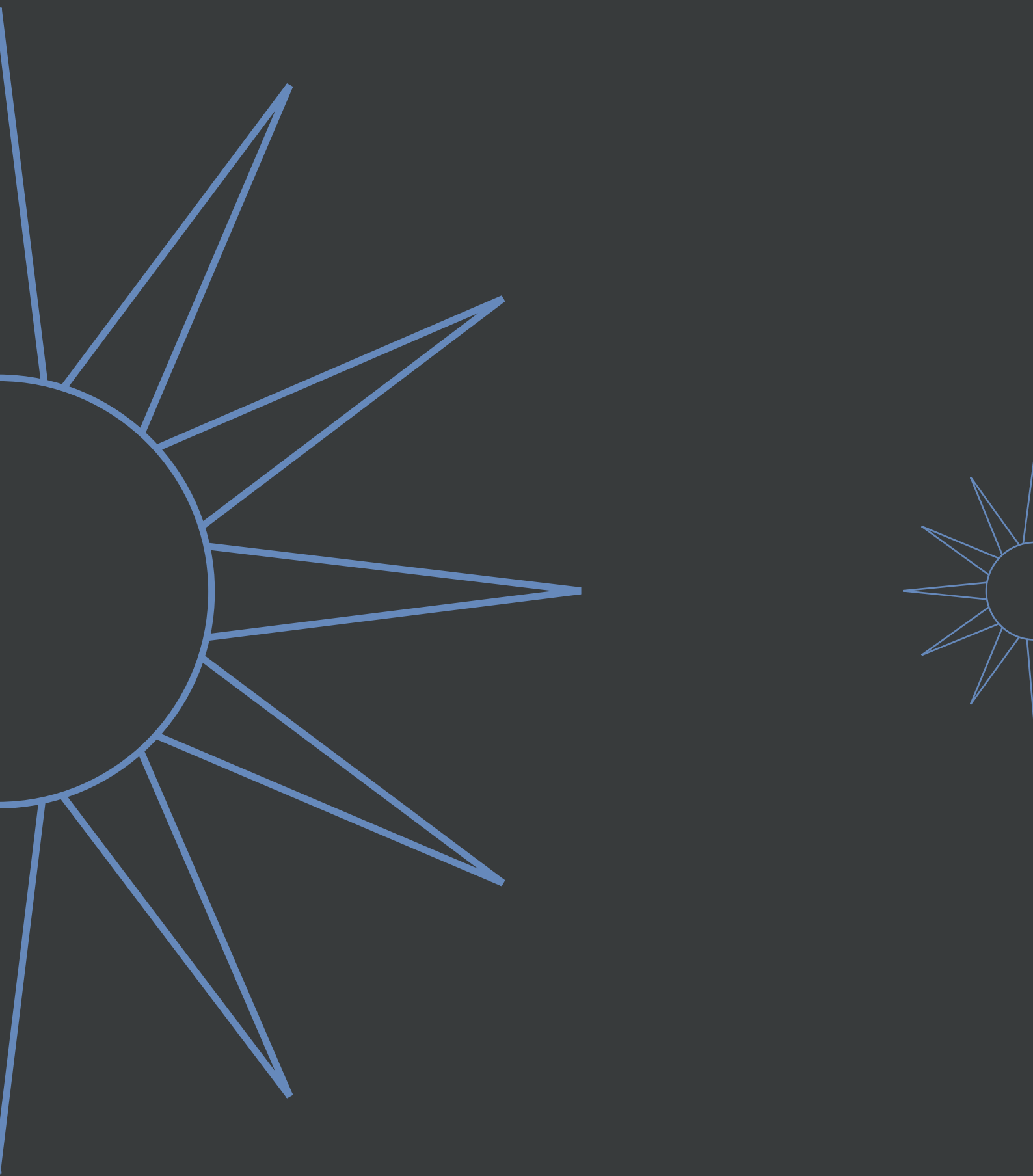
THE COLLEGE OF RADIOGRAPHERS

RADIOGRAPHY

Course of Study for the Certification of Competence in Administering Intravenous Injections

THE SOCIETY OF RADIOGRAPHERS



Course of Study for the Certification of Competence in Administering Intravenous Injections

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1. Preamble

The Society and College of Radiographers (SCoR) has promoted and encouraged radiographers to become competent in the administration of intravenous injections since 1996[1] when it first developed and published the *Course of study for the certificate of competence in administering intravenous injections and record of clinical experience*. The original course of study document was updated in 2005[2] and now, in 2011, SCoR publishes this document to bring the course of study up to date and relevant within current health care environments. Currently, ten education centres have accredited course and, since 1997, over 5000 radiographers have registered for training for the certificate of competence, with 466 registering in 2010.

