

Development and implementation of the Australian universities radiation therapy student clinical assessment form

Abstract Purpose: Prior to 2009, one of the problems faced by radiation therapists who supervised and assessed students on placement in Australian clinical centres, was that each of the six Australian universities where Radiation Therapy (RT) programmes were conducted used different clinical assessment and reporting criteria. This paper describes the development of a unified national clinical assessment and reporting form that was implemented nationally by all six universities in 2009. **Methods:** A four phase methodology was used to develop the new assessment form and user guide. Phase 1 included university consensus around domains of student practice and assessment, and alignment with national competency standards; Phase 2 was a national consensus workshop attended by radiation therapists involved in student supervision and assessment; Phase 3 was an action research re-iterative Delphi technique involving two rounds of a mail-out to gain further expert consensus; and stage 4 was national piloting of the developed assessment form. **Results:** The new assessment form includes five main domains of practice and 19 sub-domain criteria which students are assessed against during placement. Feedback from the pilot centre participants was positive, with the new form being assessed to be comprehensive and complemented by the accompanying user guide. **Conclusion:** The new assessment form has improved both the formative and summative assessment of students on placement, as well as enhancing the quality of feedback to students and the universities. The new national form has high acceptance from the Australian universities and has been subject to wide review by the profession.

Keywords: placement assessment, radiation therapy, student assessment, university assessment.

Introduction

Radiation Therapy (RT) undergraduate and postgraduate programmes are conducted at six Australian universities. These are the University of South Australia¹ (UniSA) in South Australia; the Universities of Newcastle² (UoN) and Sydney³ (UniSyd) in New South Wales (NSW); RMIT University⁴ (RMIT) and Monash University⁵ (MUni) in Victoria; and the Queensland University of Technology⁶ (QUT) in Queensland. Programmes are an assortment of either three- or four-year full time undergraduate degrees, or two-year graduate entry masters. All programmes comprise a blend of academic learning and professional clinical placements, and all programmes are accredited by the Australian Institute of Radiography (AIR). It should be noted that Tasmania and Western Australia do not currently have a radiation therapy programme however the clinical centres in these states provide placements for students of all six programmes.

Radiation therapy clinical centres in each state are generally located in large cancer care facilities providing comprehensive case care support, and given the size of Australia and the development of regional cancer services throughout Australia, many of the centres are located at large distances from the university training sites. Students of all universities regularly travel long distances within a state and across Australia to attend professional clinical placement. One of the problems faced by clinical centres across Australia over the

past years, when accepting students from the various universities for placements, was that each university used a different student professional placement reporting and assessment tool. The use of different student assessment tools was confusing for clinical supervisors at these centres, especially if they had students from different universities on placement at the same time, and this had the potential to disadvantage students when being assessed due to the lack of consistency between forms and processes. It should be noted that UoN and USyd developed a shared clinical placement assessment in 1999 due to confusion in NSW when using two different forms and processes.

In 2007, as part of a twice-a-year national RT Programme Coordinators (RTPCs) meeting funded in part by the Federal Department of Health and Ageing (DoHA), the six university RTPCs discussed the possibility of developing a national RT student clinical assessment form that would be used by each of the six participating universities. At the meeting, each RTPC presented their programme's process and documentation used for student placement assessment, and each openly discussed the strengths and weaknesses of their own forms and processes. Open questioning and discussion also occurred among the group about the strengths and weaknesses of all other universities processes and forms. On completion of this discussion it was felt that sufficient commonality existed among the clinical assessment processes and forms that it would be

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possible to develop a nationally standardised clinical assessment form for use by all six Australian universities and clinical centres. Additionally there was a desire by the RTPCs for the clinical placement assessment forms used by the universities to become more reflective of the AIR's newly developed competency based standards (CBS) for radiation therapists (RTs)⁷ as this document articulated the domains of knowledge and skills that graduates of programmes should possess as practitioners, and they were a benchmark used by the profession during programme accreditation.

