Overview
Generally professional practice placement for radiography students is undertaken within clinical departments, with practice educators facilitating the professional practice education elements of the curricula. Each clinical department is assessed for the appropriateness of the learning environment, by the radiography professional and regulatory bodies that will stipulate the numbers of students that can be placed in a centre at any one time.

Current Practice
Professional practice education constitutes a significant proportion, approximately 50%, of all radiography pre-registration courses therefore, practice educators undertake an essential role in the delivery of course curricula and development of the future workforce. The College of Radiographers (COR) does not specify the exact amount of professional practice that must be incorporated in each course curriculum. Higher education institutions (HEIs) design their own curricula and are required to provide evidence to the COR that a practical and appropriate professional practice education pathway is evident in course documentation.

Discussion
In response to the National Health Service Plan (DOH 2000a), to modernise the health service for the benefit to patients, a more flexible radiography career framework and more accessible pathways for education and training are currently under development. HEIs are investigating methods for widening access to education and the proposed career framework is being piloted in a number of clinical centres. To increase the number of health professionals, HEIs have raised student numbers significantly. This has placed pressure on the available clinical placements which in turn has increased the demands on the practice educator. The amount of time that practice educators can identify to fulfil their educational role is further reduced because of increasing service commitments.

Summary
Widening access to education and the introduction of a more flexible workforce, to provide faster and more accessible patient care, will impact on the present education and training arrangements in both professional practice and in higher education institutions. The implementation of the necessary career, and education, framework to support this development should only be considered after close collaboration with all stakeholders and with appropriate investment in both physical and human resources.
AUTHOR AND CONTRIBUTOR

We would like to acknowledge the higher education institutions that took part in the survey and we are grateful to those who completed the questionnaires.

Nuala Thompson, qualified diagnostic radiographer, is Senior Lecturer in the School of Applied Medical Sciences and Sports Studies, University of Ulster. Her responsibilities include the co-ordination of professional practice education for diagnostic student radiographers and she currently chairs the Faculty of Life and Health Sciences Student Support Committee.

Terry Lodge is an experienced clinical radiographer and lecturer in diagnostic imaging with particular interests in applied professional education. He is currently the Clinical Education Co-ordinator for the Division of Radiography, University of Bradford and is active in progressing the development of interprofessional and reflective practice in health and social sciences.

ACKNOWLEDGEMENTS

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Different centres use slightly differing terminology to define the same purpose or professional role.

**Clinical co-ordinator/professional practice co-ordinator**
A member of academic staff who has the responsibility for the co-ordination of the practice based learning elements of the course.

**Clinical supervisor**
A member of clinical staff who supervises students’ professional practice on a day-to-day basis. He/she may also be required to undertake assessment of students.

**Link tutor/academic tutor**
A member of academic staff who visits the clinical centre on a regular basis and provides the liaison between the clinical and academic institutions.

**Mentorship**
Support offered by an experienced professional to assist and guide the novice.

**Practice based learning/practice education**
Learning that takes place in the environments where radiography is practised.

**Practice educator/clinical tutor/lecturer practitioner**
The identified person who facilitates learning and supervises and assesses students in the practice setting.

**Preceptorship**
Period of adaptation into a new role.

**Professional practice placement/clinical placement**
Placements in an identified area of patient care.
Radiography Practice

Within the profession of radiography there are two distinct disciplines, diagnostic and therapeutic radiography. Diagnostic radiographers practise within the broad area of medical imaging and therapeutic radiographers practise in the broad area of radiotherapy and oncology. The scope of practice for both disciplines has been substantially increased, over the last number of years, by the introduction of new technologies and the increasing demand for their services. 

The rising demand for and capacity of radiography services, along with the government’s commitment to reform the National Health Service (DOH 2000a), have resulted in the requirement to develop new and expanded roles within the field of radiography to maintain and improve service provision. The College of Radiographers (COR) fully supports radiographers in developing and diversifying their role and encourages them to seek even more innovative ways of working (COR 2002a). Any change in the nature of the current workforce or service delivery will impact on the education requirements necessary for radiographers to undertake their new responsibilities. The recently published A Strategy for Education and Professional Development of Radiographers (COR 2002a) sets out ‘the principles that should underpin the future education and professional development framework for radiographers to enable continuous improvements in the delivery of patient services.’

