

There is an obligation on the Lead Researcher & Supervisor to bring to the attention of the School Ethics Committee (SEC) any issues with ethical implications not clearly covered by the above

ETHICAL STATEMENT

28. Please provide a clear, concise statement of the ethical issues raised by this project and provide details of how you will address these issues, paying particular attention to those questions which have specifically asked for clarification in Q28. This section should also provide full details of what type of data you will be collecting (anonymous, coded, attributable) and how you will handle/store and retain/destroy data.

Data handling- no data collection, immediate disposal of all blood for incineration.
All samples should be 'labelled' as part of safe practice, but students may use a fictitious name and date of birth.
Participation will be voluntary and subject to health and safety checks before peer venipuncture.
Students unable or unwilling to participate can continue to work with model arms.
If a student wishes to take blood , but not have blood taken, they may participate, provided another student is willing to have a (second) sample taken.
Supervision for peer venepuncture is by qualified clinical staff on a one-to-one basis.
No student will be required to participate.
No student will be disadvantaged in any assessment.
Written consent is not required, in line with NHS good practice. (Patients do not give written consent for blood samples to be taken).
There is small risk of transient pain and bruising- see risk assessment.
Students already rehearse a wide range of physical procedures on peers as part of learning.

Anecdotal evidence suggests that students who do not have this opportunity for closely supervised peer practice in a safe environment, have removed needles etc from clinical settings to practice, unsupervised, on their peers. This is clearly unethical and this proposal seeks to eradicate this type of unsafe behavior.

DOCUMENTATION CHECKLIST

Ethical Application Form	**YES** ☒	**NO** ☐
Participant Information Sheet	**YES** ☐	**NO** ☒
Consent Form	**YES** ☐	**NO** ☒
Debriefing Form	**YES** ☐	**NO** ☒
External Permissions	**YES** ☐	**NO** ☒
Letters to Parents / Children / Head Teachers etc…..	**YES** ☐	**NO** ☒
PVG Approval (Scotland) or Police Check (England/Other)	**YES** ☐	**NO** ☒
Advertisement	**YES** ☐	**NO** ☒
Other (please list):		

DECLARATION

I am familiar with the UTREC Guidelines for Ethical Research http://www.st-andrews.ac.uk/utrec/guidelines/ and *BPS, *ESRC, *MRC and *ASA (*please delete the guidelines not appropriate to your discipline) Guidelines for Research practices, and have discussed them with other researchers involved in the project.

STUDENTS ONLY
My Supervisor has seen and agreed all relevant paperwork linked to this project **YES** ☐ **NO** ☐

Print Name:	
Signature	
Date:	

SUPERVISOR(S)
The Supervisor must ensure they have read both the application and the guidelines, and also has approved the project and application, before signing below, with clear regard for the balance between risk and the value of the research to the School/Student. (Supervisors should provide this on a separate sheet or supply to the student to insert below) Please, if you wish, add comments in no more than 200 words:

Print Name:	
Signature	
Date:	

STAFF RESEARCHER ONLY

YES ☒ **NO** ☐

Print Name:	Lysa Owen
Signature	
Date:	18th June 2018

SCHOOL ETHICS COMMITTEE OFFICIAL USE ONLY

STATEMENT OF ETHICAL APPROVAL

This project has been considered using agreed University Procedures and has been:

☐ Approved

☐ Not Approved pending:

- ☐ More Clarification Required
- ☐ New Submission Recommended
- ☐ Discussed with Supervisor
- ☐ Referred to UTREC
- ☐ Referred to Fieldwork Subcommittee

Convenor's Name	
Signature	
Date:	

Please use the space below and additional pages to attach any supporting documents i.e. Participant Information Sheets, Consent Forms, Debriefing Forms, Questionnaires, Letter to Parents etc.
We recommend you refer to the sample documents provided at https://www.st-andrews.ac.uk/utrec/EthicalApplication/SampleDocuments/

Risk Assessment Form - University of St Andrews

Unit Clinical Skills Suite, St Andrews University		**Name of Assessor** Lysa Owen, Christal Grierson	
Activity Venepuncture & peripheral cannulation - peer practice for medical students		**Signed**	
Date 9th May 2018	**Date staff informed**		**Date for Review**

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Timescale for Action	Person responsible for implementation	Date completed
Needlestick injury	medical students/ teaching staff	Adhere to sharps policy	Assess proficiency of skills on mannequin before progress to peer practice Teaching staff knowledge of sharps policy refreshed		L.Owen C.Grierson	
Infection	medical students/teaching staff	Universal precautions. All students OSAS approved fit for training.	Assess proficiency of skills on mannequin before progress to peer practice Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	
Arterial puncture	medical students	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	
Phlebitis	medical students	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	
Missed vein	medical student	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	
Haematoma formation	medical students	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	
Anxiety	medical students	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance		L.Owen C.Grierson	

Risk Assessment Form - University of St Andrews

Unit Clinical Skills Suite		**Name of Assessor** Lysa Owen, Christal Grierson
Activity Venepuncture & peripheral cannulation - peer practice for medical students		**Signed**
Date 9th May 2018	**Date staff informed**	**Date for Review**

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Timescale for Action	Person responsible for implementation	Date completed
Excessive bleeding	medical students	Simulated practice	Assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance Consider if any students are at increased risk of bleeding		L.Owen, C. Grierson	
Fainting	medical students	small group teaching supported by healthcare professionals	Practice will take place with the student who is playing the role of a patient either sitting on a bed or lying on an examination table. In the event of fainting a student would be assisted to lie down with their legs elevated and a member of staff would remain with them until they felt well again. Drinking water would be available as would the resources to monitor blood pressure.		L.Owen, C. Grierson	
personal data breech	medical students	one to one supervision to ensure no samples removed from venue, but disposed of immediately in sharps bin, for incineration	students given option of labeling specimens with fictitious names and dates of birth		L.Owen, C.Grierson	
Needlestick Injury	medical students	one to one supervision, assess proficiency of skills on mannequin before progress to peer practice. Experience teaching staff, proficient in this skill, will always be in attendance	Students and tutors required to read and adhere to existing sharps and needlestick policies as appended		L.Owen, C. Grierson	
Other unforeseen harm to medical students		submission to teaching ethics committee for consideration	action according to outcome		L.Owen Teaching ethics committee	