It was felt that the development and implementation of a common assessment tool could:

- 1 Ease an unnecessary point of confusion about clinical assessment among the providers of clinical education nationally
- 2 Increase the efficacy and accuracy of the student placement and reporting process nationally
- 3 Allow for standardisation of national clinical assessment training for RT educators and clinical supervisors
- 4 Encourage RT students of all programmes to accept placements at non-traditional placement locations across Australia thereby assisting those locations to recruit graduates.

It was noted that similar processes to develop a national framework for placement assessment have been undertaken in other allied health fields such as occupational therapy.⁸

This paper describes the process which the RTPC group led to develop a nationally standardised and accepted clinical assessment form to be used by all six universities, and in all clinical centres, to assess radiation therapy students on placement across Australia. The process included several phases: Phase one involved the recruitment of independent researchers to coordinate the research and the development of a draft assessment document; Phase two involved an expert panel workshop that used multi-small group consensus⁹ on key criteria to further develop the draft document; Phase three was a mail questionnaire to clinical experts which used the Delphi technique^{10,11} to further develop a consensus on a final document to be tested; and Phase four was the piloting of the process and form in clinical practice.

Phase 1 Methodology

Project funding and project leadership

In mid 2007 a successful grant application for the development of a national standardised RT student clinical assessment form was prepared and submitted by one of the authors (E Giles) on behalf of the RT Clinical Programmes Coordinators to the DoHA to run Phases 1 to 3 of this research. The Centre for Allied Health Education (CAHE)¹² at the University of South Australia was recruited by the RTPCs as an independent contractor to run the project. The CAHE is not affiliated with medical radiation programmes in any of the provider universities. The University of South Australia's Human Research Ethics committee approved all aspects of the Phase 1–3 research project, and informed consent was obtained by all participants involved in the research.

Current assessment forms and the AIR's Competency Based Standards

CAHE initially collated the five clinical assessment forms in use in 2007 by the universities. They reviewed the forms to identify the criteria assessed by each university, and to identify consistency and similarity

in meaning, wording and scoring of the criteria. One goal of the project was to align the new form with the criteria as described by the Australian Institute of Radiography's Competency Based Standards for the Accredited Practitioner and the CAHE reviewed this document against the current forms in use.

Drafting of the nationally standardised clinical assessment form

A meeting of the RT Programme Coordinators was held in Adelaide in February, 2008, which was coordinated by the CAHE. The meeting discussed items for inclusion in the standardised assessment form, taking into account the synthesis and commonalities between the five assessment forms, the competency based standards, and any inconsistencies between the two. Following this meeting, the first draft of the assessment form was developed.

The new form was developed using the following four domain headings from the CBS document:

- 1 Knowledge and Understanding
- 2 Critical Thinking and Evaluation
- 3 Professional and Ethical Practice
- 4 Care and Clinical Management.

The fifth CBS standard, "Lifelong Learning", was at the time identified by the RTPC to be a domain that would not easily be assessed on students undertaking clinical placements. Lifelong learning has a large affective element,^{13–15} rather than an immediate observable professional clinical knowledge and skill base element that clinical supervisors could reliably report on. It was therefore not considered for inclusion in the developing standardised assessment form at the time.

A range of criteria that were on the current university forms and that related to the development of professional behaviours and attitudes associated with responsibility and accountability, not only to oneself but to the team and patients, were included in a new domain. These criteria were generally not immediately assessable within the CBS for Accredited Practitioners, but they were deemed relevant to student assessment. This fifth domain was named: 5 Professionalism

Once the five main domains were established the CBS document and current university forms were reviewed to establish those criteria that would be assessable under each domain. Over the following weeks a working draft of the assessment form was developed by CAHE and circulated to all RTPCs for feedback. At the end of this iterative process the draft assessment form had the five key domains of student clinical assessment with a total of 19 sub-domain descriptive assessment criteria.

The development of a user guide was also discussed during this meeting and added to the scope of the project. The purpose of the user guide was to assist those RTs that would supervise and/or assess students on placement, by providing a range of cues or prompts that were more specifically descriptive of each criterion. The CAHE developed the user guide and circulated the document to the RTPCs.