The strategy promotes widening access to the profession with flexible career pathways and includes a revised career structure for existing radiographic staff, to ensure that highly skilled practitioners are retained within the clinical setting. To facilitate this the COR has embraced the concept of workers being recognised at consultant practitioner, advanced practitioner, practitioner and assistant practitioner level, now termed the four tier structure. The College of Radiographers has published a number of documents to offer guidance and support for both higher education institutions (HEI) and practitioners involved in, or considering involvement in, the implementation of the career progression framework. The four-tier structure is currently being piloted at various sites to establish the effectiveness of the proposed system (COR 2002b). However, before these reports have become available a number of hospital trusts have already recruited into the consultant practitioner, advanced practitioner and assistant practitioner roles. The role of each practitioner is briefly outlined below.

Assistant practitioner

Assistant practitioners will be clinically competent to provide support for registered practitioners and to undertake a defined range of routine examinations, or treatments, including patient care, under the supervision of registered practitioners. The assistant practitioner will carry a clinical portfolio that demonstrates his/her range of competencies. It is anticipated that the educational requirement for this role is a National Vocational Qualification (NVQ) level 3 units, work-place learning units and additional higher education qualifications, for example Certificate or Diploma of Higher Education or a foundation degree. Conversion from assistant practitioner to practitioner will allow accreditation of previous experiential learning and be via an accredited programme of education and training, which will fulfil the requirements of the relevant regulatory, professional and other bodies.

Practitioner

Practitioners are radiographers who are registered with the Health Professions Council and undertake a broad portfolio of diagnostic/therapeutic procedures in the delivery of patient care. Following registration they should undergo a period of preceptorship to consolidate knowledge and to ensure smooth transition from student to confident professional practitioner. Following their preceptorship training practitioners should feel confident about undertaking supervision or mentorship roles with pre-registration students and assistant practitioners. The minimum requirement for this role is currently a BSc Hons degree, or its equivalent. Practitioners require further education and training to develop the level of expertise associated with more specialist roles.

Advanced practitioner

Advanced practitioners have developed their knowledge and expertise in one or more areas of practice and undertake procedures that require significant postgraduate training and involve an increased clinical risk. They may assume responsibility for many clinical and medically related tasks previously only undertaken by medical practitioners. The advanced practitioner’s role includes interaction with the wider multidisciplinary team, service management, research and education. The COR believes that the educational requirement for this role is at Masters level, or equivalent.

Consultant practitioner

Consultant practitioners have achieved the highest level of practice, professional leadership and consultancy. They play a leading role in research, education and training. The COR believes that the educational requirement for this role is at doctoral level, or equivalent.

In order to provide guidance, and to support those involved with the appropriate development of learners, at the different levels of radiography practice the COR has created a curriculum framework (COR 2003b). The framework builds on relevant existing work in education and practice within radiography and the wider health care and education sectors. The purpose of this framework is to support HEIs and practitioners in the development of modern radiography services and the main strands discussed in the document are:

- a ladder of education and professional development;
- flexible pathways for education and professional development;
- matching education, professional development and lifelong learning to service needs;
- recognising the benefits of inter-professional education and working.

The framework describes the professional competence, in broad terms, relative to each of the four levels of professional practice in radiography and identifies the learning requirements associated with each level. The COR understands that this career progression is a priority for the profession and requires close collaboration between professional practice and education. Implementation of the career progression framework can only be successful with the support of the profession and additional information about the four levels of practice is detailed in Education and Professional Development: Moving Ahead (COR 2003c).
Nature of Radiography

As stated earlier, in the profession of radiography there are two disciplines and students undertake the appropriate course that will lead to qualification as either a diagnostic or therapeutic radiographer. In the UK there are sixteen higher education institutions providing both BSc (Hons) Diagnostic Radiography and BSc (Hons) Therapeutic Radiography courses and a further eight institutions providing a BSc (Hons) Diagnostic Radiography course alone. Within the ROI there is one Diagnostic Radiography course in University College, Dublin and one Therapeutic Radiography course in Trinity College, Dublin. The length of the course is three years in England and Wales and four years in Scotland, Northern Ireland and the Republic of Ireland. The ratio of students undertaking diagnostic radiography compared with those undertaking therapeutic radiography in the UK is 4:1.