SCoR publications chart the pattern of role development within the imaging and radiotherapy professions. In *Role Development Revisited: The Research Evidence 2003* (CoR 2003)[3] it was acknowledged that the facility of being able to administer intravenous injections provided significant role development opportunities. Further studies into the scope of practice for the profession reveal how competence in intravenous injections has had an impact on the role of the radiographer. In the research project undertaken in 2008 by the University of Hertfordshire in collaboration with the Institute for Employment Studies for the Society and College of Radiographers (CoR 2008)[4], it was apparent that the ability to administer medicines intravenously had contributed to an increase in the scope of practice for the profession. Diagnostic radiographers working in gastro-intestinal, urological and nuclear medicine departments, for example, are able to take the lead in providing the services partly because of their ability to administer intravenous injections. Similarly, therapeutic radiographers working in treatment planning and on-treatment review find that being able to administer drugs intravenously allows them to take the lead and provide seamless care for the patient. Administering intravenous injections is within the current scope of practice for many radiographers as stated in *The Scope of Practice 2009* (CoR 2009)[5].

In 1999, *The Final Report of the Review of Prescribing, Supply and Administration of Medicines* (The Crown Report DH 1999)[6] recommended changes to the mechanisms whereby health care professionals could prescribe, supply and administer medicines including an extension of prescribing rights to health care professionals, including radiographers. Information on this is provided in the 2010 SCoR advice document [7].Currently, radiographers may supply and administer medicines under Patient Specific Directions and Patient Group Directions. Also, radiographers may undertake courses to qualify as supplementary prescribers and therapy radiographers in particular are finding this of benefit. The next most significant change for radiographers will be when they are able to access courses leading to independent prescribing rights. The Department of Health is committed to extending non-medical prescribing and is slowly working towards independent prescribing for some Allied Health Professionals.

National occupational standards produced by Skills for Health include standards related to establishing intravenous access and administration of fluids https://tools.skillsforhealth.org.uk/

The Health Professions Council (HPC) Standards for Proficiency – Radiographers[7] require diagnostic radiographers *to be able to perform the full range of plain film and standard contrast agent examinations*. Radiographers taking the lead in these procedures would need to be competent in administering intravenous injections.

The College of Radiographers would like to encourage providers of this Course of Study to make the course available to any of the radiography workforce who would benefit from such a role development opportunity given a clinical demand. Extending the client group will create challenges for the course providers and additional academic study may be needed to bring such participants to an appropriate level. However, radiographers work within multiprofessional teams and course providers would wish to take account of this.

2. Approval of Courses

Procedure for approval

Institutions wishing to develop programmes for the certificate of competence in administering intravenous injections should state their intention at least six months before the commencement of such a course. On receipt of the notification of intent, the Accreditation Department at the SCoR will issue the current guidance and nominate assessors. It is expected that, wherever possible, the approvals process will be conducted by correspondence and through the scrutiny and assessment of relevant documentation.

Documentation required

The course proposal document must contain the following:

- Name of award;
- Rationale for development of the course that clearly demonstrates the viability and sustainability of the programme;
- Aims and objectives: Unambiguous course aims, objectives and outcomes together with evidence of how they are to be met in terms of educational support within an institution and the associated practice placements must be evident;
- Statement of the relationship of the award to other radiography/health programmes offered. Detail of credit rating where applicable;
- Entry criteria/policy;
- Learning outcomes related to scope of practice, learning and development framework, occupational standards and the core and relevant specific dimensions of the NHS Knowledge and Skills Framework;
- Curriculum/Indicative content/syllabus;
- Assessment methodology and schedule;
- Resources to support the programme including physical and human, academic and clinical;
- Evidence of a development strategy for clinical staff engaged in the supervision, support and mentorship of the learner;
- Partnership arrangements with clinical departments;
- Learning resources available to the learner at both the host institution and clinical department;
- The quality assurance processes underpinning the course need to be clearly defined;
- Evidence that all staff teaching elements of the course related to radiography, by virtue of their qualification as radiographers, are registered with the HPC.