Phase 2 Methodology

Clinical radiation therapists consensus workshop

Given that the assessment form was to be used for student evaluation by radiation therapists, part of the research methods included consensus building with radiation therapists around the content and terms used within the document. A re-iterative Delphi technique was used with

clinical RTs to provide feedback regarding the developing document. A workshop was held the day prior to the start of the Annual Scientific Meeting of Medical Imaging and Radiation Therapy in Melbourne in April 2008. Conference attendees were invited to attend the workshop via the conference website, and participation was open to any interested stakeholder. The workshop was attended by 33 participants who held a range of RT positions including radiation therapy educators, clinical supervisors, student mentors and RTs that had to assess students on placement as part of their normal clinical role. The workshops commenced with a presentation of background information regarding the project and presentation of the draft versions of the assessment form. The draft assessment form was subject to two rounds of small group consensus, and the user guide open to whole of forum discussion.

In terms of review of the draft assessment form, the workshop attendees were divided into six small groups of between five and six participants, and each small group was facilitated by a member of the RT Programme Coordinators group. The first round of discussion for each small group centred on the inclusion or exclusion of each of the 19 sub-domain criterion as described on the form. The groups were asked to answer:

- 1 Yes, they agreed to include the criteria in the assessment form in its current form
- 2 No, they would exclude the criteria or they required amendment in the form of wording changes.

On completion of this round of small group consensus discussion, the responses of each group (yes = agree to retain or no = disagree to retain) were presented to the workshop for all to hear and a whole of workshop consensus agreement was established for each criterion. The aim of the iterative rounds was to identify the degree of consensus among the expert panel members. While there are no recognised guidelines in the literature as to the appropriate level of agreement for achieving consensus, the recommendations range from 50 to 100% based on the importance of the research.¹¹ A consensus level of 60% was chosen by CAHE and the RTPCs as a realistic goal for this type of research.

Based on a 60% consensus level with six expert panel groups, criteria were retained on the developing form in their current wording when five or six of the six small groups answered yes to retain the criteria. Seven of the 19 criteria met the 60% consensus level and were kept in full. Less than 60% consensus was reached on 12 of the 19 criteria. These 12 criteria formed a second round of small group discussion and expert panel consensus.

In the second round of small group discussion, the same expert panel groups were asked to propose either exclusion of the 12 remaining criteria from the form, or to propose revised wording for the 12 criteria. The small group feedback was again presented to the workshop in open discussion and a 60% consensus agreement was reached on the rewording of the 12 remaining criteria. No criteria were excluded from the developing assessment form, and no new criteria were added as a result of the expert panel workshop.

At the end of the consensus decision-making round, the forum discussed the user guide, although it was noted that the user guide needed some revision given the wording change to 12 criteria. The user guide was designed to provide “cues” that described each of the assessment criteria, however the open discussion highlighted that the current cues were too specific and needed to be generalised. As a result of this discussion, it was

agreed in a consensus vote to change the word “cues” to “prompts” and to make the prompts less specific than they currently were. The following introductory statement was written and agreed to be added to the user guide: *“It is important to note that these prompts are listed as general examples and by no means represent an exhaustive list of behaviours that must be demonstrated by each student.”*

All 33 workshop attendees were invited to participate in the next stage (Phase 3) of the development of the form and user guide. The proposed changes that resulted from the clinical assessment workshop were made to the draft assessment form and the user guide by the CAHE prior to Phase 3 research.

Phase 3 Methodology

Questionnaire to clinical experts

In addition to those RTs who volunteered at the workshop to continue their involvement with the project, the RTPC group used purposive sampling¹⁶ to identify academics and clinicians who were thought to have specialist knowledge and who would be able to assist in the development of the development of the assessment tool. Nominees included current and past clinical educators and academics from radiation therapy, nuclear medicine and radiography disciplines, who were likely to have an active interest in student assessment and therefore provide useful feedback using the Delphi technique. Both volunteers and nominees were contacted via email and asked to provide their consent to participation via a signed consent form, and those that returned a signed form became the participants of the Phase 3 research project. A total of 44 participants agreed to participate in the Delphi questionnaire process (7/33 workshop attendees and 34 new nominees).