In the National Health Service (NHS) Plan (DOH 2000a) the government stated its commitment to modernising education and training and substantially increasing the number of health professionals being trained. Therefore, radiography departments in HEIs are being encouraged to respond innovatively and increase student numbers (DOH 2000b). The establishment of more flexible and accessible pathways for educational and career development will widen access to education and training. Until recently the Bachelor of Science degree with Honours was the requirement in order to be eligible for registration with the HPC but there is now the opportunity for graduates to enter the profession by gaining a degree at masters’ level.

For example, applicants with a degree in a related discipline may undertake a Postgraduate/Masters course and upon successful completion be eligible for registration with the HPC. To register with the HPC these students must achieve competencies as well as the required number of postgraduate-level credits. In line with the COR four tier structure some HEIs have introduced courses for assistant practitioners but these, as yet, have not been accredited by the College of Radiographers. To progress the more flexible access to education, necessary for the delivery of modern radiography services, a number of HEIs are currently developing education pathways to allow the assistant practitioner to progress to practitioner level and part-time BSc Honours degrees.

Source of Funding

Student radiographers have their academic fees paid by the relevant health authority and normally receive a means tested bursary, also from the health authority. Where bursaries are not available from health authority sources applicants can apply for a mandatory award from their local education authority. Students can also apply for a reduced rate non-means tested student loan. In the Republic of Ireland students’ fees are also paid by the Department of Health, and they can apply for means tested maintenance grants via either local authority grants or the Department of Education, depending on the individual student’s circumstances.

Roles and Responsibilities in Practice Education

In radiography, professional practice education and professional practice placement have traditionally been termed clinical education and clinical placement, respectively. Within each clinical placement centre there is an identified member of clinical staff who has the responsibility for organising the implementation of the professional practice education programme and for liaison with the HEI. The title of this member of staff can vary between the various clinical departments and it may be lecturer practitioner, professional practice educator or clinical tutor.

There are also clinical supervisors who supervise the students’ practice on a day-to-day basis and may, or may not, undertake assessment of students. The roles and responsibilities of the identified professional practice educator and clinical supervisor can vary significantly between different clinical centres. In some clinical centres the practice educator, as well as having responsibility for pre-registration students, has responsibility for co-ordinating the continuing professional development (CPD) programme for qualified staff. This has greatly added to the remit of the practice educator’s role and may impact on the amount of time they can dedicate to fulfilling their role with pre-registration students.

They may also be involved with the implementation of the education programme for assistant practitioners where these posts have been introduced. Some practice educators have attained training and assessing qualifications to support the development of assistant practitioners, as the education requirement for assistant practitioner will be at SVNQ level.

A link or academic tutor from the HEI visits each placement centre and provides the liaison necessary for effective communication between clinical and academic departments. Link tutors may have the responsibility for visiting one, a group or all professional practice placements. A member of academic staff undertakes the role of professional practice co-ordinator and co-ordinates the placement, either for the complete course or for particular cohort(s) of students.

Professional Requirements and Standards

It is a requirement, of the Health Professions Council and College of Radiographers, that all clinical centres are approved for professional practice placement. A Joint Validation Committee (JVC), acting on behalf of the aforementioned bodies, will assess if clinical centres provide proper environments for students’ learning. When the JVC has assured itself that the practice education is appropriate, it will recommend the clinical centres approval to its parent bodies and identify the number of students that can be placed there at any one time. The JVC is concerned to ensure that clinical placements form coherent parts of the undergraduate radiography education programme, that appropriate learning outcomes exist and that assessment of these is integral to the students progress. HEIs need to demonstrate that, in selecting a particular centre for placement, provision of the following has been considered appropriate:

- Range of practice education opportunities available within the placement site
- Overall volume and range of work undertaken
- A stimulating learning environments for students
- Access to teaching and learning aids, including internet access
- Staffing arrangements to include mentors or tutors with specific student responsibilities should be identified
- Evidence of ongoing staff education and role development
- Risk management and health and safety policies and procedures in place and operating effectively
- Established lines of communication and liaison with the HEI
- Robust mechanisms for the evaluation of practice education provision.

(JVC 2002)

The regular monitoring and evaluation of clinical placements is the responsibility of the HEI providing the course. Generally clinical placements have been associated with a single HEI. However, because of the necessity to train increased numbers of students in response to the NHS plan (DOH 2000b) clinical departments may need to be used by more than one HEI. In this instance it is the responsibility of the HEIs concerned and the clinical placement provider to ensure that the collaborative arrangements are robust and to agree working methods prior to seeking JVC approval.

Inter-Professional Learning

The College of Radiographers has been positive in supporting the current government policies for modernisation of the Health Services, which includes promotion of inter-professional evidence-based practice and life-long learning of all practitioners. One of the main aims of A Strategy for Education and Professional Development of Radiographers (COR 2002a) is to ‘promote inter-professional academic and clinical skills development that protects the public through safe working practices’.

The levels of knowledge and understanding required for team working and inter-professional practice are further detailed in the curriculum framework for radiography (COR 2003).
Questionnaires were sent to the twenty-six higher education institutions in the United Kingdom and Republic of Ireland that offered pre-registration courses in radiography. Twelve were returned representing a response rate of 46%. As six of the institutions that responded offered more than one pre-registration course, data from nineteen courses were represented in the answers.

Nature of Student Placements
As the College of Radiographers does not specify the exact amount of time that students must spend in professional practice, or when the professional practice elements should be completed within course curricula, it was not uniform across the courses. This is in contrast to other professional bodies that stipulate the exact number of weeks, or even hours, of professional practice that must be included in their courses in order to fulfil requirements for HPC registration. Radiography departments within each higher education institution design their own course curriculum and the requirement of the College of Radiographers is that a practical and appropriate professional practice is spent in professional practice.

Learning outcomes for each period of professional practice placement should be precisely described within the professional practice education programme and there should be full integration between the theoretical and professional practice components of the course. The professional body for radiography in the Republic of Ireland is the Irish Institute of Radiography and it states that students should spend approximately 2,000 hours in professional practice. However, although the actual length of practice education was not standardised it did contribute a significantly high proportion to all courses; approximately 50%, of both the three and four year courses, is spent in professional practice.

Student Status
All students are supernumerary and the College of Radiographers requires that confirmation of this be established with each clinical centre.

Status of Practice Educator
All HEIs indicated that there was one specific person with the responsibility for managing the link between the university and clinical centre but clinical centres may have one, or more, practice educators who organise the placement. The status and responsibilities of the practice educator also varied greatly between institutions. There were three main themes. The first was that practice educators were employed by the NHS and were allocated full time to practice placement support. These practice educators organised all assessment and teaching of students as well as the day-to-day implementation of the professional practice education programme.

The second, and slightly more usual, arrangement was that practice educators were part-time clinical radiographers, with a commitment to service delivery, and part-time lecturer practitioners. A third variation was that the practice educator organised the administrative part of practice education but did not undertake assessment of students. Only two centres adopted this latter arrangement, where lecturers from the HEI visited one or two days a week and performed all the assessment, or teaching requirements. All institutions maintained contact with the clinical centres by visits from university link tutors during each placement, but the number of visits per placement period varied from one per period of placement to once each week.

Cultural Background of Student and Students with Disabilities
The ethnic breakdown of the students was: 90% White, 2% Pakistani and less than 1% from each of the following groups Black African, Black Caribbean, Indian and Asian. Less than 1% of students had a physical disability and approximately 4% were identified as having a learning disability. The nature of either the physical or learning disability is not known.

Supervising Students from Other Disciplines
This question was not addressed by the questionnaire. However, following the introduction of the assistant practitioner role, some practice educators have now become involved with supervising both pre-registration students and assistant practitioners with different educational requirements. Supervising trainees requiring different levels of competence, was actually identified as a difficulty by one practice educator.

The implementation of inter-professional learning (IPL) in professional practice was varied. Only 24% of courses incorporated limited IPL during professional practice but 66% of courses incorporated shared learning in a number of academic modules. Of the respondents who included IPL in their academic modules, only one indicated that the first year of the course was fully delivered by shared learning with other allied health professions, nursing and midwifery. This has only been introduced in the last few years and is still undergoing refinement.

The other respondents utilised inter-professional learning both in problem based learning modules, where they could avail of the opportunity for collaborative problem solving, and in other modules. Topics covered in these modules included anatomy and physiology, science subjects, research design, professional and ethical issues, communication and psychosocial aspects of patient care. Most of the shared learning was with other allied health professions, nursing and midwifery students and two courses also had elements of shared learning with medical students. The respondents who indicated that there was no shared learning in their courses explained that there were no suitable courses at their institution for them to work with.

Selection of Practice Educators
The College of Radiographers has no set guidelines or requirements for the selection of practice educators, but does indicate that it would be good practice to encourage practice educators to gain recognised qualifications or academic credit for such development. The criteria for the selection of practice educators varied greatly and ranged from requiring simply State Registration to requiring both 3 years post qualification and a recommended Professional Practice Teaching Certificate. The majority of institutions required 18 months to two years post qualification plus attendance at a half-day or one-day Assessor Training Course, with updates on a regular basis.

Preparation of Practice Educators
All institutions offered one, or more, courses to prepare and provide ongoing support for practice educators. Delivery of the courses was by both academic and clinically related staff. The length of the courses ranged from a one half-day assessors’ training, with no credits, to a full academic module, with appropriate credits, delivered over one or two semesters. Three centres stated that attendance at a half or one-day training course, on an annual basis, was compulsory.

Table One illustrates the topic areas covered in practice educators courses and the percentage of courses that included them in their curricula. The only three topics covered in each course were, not surprisingly, the roles, responsibilities and accountability of the practice educator, monitoring student progress and student assessment. All other topics were covered in varying degrees and it was noted that both special needs and cultural diversity were covered in only 25% of HEIs.
Assessment of Practice Placements

The methods of assessment and the percentage of courses using each method are demonstrated in Table Three. The only universal method of student assessment was observation of professional practice. There was evidence of the development of assessment strategies more focused on the student’s own evaluation of learning. Straightforward recording, reporting and written reports were used in 50% of practice placements, whereas reflective records and portfolios were used in 84% and 92% of placements, respectively. The collection of evidence to demonstrate achievement of the different professional, clinical and transferable competencies was indicated as a recent development by 50% of respondents.

Perhaps because of the difficulty with awarding the students individual marks peer discussion was only used in 33% of courses. It is clear that there is a substantial move from the very subjective viva voce assessment to the more objective structured clinical examination (OSCE), in an effort to ensure that the assessment was as objective as possible. The OSCE is very time consuming to organise and mark, as each student has to progress through the same process, therefore, some centres have adopted a modified OSCE that is largely computer based.

On-Going Support Systems

All institutions, except one, indicated that there were ongoing methods of support for practice educators. This support included regular visits from academic staff as well as meetings at the HEI, along with telephone and email contact. 32% of respondents had implemented, or are presently developing, web based support for practice placement. The development of both web-based course and professional practice material was indicated as a method of further improving the communication between the HEI and clinical centres and also ensured that clinical staff and students had access to current documentation. The one institution that indicated no on-going support mechanisms is in the process of totally redesigning the clinical placement audit tool.

Figure One: Student preparation methods

Table Three: Methods of assessment of students

<table>
<thead>
<tr>
<th>Method</th>
<th>% of courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio</td>
<td>92%</td>
</tr>
<tr>
<td>Observation of professional practice</td>
<td>100%</td>
</tr>
<tr>
<td>Recording and reporting</td>
<td>50%</td>
</tr>
<tr>
<td>Written reports</td>
<td>50%</td>
</tr>
<tr>
<td>Reflective records</td>
<td>84%</td>
</tr>
<tr>
<td>Case Studies</td>
<td>75%</td>
</tr>
<tr>
<td>Peer discussion</td>
<td>33%</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>67%</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Objective structured clinical examination</td>
<td>40%</td>
</tr>
<tr>
<td>Viva Voce examination</td>
<td>16%</td>
</tr>
</tbody>
</table>

Table Four: The percentage of staff undertaking student assessments.

<table>
<thead>
<tr>
<th>Staff involved</th>
<th>Formative %</th>
<th>Summative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager or deputy</td>
<td>42%</td>
<td>17%</td>
</tr>
<tr>
<td>Named practice supervisor</td>
<td>67%</td>
<td>46%</td>
</tr>
<tr>
<td>Senior clinicians as group</td>
<td>42%</td>
<td>25%</td>
</tr>
<tr>
<td>HEI Placement tutor</td>
<td>67%</td>
<td>67%</td>
</tr>
<tr>
<td>Other</td>
<td>42%</td>
<td>25%</td>
</tr>
</tbody>
</table>
One respondent stated that practice educators also supported each other by regular telephone or email contact. New practice educators are paired with an experienced educator who will then arrange to undertake peer observation for assessments until the recently appointed educator feels confident in his/her role as assessor. Case studies and portfolios are also exchanged to facilitate moderation in marking.

67% of respondents stated that they were continuing to develop and improve support mechanisms for practice educators. The following are the improvements that had already been made or are in the process of being introduced:

- Regular audit of placement centres
- Total redesign of the clinical placement audit tool which provides clinical support with a mechanism for identifying and addressing key issues
- Web based support
- Introduction of mentors
- Additional study days
- Courses in student assessment, at the university

The following positive points were also quoted:

- The personal advantages that could be accrued to the practice educator’s CPD and CV by participating in the professional practice education programme of students.
- The commitment of practice educators to educate and supervise students in professional practice was evident throughout. However, the majority of respondents stated that the time they could devote to the role was being reduced due to increasing service commitments. Limitations quoted were:
  - Difficulty to assign students to the same member of staff.
  - Equipment breakdowns “scupper” learning opportunities
  - Maintaining student motivation
  - Supervision of first year students was very labour intensive
  - Lack of recognition and opportunity for career progression within the profession for the role of the practice educator

The method of improvement identified by 75% of respondents was an increase in the amount of time that they could dedicate to the education and assessment of students allocated to them. Means of addressing some of the difficulties experienced by practice educators included:

- A reduction in the annual intake of students, therefore, alleviating the burden on the professional practice placements
- All practice educators should have definite time allocation for student related issues
- Additional clinical staff to reduce the pressure of the clinical workload that restricts the level of supervision
- Appointment of a clinical co-ordinator to ensure parity across sites
- A recognised line of career progression for practice educators similar to that for staff who specialise in a particular area of clinical practice
- Training and education of students to be perceived as a core clinical activity/priority
- More university staff based in professional practice
- More structure and information
- More study opportunities for the practice educator
- Student radiographers paid to train
- Longer and more flexible working hours including evenings and weekends
- More equipment available for students to gain experience
- More structure and information
- Different types of support – emotional, academic, clinical.

<table>
<thead>
<tr>
<th>Perceived Benefits/Limitations of Educating Students on Practice Placements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
</tr>
<tr>
<td>A large number of positive points from having students on practice placement were identified, but there were two benefits identified by most respondents.</td>
</tr>
<tr>
<td>Having students in the clinical department encouraged staff to take a more critical and reflective approach to their own performance. Indeed it was felt that the overall standard of practice within the department was improved</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Limitations</td>
</tr>
<tr>
<td>The commitment of practice educators to educate and supervise students in professional practice was evident throughout. However, the majority of respondents stated that</td>
</tr>
<tr>
<td>the time they could devote to the role was being reduced due to increasing service commitments. Limitations quoted were:</td>
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<td></td>
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</tbody>
</table>
As, approximately, 50% of each course is spent in professional practice education it is clear that professional practice is an essential element in the training and education of pre-registration radiographers. Practice educators have current and detailed knowledge about service requirements therefore, higher educational institutions should avail themselves of the valuable contribution practice educators can make to course delivery and to curricula design. The practice educators who were involved with course design appreciated the opportunity to integrate with the course team and felt that it was advantageous for their own professional development. For effective integration between the professional practice and academic components of the course the liaison arrangements between the professional practice environment and the higher education institution must be robust.

Areas of Good Practice

Each HEI maintained regular contact with practice educators and clinical departments via a link tutor who visited once, or a set number of times, per placement period. This regular contact not only provided the practice educator with necessary support but also allowed academic staff to keep abreast of developments in professional practice, and thus course curricula can be designed to meet service needs. Although the role of the practice educator varied they felt that they were instrumental in maximising the essential link between the HEI and the clinical departments and welcomed the opportunity to become involved in course planning.

In evaluating the nature and status of the practice educator a number of different arrangements was identified. The majority of practice educators contributed to the teaching and assessment of students, and this can only be seen as beneficial. This arrangement allows the student to clearly integrate the theoretical and academic components of the course, as both clinical and academic members of staff are responsible for course delivery. Possibly the student would perceive professional practice and academic education as two completely separate entities if only academic staff from the HEI undertook all assessment and conducted tutorials.

All HEIs were aware of their responsibilities to provide the appropriate support and training for practice educators to fulfil their educational role. They offered one, or more, courses to prepare and provide ongoing support for practice educators and a number of HEIs demonstrated their commitment to improve the quality of support by implementing additional methods to augment the support process. The introduction of support mechanisms availing themselves of web-based materials should further enhance the support available. Approximately 60% of courses had developed, or were developing web-based support for practice placements to support both the students and the practice educators. This allows information to be disseminated widely and allows it to be kept up-to-date at all times. The communication tools available on line allow the students and practice educators to offer support to each other as well as maintain regular contact with the HEI.

The majority of respondents have progressed from straightforward reporting and recording to assess student competence to methods involving self-reflection on the part of the student. The introduction of the portfolio, which involves the collection of evidence to demonstrate achievement, encourages the student to take responsibility for his/her own learning. It allows the student to identify his/her learning needs and to set their own learning outcomes, which should facilitate self-paced learning and development in professional practice. If the career progression framework is adopted then this method of assessment becomes even more suitable as clinical centres will have to accommodate learners with different educational requirements. For example it will be necessary for the assistant practitioner to compile a portfolio to demonstrate his/her range of competencies in defined areas of practice.

Discussion

Discrepancy between Rhetoric and Reality

- Although the government, as part of its strategy for modernising the NHS has advocated inter-professional learning in academic and practice settings, it is not happening to a great extent, particularly in professional practice settings.
- There is a distinct move towards the use of web based material for course delivery and for the support of students and practice educators. However, access to the internet during professional practice placement is not readily available in all clinical centres.
- Increased training commissions in an effort to meet NHS Plan targets and service requirements require identification of additional placement opportunities as a matter of some urgency. Radiography professional practice for students differs from professional practice for other health professional students as it is currently undertaken almost exclusively in the clinical environment. This limits the scope for the identification of additional practice placements to accommodate the increased student numbers that are necessary for service requirements. Other disciplines can avail themselves of practice education opportunities that are available, for example, in education and social settings and, therefore, reduce the pressure on established placements.
- Both the DOH and VJC state that there is a need for investment in clinical staff and in the provision of adequate resources to support the delivery of practice education (DOH, 2000a). However, all practice educators were concerned about the lack of time that they had to fulfil their educational role. They felt that the time allocated to student responsibilities suffered as a result of staff shortages and increased demands on radiography services.
- Widening access to education and training should encourage entry into the profession from students with black and ethnic minority backgrounds in order to provide culturally sensitive services to diverse communities. As over 93% of the students were white, progress in this area is slow.
- If practice educators are expected to undertake student assessment it is fundamental that they receive adequate training and updating to perform that important role, to assure validity and reliability of the assessment process. However, attendance at a suitable course, prior to being allocated students, was not compulsory.
- The type of course available to the practice educator varied greatly in length and content and most HEIs did not stipulate that attendance at an assessor’s course was compulsory, before students are allocated to a particular centre. This is possibly of even greater importance where a peer group of students undertake assessment in a number of different clinical centres. This limitation was identified by a few of the respondents, who expressed concern about the lack of continuity and equity in assessment.
- HEIs should provide guidance and documentation that is clear, unambiguous and sufficient to inform the practice educator for his/her role as assessor. However, some practice educators, undertaking student assessment, expressed a lack of understanding of the documentation.
- The government has made clear its commitment to reward staff for their skills and ability (NHS 2000a), therefore, practice educators should be given similar opportunities to advance in the career framework that are available to practitioners who have developed expertise in a specialised area. However, practice educators feel that they are overlooked and are not given appropriate recognition for the role that they undertake.
Conclusions

The College of Radiographers supports the premise of widening participation and increasing flexible delivery of radiography courses and also promotes continuing professional development and life-long learning for all practitioners in radiography. This is evidenced by the piloting of the career progression framework in selected clinical centres and also by the publication of a number of strategy and guidance documents for its implementation.

The development of the more flexible workforce, in the four-tier structure, is ultimately to improve patient services and to provide faster and more accessible care. To facilitate the tier structure, is ultimately to improve patient services and to provide faster and more accessible care. To facilitate the developing workforce, programmes of education that have flexible entry and exit points and part-time attendance are being pursued by a number of HEIs. The implementation of any changes in the present education and training arrangements should only be undertaken with close collaboration between the professional practice service providers, the College of Radiographers, higher education institutions, workforce development confederations, Health Professions Council and other relevant agencies.

What effect the introduction of the assistant practitioner role will have on pre-registration student radiographers has yet to be evaluated. Assistant practitioners will be paid as they undertake a training programme and will be given the opportunity to progress into professional level education. This will lead to an anomaly in the payment between assistant practitioners and pre-registration radiography students, which in turn may lead to some degree of friction between the groups. It was suggested that student radiographers should receive some method of payment when undertaking periods of professional practice and this may merit further investigation.

As education providers continue to increase student numbers to meet NHS workforce targets additional pressure is placed on the capacity of professional practice placements and the workload of practice educators. The fact that all practice educators felt that they did not have enough time to devote to their role as educators and having additional students added to the stress they experienced is of concern. Therefore, it becomes imperative that there is appropriate investment in both the human and physical resources necessary to support professional practice education.

Recommendations

- HEIs should actively seek additional and innovative opportunities for professional practice education in an effort to relieve the pressure on existing centres. Professional practice education in radiography has traditionally occurred in clinical centres, perhaps there is the possibility of developing professional practice education opportunities in non-traditional areas.
- More use should be made of professional practice teaching suites where students could gain practical skills using role-play scenarios. This would be beneficial before placement to introduce the students to new skills and to reinforce students learning after a period of placement.
- Clinical departments and HEIs need to collaborate to maximise the use of facilities for the attainment of professional practice skills. More flexible use of the available professional practice places should be investigated.
- Documentation from the HEI should be clear and unambiguous. Regular information/study days should be held to inform clinical staff and clarify any particular areas.
- Professional practice educators should be allowed sufficient time, be fully supported and have access to the appropriate education and training necessary for them to fulfil their vital educational role in the preparation of the future workforce.
- Attendance at an appropriate training course should be compulsory for practice educators before they undertake the education and assessment of students.

In order to retain the expertise of experienced practice educators they need to be given recognition for the valuable role that they fulfil in the education and development of the future workforce. The opportunity for career progression that is available to clinical specialists should be equally available to practice educators.

Inter-professional education in practice environments should be encouraged not solely for the benefits that it brings for students and practice educators but ultimately because of the benefits it brings for the patients.

Investment in resources for practice education should encompass personnel to support course delivery in academic and practice settings, as well as physical resources. A particular area that requires considerable investment is the provision of adequate IT facilities to support the growth of web-based support for students and practice educators.

If the four-tier structure is judged to be the appropriate way forward to enable the radiography profession to deliver a modern radiography service, then all stakeholders need to work in partnership to facilitate its implementation and to ensure protection of the public.
References