Period of course approval

At the conclusion of the assessment of the proposal, the SCoR Approval and Accreditation Board will consider the assessors report. The Board meets three times a year in February, May and September. The recommendation to approve (or not) will be endorsed by the College Board of Trustees (CBoT) on behalf of the Council of the Society of Radiographers. Institutions will be notified of the outcome and period of approval following the meeting of CBoT. Therefore, institutions should be aware that the full time scale for approval might exceed six months.

Recognition will be granted prospectively for a pre-determined period.

Course approval is for two years and institutions may seek re-approval from the Approval and Accreditation Board.

A schedule of fees for accreditation of a course and for individuals registering on such a course is available from the Accreditation Department at SCoR and is available on the website www.sor.org

3. Course outline

There are two components to the course of study:

- Theoretical element; mainly theory with some practice of skills using commercial arm/leg models and;
- Practice based learning under the guidance of a named supervisor to include a record of clinical experience.

The learner should normally successfully complete the practice based learning within six months of attendance at a course before being awarded the certificate of competence.

The named supervisor should be agreed locally as someone appropriate to guide and assess competencies. The course provider must liaise with the supervisor and provide guidelines to help him/her in this task. These guidelines must take account of any local policies.

The course provider must be satisfied that the aims and objectives of the course have been met. The theoretical element must be assessed and clinical competence assured by the named supervisor. The mode of assessment at the discretion of the course provider. The College of Radiographers would wish to be assured that the course provider has tested that the successful candidate has a full and thorough knowledge and understanding of the theory underpinning the clinical procedure and that the practical skills have been acquired.

Under certain circumstances the course provider may deem it desirable to grant exemption from parts of the course or to add module(s) dependent on the clinical need. The College of Radiographers welcomes such flexibility as long as the standard achieved is of the highest level and patient safety is assured.

4. Aims and objectives

Course aims

1. To provide the appropriate theoretical background for practitioners to undertake intravenous injections.
2. To allow practitioners to develop clinical expertise in intravenous injection procedures.

Course objectives

On completion of the course of study the practitioner will be able to:

1. Discuss the role of the practitioner in the administration of intravenous injections;
2. Demonstrate the professional and medico-legal implications of this role;
3. Draw up criteria under which practitioners may undertake intravenous injections;
4. Demonstrate the ability to assess risk groups and profile the patient for suitability for intravenous injection by the practitioner;
5. Negotiate and implement departmental protocols for the administration of intravenous injections by practitioners;
6. Demonstrate understanding of the pharmacological and physiological principles of medicines administered in clinical practice;
7. Explain and undertake the procedure of intravenous substance administration;
8. Explain and implement the safety precautions associated with intravenous administration;
9. Recognise and deal appropriately with any adverse reaction to intravenous administration;
10. Evaluate and assess the procedure of administering intravenous injections.

5. Theoretical component

The course provider will decide on the appropriate teaching methods dependent on class sizes, facilities and range of experience of learner group. This is a post-qualification course and, as such, prior learning is assumed. Course providers may wish to use pre-course literature and/or a diagnostic threshold test before admitting the learner to the course.

6. Course content

Sections 1 to 6 provide core curriculum to be included in all courses and sections 7 to 9 dependent on clinical speciality.

Section 1: Anatomy of the Upper Limb and Lower Limb

Venous drainage, surface anatomy, injection sites

Section 2: Physiology

Fluid compartments, fluid shifts
Homeostasis
Blood brain barrier

Section 3: Emergency situations

Management of reactions
Emergency equipment and drugs

Section 4: Medico-legal

Written schemes of work, protocols
Legal issues and current relevant legislation

Section 5: Infection protocol

Compliance with local requirements, eg asceptic non-touch techniques
Aseptic techniques
Disposal of waste
Accidental sharps injury
Control of infection

Section 6: Injection procedure

Theory, preparation, cannulation, administration

Section 7: Contrast agents

History and development of ionic and non-ionic contrast media
New developments
Comparative advantages and disadvantages
Reactions; hyperosmolar, allergic, idiopathic
Patient selection and risk groups

Section 8: Radio-nuclide imaging

Radioactive substances
Non-radioactive substances

Section 9: Magnetic resonance imaging

Types and composition of all MR contrast agents
Consider the relevance of the patient's renal function and creatinine levels in conjunction with minimising the risk of nephrogenic systemic fibrosis (NSF) when using gadolinium contrast agents

Section 10: Other medicines used in Clinical Practice

Drugs used during diagnostic imaging procedures
Drugs used in treatment related toxicity in radiotherapy and oncology

7. Clinical component

It is anticipated that following successful completion of the theoretical component, the learner will return to the clinical department and complete the clinical practice under the supervision of the agreed named supervisor. An example of a suitable record of clinical experience in administering intravenous injections is given in Appendix A.

The learner must demonstrate competence and the supervisor must be satisfied that the learner is able to administer intravenous injections in a variety of settings.

Competence is specific to the individual's scope of practice and it must be clearly defined as such.

8. Continuing professional development

In line with The College of Radiographers' policy on Continuing Professional Development (CPD), learners awarded the certificate are required to demonstrate continuing competence to practice.

Learners successfully completing the course of study should be made aware of the procedures regarding documentation of the *evolution* of their role. Whilst undergoing regular audit of their clinical practice is important there is also a need to document and 'sign-off' individual activities or changes to practice, thereby demonstrating that additional training has been given. This could be in the form of a clinical log, short written report or attendance certificate, after one-to-one tutorials or short seminars.

Resources for CPD activities include:

- Web based information on current and emerging policies and updates. For example, alerts from MHRA, Resuscitation Council UK and professional bodies such as the SCoR and the Royal College of Radiologists.
- Online CPD and Continuing Medical Education resources such as CoRE learning, Medscape and appropriately reviewed and published research.
- Use of reflective clinical logbook with, for example, levels of supervision (demonstrated/assisted and supervised), protocol changes, change of route or method of administration (pressure injector, cannula, infusion), additional pharmaceuticals.

9. References

The course provider will decide on the appropriate teaching methods dependent on class sizes, facilities and range of experience of learner group. This is a post-qualification course and, as such, prior learning is assumed. Course providers may wish to use pre-course literature and/or a diagnostic threshold test before admitting the learner to the course.

1. The College of Radiographers 1996 *Course of Study for the certificate of competence in administering intravenous injections and record of clinical experience.*
2. The College of Radiographers 2005 *Course of Study for the certificate of competence in administering intravenous injections and record of clinical experience.*
3. The College of Radiographers 2003 *Role development revisited; the research evidence.*
4. University of Hertfordshire in collaboration with the Institute for Employment Studies for the Society and College of Radiographers (CoR 2008)[4].
5. Scope of Practice 2009
6. In 1999 *The Final Report of the Review of Prescribing, Supply and Administration of Medicines* (The Crown Report DH 1999[6]).
7. The Supply, Administration and Prescribing of Medicines: guidance and advice for the radiography workforce.
8. Health Professions Council 2009 *Standards of proficiency – Radiographers.*

Appendix A

RECORD OF CLINICAL EXPERIENCE IN ADMINISTERING INTRAVENOUS INJECTIONS

Name _____

Name and address clinical department _____

_____

Name of supervisor _____

Course Provider _____

NB: All clinical practice is to be completed under the terms of a local scheme of work and within guidance and advice issued by SCoR

Assisted/Demonstrated Injections

	Date	Pt ID	Supervisor's comment	Supervisor's signature
1.				
2.				
3.				
4.				
5.				