In early May 2008, participants were emailed the updated draft version of the assessment form, and user guide, along with a questionnaire that elicited responses to the following question for each of the 19 criteria:

Question: Is this a valid criterion for inclusion in the assessment form?

Answer: Yes or No.

Those who answered “yes” were asked to provide one of two responses: “I agree unconditionally with the statement” or “I would like to suggest an amendment to the statement” (with a prompt to include the proposed amendment).

A “no” response included the following statement to be completed by the participant:

“My justification for excluding the criterion from the assessment form is:...”

Respondents were also given the opportunity to provide any further comments on areas such as additional criteria, overall layout/content, user guide/prompts or scoring criteria. Participants were given a two-week period with which to respond via email. By the end of the response time there were 33/44 responses received (75% response rate). Once again the consensus rate for inclusion, or exclusion or change, was maintained at 60% consensus level.

Consensus was achieved for all 19 criteria (range 66% to 94%). Overall, the feedback regarding the scoring criteria was positive thus no changes were made to the criteria on the developing assessment document. Changes to the layout of the form were made by CAHE based on the first round of questionnaire feedback and included items such as:

- More space allowed for comments
- No fonts below 11 point to be used

Table 1: Domain 1-4 assessment scale.

Evaluation of Student Performance Use these criteria to rate Domains 1–4					
1	2	3	4	5	NA
Unsatisfactory level of achievement	Progressing but requires improvement	Satisfactory level of achievement	Occasionally exceeds expected level of achievement	Consistently exceeds expected level of achievement	Not applicable Not assessed

- Description of scoring method simplified
- A line to be included for assessor's name (not just signature)
- The term "Radiation Therapy" to be used consistently throughout the assessment form and user guide
- Scoring categories were placed at the top of each page
- Colour coding of different domains.

A near complete version of the assessment form was sent back to the same 44 participants for a second round of feedback in early June 2008. The respondents were provided with the degree of consensus achieved previously for all items and all the de-identified qualitative feedback provided from the first round questionnaire. This allowed participants to view all other feedback and provide further comment on the overall content of the near complete version of the assessment form. Unstructured feedback was also elicited via email. Once again, participants were given a two-week period in which to respond. A total of 16/44 responses was received (36% response rate), with the majority of responses being positive and supportive of the use of this form in clinical practice.

Following the second round of Delphi feedback the de-identified feedback was provided to the RTPC for consideration. One recurring issue in all forums (RTPCs meetings, the workshops, and questionnaires) was that of the assessment of specific student competencies or skills (within one of the skill criteria listed in the form). In relation to the issue of specific clinical skill assessment, the RTPCs maintained a position that specific clinical skills (or competencies) would be assessed separately from the use of the developing form, which was aimed more at providing formative or summative overall feedback to the student than comment on specific skills sets. Extra information was added to the form to help clarify this point:

"Note: this criterion is based on an overview of performance of technical skills. All students undertake a separate competency assessment requiring demonstration of specific skills, and this is assessed using a separate form. Please refer to each university's specific technical performance indicators for competency assessment."

After consideration of this second round of feedback, a final assessment form and user guide were developed by CAHE.

Results of Phases 1–3

The outcomes of Phases 1–3 included the development of the Australian Universities Radiation Therapy Student Assessment Form (AURTSAF), and the associated User Guide. Both documents are provided at the end of this paper as Appendices A and B. The documents are structured around the five domains of practice and the 19 sub-domain criteria agreed to within the three-phase research process described above.

In terms of both documents the first four domains of student practice and assessment are those described in the AIR CBS document, and the fifth domain was an expectation required by all university programmes. Domains 1–4 are assessed using a six point Likert scale shown in Table 1. The use of a descriptive rating for domains 1–4 allows for feedback to be given

to students according to a set of descriptors that will allow them to note where they need to further develop their knowledge and skills. Additionally at the time of the project all programmes except RMIT used the clinical supervisors assessment scores of students to calculate marks towards the student's clinical placement course (subject) that they were enrolled in, therefore a graded scale of scoring was required by all universities.

Domain 5, Professionalism, is assessed as a Satisfactory or Unsatisfactory rating in recognition of the mandatory requirement for students to demonstrate those behaviours associated with codes of conduct and professional behaviour.

Phase 4 Methodology

Project grant and project leadership

In mid 2008 a second successful grant application was prepared and submitted by one of the authors (E Giles) on behalf of the RT Clinical Programmes Coordinators to the DoHA to pilot the new Australian Universities Radiation Therapy Student Assessment Form (AURTSAF) and user guide. Once again the CAHE was recruited to run the pilot testing. The UniSA Human Research Ethics committee approved all aspects of the research prior to the research being conducted.

Piloting the new assessment tool

Four clinical centres in Western Australia and Tasmania were selected as the venues for the pilot of the new assessment form and user guide. These two states and the four clinical centres were chosen as they regularly receive students from all over Australia. Information about the project was provided to all RTPCs, to the four clinical centres involved in the pilot, and to the students being assessed on placement, and consent was received from all to be involved in the project. The project was undertaken between July–October 2008.

Clinical supervisors at each centre were asked to do two things:

- 1 Assess students on placement using both the relevant university-based forms and the new national assessment form
- 2 Provide feedback on the new form using a purposefully designed questionnaire.

The student placement assessments, using both the new and current assessment forms, were provided to the research team and the home universities for review and comment. The questionnaire was analysed by CAHE.

Results Phase 4

Student and site participants

A total of 18 students consented to participate in this pilot test. While students of all universities were assessed as part of the pilot, the majority of students were from UniSA, USyd and Monash. The majority of students (17) were from year two of their programme with only two year 1 students (UoN) assessed using the form. Table 2 shows the location of students

Table 2: Student assessed with the new assessment form by location.

Location	Clinical site	Number / proportion of students (n = 18)
Western Australia	Sir Charles Gairdner Hospital	2 / 11%
	Perth Radiation Oncology	4 / 22%
Tasmania	WP Holman (Launceston and Hobart)	7 / 39%
	Royal Hobart Hospital	5 / 28%

Table 3: Results of the pilot questionnaire: questions 2–7.

Question	Responses % / Number			
Q2: Ease of use of the assessment form	Very easy 27% / 3	Easy 55% / 6	Difficult 18% / 2	Very difficult 0
Q3: Clarity of the assessment form	Very clear 18% / 2	Clear 82% / 9	Somewhat clear 0	Unclear 0
Q4: Comprehensiveness of the assessment form	Very 36% / 4	Complete 64% / 7	Barely 0	Incomplete 0
Q5: Usefulness of the user guide	Very useful 56% / 5	Useful 44% / 4	Limited 22% / 2	Not Useful 0
Q6: Clarity of the user guide	Very clear 18% / 2	Clear 73% / 8	Somewhat 0	Unclear 9% / 1
Q7: Overall satisfaction with the assessment form	Very satisfied 33% / 3	Satisfied 78% / 7	Barely satisfied 11% / 1	Unsatisfied 0

involved in the research. The students were assigned to different clinical placement sites in Western Australia and Tasmania.

Results of the questionnaire

Eleven clinical supervisors from the four clinical centres completed the questionnaire. The 15 item questionnaire comprised six questions about the ease and clarity of the new assessment form, four yes/no response questions about the ease and usefulness of the new assessment form, as well as four open ended questions that sought feedback on the overall satisfaction of the supervisors in using the form (refer to Table 3).

Clarity and time to complete the assessment form

When asked if the assessment form allowed for clear and objective assessment of the student's performance, all respondents gave an affirmative answer. Similar responses were reported when participants were asked about the assessment form's capacity to provide sufficient and useful feedback to the students. Clinical supervisors indicated that on average it took between 20–30 minutes to complete the assessment form, and around 85–90% of the clinical supervisors thought that this represented a reasonable time frame.

What the respondents liked most about the assessment form

When asked to provide feedback as to what aspects were most liked about the form, the following positive comments were provided by the respondents (anonymous responses, each response is from a different responder):

"I liked that it was concise and that there were more in depth details on what the questions meant if needed... Language related to the expectations of the profession (i.e. as per CBS and expectations for staff). One comment I heard was perhaps we could use it or similar for staff assessment... Good criteria... I liked most the format of the new form which is more systematic than the old ones... I think that the user guide was the most useful aspect. The more detailed descriptions of the expectations of each criterion were very useful... I like the idea of standardising assessment such that it is done the same way all over Australia... I felt that all areas were covered as well as giving room for specific comments to assist the student in setting their goals... It covers all areas of relevance for assessment of the student's ability."

What they liked least

When asked to provide feedback as to what aspects of the form were liked the least, the following negative comments were provided by the respondents (anonymous responses, each response is from a different responder):

"No student feedback (provided)?... The comment section after each area of assessment. I personally just use the final comments section to cover all areas. This could be quite time demanding if you are required to fill out all sections every week of a student's placement... Some repetitive criteria ... Some overlap between domains (probably unavoidable!)... Some questions were asking similar things... If the scoring is going to be totaled up then areas where "N/A" has been ticked could adversely affect the total score for the placement... The universities will need to provide more detail on expected level. Staff are reliant on their own perceptions

of what level the students should be at. This subjectivity will be difficult to remove – perhaps training / guidance from course coordinators may be useful... There was very little that I did not like about the form... there was nothing to not like”

Other comments

When asked to comment on a range of variables that could have affected the way the assessment form was used (such as year level of students, level of intellectual capacity, use for formative or summative evaluation), the following remarks were provided by the clinical tutors (anonymous responses, each response is from a different responder):

“If I was to find out that this is not being used to go towards their overall grade for a subject I would not be spending anywhere near as much time (would probably not write comments at all) on it as I feel this is a waste of our time... The students are adults and we can express to them verbally what they are doing well and what needs improvement (this form should only be used for the university to have an idea how the student is progressing)... It’s more difficult to assess 1st year students as what they have to know is basic and elementary level and don’t have much expect achievement they should make (sic)... The items in the assessment form are relatively general which aren’t targeting students’ specific ability and skills. Therefore, this assessment would only tell you how the overall performance of the student is, but not specific areas... I take it all of those variables are taken into account prior to completing any assessment. The level of which I expect a student to be at I base on my own experience and expectations. I think that these aspects were defined well within this assessment form... The form may acquire different results depending on whether the marker grades according to expected standard for that year or overall competency. This could be clarified to further improve the quality of the form... Expectations are different for different levels of students.”

Summary of feedback

Feedback from the pilot group of clinical educators was overwhelmingly positive. All the participants agreed the new form allowed clear and objective assessment of the student’s performance, and provided sufficient and useful feedback to the students. Most of the respondents found the assessment form easy to use. The majority felt that the form was clear and comprehensive enough to cover the domains important for clinical placement assessment. Most of the respondents found the user guide useful in their assessment.

The features of the new form that the clinical supervisors liked most were related to the format as well as the comprehensiveness of the scope covered by the assessment form. Feedback about the least liked aspect of the questionnaire suggested that there are items or criteria that are similar and repetitive. It was also indicated that for some questions where “not applicable” has been ticked, simply adding up the score might affect the meaning of the total score.

There was dissension in the comments made on how the results of the assessment form might have been affected by variables such as year level of student and intellectual capacity. There was a comment that the new form may produce different results depending on whether the marker grades according to expected standard for that year or overall competency, and therefore the standard of acceptable practice should be made clear in the assessment form. Conversely, another comment suggested that this was already defined well within the assessment form and thus will not require any changes.

As a result of this evaluation feedback, spaces for comments after each domain were removed; a place for student comments was included, headers and footers were removed to allow each university to embed into their respective clinical workbook materials documentation and information about the accompanying user guide and training package were added to the front page. A statement was amended and highlighted in the user guide pertaining to student level of progress and referral to information about student level expectations from each university. In addition a statement was included about the form being the product of a national collaborative project involving the six universities, funded by Department of Health and Ageing and finally, a copyright statement was added.

Conclusion

A nationally standardised clinical assessment form and user guide to be used by the six Australian RT programmes, for the placement assessment of all Australian radiation therapy students, in all Australian clinical centres, has been developed based on:

- 1 Synthesis of the five different assessment forms currently in use by the six Australian universities providing radiation therapy training,
- 2 Incorporation of the AIR’s CBS documents for the Accredited Practitioner
- 3 A clinical experts consensus workshop
- 4 Two rounds of Delphi questionnaire and feedback
- 5 Piloting of the documents in four clinical centres on a sample of students from each university.

In early 2009, prior to a national roll-out of the form and user guide, a training package in CD ROM format was developed by the RTCs and distributed to all Australian RT departments. This consisted of a PowerPoint (Microsoft, Seattle WA, USA) training presentation with accompanying voice-over that described how to use the assessment form and user guide and a summary of how the new assessment domains aligned to the AIR CBS document. It also provided information on delivering feedback to students. Although RTs from most states and clinical sites participated in the development of the new national assessment form, training sessions at key locations in all states delivered by staff from the local universities was undertaken prior to the use of the new form. The only difference to the national training was in Tasmania and Western Australia where pilot training and piloting of the new processes occurred prior to the Phase 4 research, and the RTs of these states indicated that they could roll out the form without a formal training session led by a university. The training package has been appellated as an AIR Continuing Professional Development (CPD) activity to be claimed by RTs who complete the training. There is also a link within the CD, to an evaluation survey on the effectiveness of the training package.

The RTPCs notified the professions accreditation board, the AIR’s Professional Accreditation and Education Board (PAEB), of the completion of the assessment project and provided them with a project report, electronic copies of the assessment form and user guide, and copy of CD ROM training package.

All six Australian RT universities rolled out the new clinical assessment form in their programmes across the first or second half of 2009. The assessment tool and user guide are the joint property of the six universities involved in the research and they have copyright of the assessment tool and user guide. It is anticipated that a review of the efficacy of the assessment tool will be required every two years with clinical centre feedback about the currency and appropriateness of the tools for use in

clinical practice. This may be performed by the six provider universities as a part of ongoing placement coordination activity. As holders of the copyright the six universities would consider supporting applications for the use of the clinical assessment tool in the research setting. Practitioners wishing to use the document in research should contact a RTPC.

As well as developing a national clinical assessment form, the project also re-energised the interest and involvement of clinical RTs in standards of student clinical practice, it has led to a great partnership and new lines of open and supportive communication between the six RT programmes, and met an outcome of the Department of Health and Ageing by providing greater access to radiation therapy clinical training through the development of a unified national assessment strategy.

The process of the development and implementation of the Australian Universities Radiation Therapy Student Clinical Assessment Form has been presented in the following forums:

- 1 Giles E, Milinkovic D, Dempsey S, Wright C and Chiswell M. *Design and implementation of a national standardised radiation therapy student clinical assessment form*. Presentation at the Australian and New Zealand Association of Medical Educators (ANZAME) conference Townsville Queensland July 2010.
- 2 Chiswell M, Giles E, Wright C, Dempsey S, Rowntree P, Jimenez Y. *Methodology for development of a national clinical assessment form for radiation therapy*. Article in *Spectrum* (Australian Institute of Radiography) 2009;16 (5): 5–6.
- 3 Giles E, Wright C, Chiswell M, Dempsey S, Jimenez Y, Hargrave C. *The development of a nationally standardised Radiation Therapy Student clinical assessment form*. Presentation at the Combined Scientific Meeting Brisbane October 2009.
- 4 Jeffries L, Giles E, Dempsey E, Wright C, Forrest W, Hargrave C, Jimenez Y, Churcher K. *The development of a nationally standardised Radiation Therapy student clinical assessment form*. Poster at the AIR Research symposium Melbourne October 2008.

The project was nominated for a Business Higher Education Round Table (BHERT) national award for collaboration in educational excellence, Melbourne, 2010.

Appendices A and B p20–25

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APPENDIX A

Australian Universities Radiation Therapy Student Clinical Assessment Form

Assessment Form – version 1a

University: _____ Placement location: _____

Year of program: _____ Block No: _____ Week of placement: _____

Final Summative Assessment / Formative Assessment (*circle one*)

Instructions:

This form should be completed by the Radiation Therapy Clinical Educator, Preceptor or the student's immediate clinical supervisor. For more detailed information on completing the assessment form, please refer to the user guide.

There are 5 domains of practice to be assessed including:

1. Knowledge and Understanding
2. Critical Thinking and Evaluation
3. Professional and Ethical Practice
4. Care and Clinical Management
5. Professionalism

Each domain contains several criteria and all criteria should be assessed for each student.

Domains 1–4 should be assessed using the five-point scale ranging from “Unsatisfactory level of achievement” through to “Consistently exceeds expected level of achievement”, or “Not applicable”.

Domain 5 (professionalism) should be assessed either as Satisfactory or Unsatisfactory.

Note: For more detailed information on completing the assessment form, there is a user guide that explains the items within the domain and a training package recommended for new users. Please refer to either the clinical educator within your department, or the University supporting the student placement, for the training package.

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The assessment form and user guide was authored by E Giles, S Dempsey, N Charlton, M Chiswell, C Wright, P Rowntree representing the Radiation Therapy Programme Coordinators group (RTPC) of the six tertiary institutions in Australia (University of South Australia, University of Newcastle, University of Sydney, RMIT University, Monash University, and Queensland University of Technology).

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Student's Name _____ Hospital/Department _____

Evaluation of Student Performance Use these criteria to rate Domains 1–4					
1 Unsatisfactory level of achievement	2 Progressing but requires improvement	3 Satisfactory level of achievement	4 Occasionally exceeds expected level of achievement	5 Consistently exceeds expected level of achievement	NA Not applicable Not assessed

1. Knowledge & Understanding	1	2	3	4	5	NA
1.1 Applies & adapts previous knowledge to clinical practice situations						
1.2 Applies & adapts new knowledge to clinical practice situations						
1.3 Demonstrates knowledge of the role and responsibilities of the Radiation Therapist and how this fits within the multidisciplinary team						

2. Critical Thinking & Evaluation	1	2	3	4	5	NA
2.1 Demonstrates the ability to be self-directed						
2.2 Demonstrates appropriate time management skills and use of available resources						
2.3 Demonstrates problem solving skills to formulate appropriate clinical decisions						

3. Professional & Ethical Practice	1	2	3	4	5	NA
3.1 Assumes responsibility for own actions and works within accepted departmental protocols and standards of practice for Radiation Therapy						
3.2 Recognises own abilities and level of professional competence and consults with an experienced practitioner when expertise is required beyond own level of competence						
3.3 Documents accurately						
3.4 Works and communicates effectively with, and demonstrates respect for, all members of the multidisciplinary team						
3.5 Demonstrates effective verbal and non verbal communication with patients, and their carers and families						

4. Care & Clinical Management	1	2	3	4	5	NA
4.1 Demonstrates empathy and respect for individuals and their carers/families						
4.2 Demonstrates awareness of patient's needs and health issues and takes appropriate action						
4.3 Performs technical skills to an appropriate level of competence relative to the stage of their academic programme in: Note: This is not an assessment of specific clinical competencies. Please refer to each University's specific technical performance indicators for competency assessment.						
• Treatment						
• Planning						
• Simulation/CT						

Evaluation of Student Performance
Use these criteria to rate *Domain 5*

S Satisfactory level of achievement	US Unsatisfactory level of achievement	
5. