THE COLLEGE OF RADIOGRAPHERS

RADIOGRAPHY

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

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THE SOCIETY OF RADIOGRAPHERS

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

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First edition
May 2005
ISBN 1 871101 24 7

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The Society and College of Radiographers are grateful to Tyco Healthcare/ Mallinckrodt in sponsoring the publication of this document and the development of the new intravenous injection course guidance.

At Tyco Healthcare/ Mallinckrodt, the reality guides our commitment to offer problem solving and foresight to imaging customers. We strive to deliver products, tools and services that enable healthcare providers to work in efficient, economical and innovative ways. The core motivation of both Tyco Healthcare/ Mallinckrodt and our customers is the health and well being of patients worldwide.

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Mallinckrodt, business unit of Tyco Healthcare and major supplier in imaging, provides a full line of diagnostic and therapeutic products, such as contrast media and delivery systems, radiopharmaceuticals and urology imaging systems. This extensive portfolio contains the X-ray contrast agent OPTIRAY® with its unique Prefilled Technology, aimed at improving efficiency, whilst reducing costs and addressing the ever advancing environmental questions.

Tyco Healthcare/ Mallinckrodt is very happy to continue to assist the College of Radiographers in this injection course for Radiographers and wishes the College every success in continuing to assist the membership to develop their role in clinical practice.

1. Preamble

In 1996 The Society of Radiographers developed and published the *Course of study for the certificate of competence in administering intravenous injections and record of clinical experience*. Since then approximately 2500 radiographers have been successful or are in the process of training for the certificate of competence. Currently 13 centres are accredited to provide the training course. This document brings the course of study up to date and relevant within current health care.

Role Development Revisited: The Research Evidence 2003 (CoR 2003) acknowledged that the facility of being able to administer intravenous injections provided significant role development opportunities. 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 on-treatment review find that being able to administer drugs intravenously allows them to lead the reviews 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 2003* (CoR 2003) and has permitted a significant part of the diagnostic imaging and radiotherapy and oncology services to be radiographer led.

In 1999 *The Final Report of the Review of Prescribing, Supply and Administration of Medicines* (The Crown Report DH 1999) recommended an extension of prescribing rights. Currently, radiographers may supply and administer medicines under Patient Group Directions. The first courses which will lead to radiographers being able to prescribe under supplementary prescribing rights will become available in early 2005 and it is anticipated that radiographers, especially therapeutic radiographers involved in treatment review will benefit from this role development opportunity. The most significant change for diagnostic radiographers will be when they are able to access courses leading to independent prescribing rights. The Department of Health is committed to extending non-doctor prescribing but intends to wait until supplementary prescribing is established before proceeding with plans for independent prescribing.

Occupational standards produced by Skills for Health include standards within the section on Clinical Imaging *(RD 10 Establish intravenous access and administer fluids for use during imaging procedures)*

The Health Professions Council Standards for Proficiency require diagnostic radiographers to *be able to perform the full range of 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 it 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 a minimum of two assessors, depending on the programme(s) to be offered. 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, curriculum 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 inc. physical & human, academic & 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.

In line with The College of Radiographers' policy on Continuing Professional Development, learners awarded the certificate are required to demonstrate continuing competence to practice. Individuals seeking accreditation may apply to the Accreditation Department of SCoR.

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 is 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
To provide the appropriate theoretical background for practitioners to undertake intravenous injections
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:

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

Course Content

Sections 1 to 6 provide core curriculum to be included in all courses and sections 7 to 10 dependent on clinical speciality.

Section 1: Anatomy of the upper 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

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: Other medicines used in clinical practice

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

Section 10: Anatomy of the lower limb

Venous drainage, surface anatomy, injection sites

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.

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. References

The College of Radiographers 2002 (Updated 2004) *Statements for Professional Conduct,* CoR, London

The College of Radiographers 2003 *Role development revisited; the research evidence,* CoR, London

The College of Radiographers 1999 *Course of Study for the certificate of competence in administering intravenous injections and record of clinical experience,* CoR, London

Health Professions Council 2003 *Standards of proficiency radiographers,* HPC, London

Skills for Health website:
http://www.skillsforhealth.org.uk/standards_database/index.htm

The College of Radiographers
Limited company registration number 1287383
Registered charity number 272505

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