Is the learner competent to progress to next stage of clinical training? Yes/no

Comments: _____

_____

_____

_____

Signature of supervisor _____

Supervised Injections (minor assistance)

	Date	Pt ID	Supervisor's comment	Supervisor's signature
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Is the learner competent to progress to next stage of clinical training? Yes/no

Comments: _____

_____

_____

Signature of supervisor _____

Supervised Injections (no assistance)

	Date	Pt ID	Supervisor's comment	Supervisor's signature
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Is the learner competent to progress to next stage of clinical training? Yes/no

Comments: _____

_____

_____

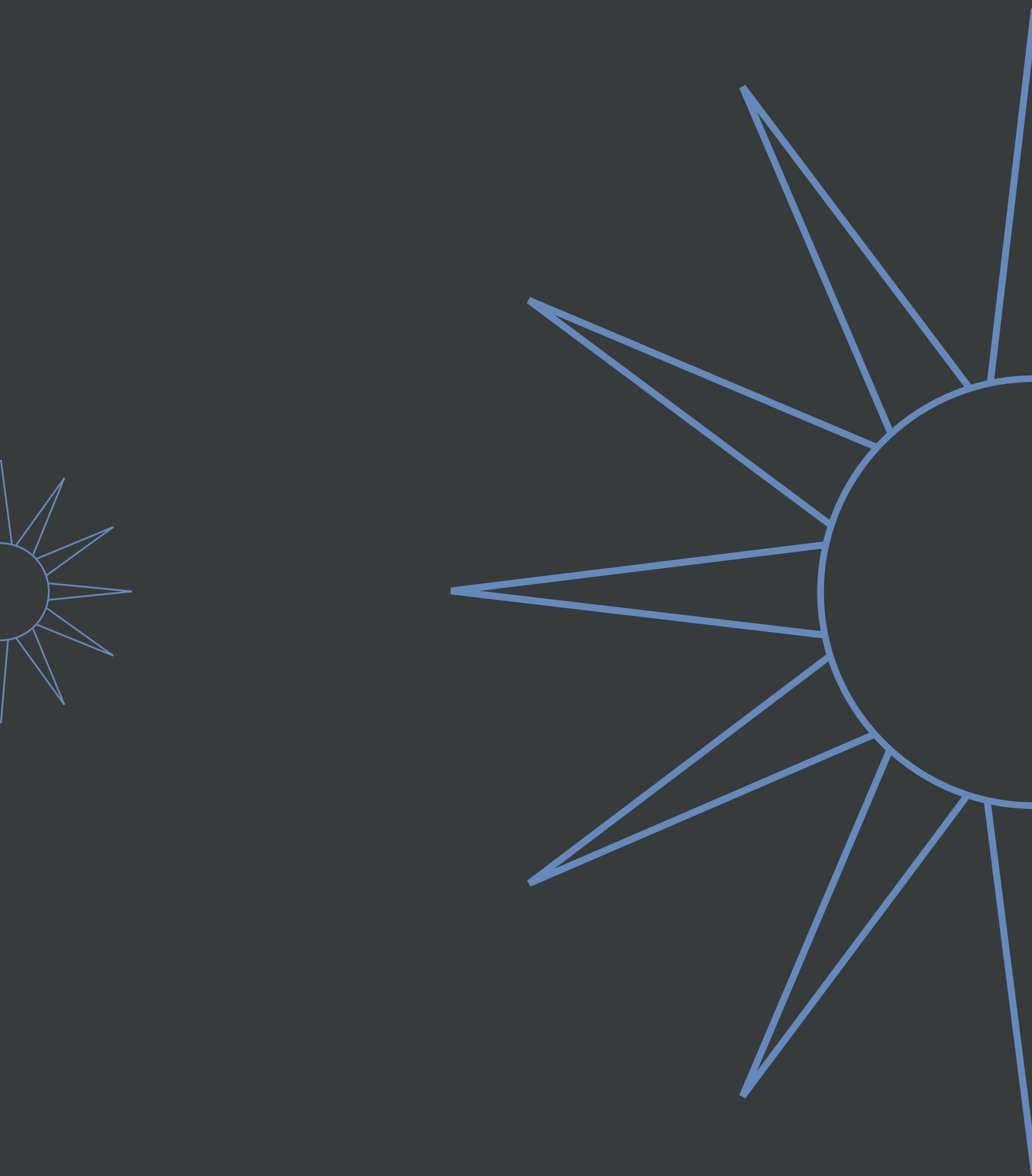
Signature of supervisor _____

DECLARATION OF SUPERVISOR

I certify that _____ has undertaken the intravenous injections detailed above and is, in my opinion, competent to administer intravenous injections under the terms of the local schemes of work and within SCoR policy

Signed _____ Date _____

Signature of supervisor



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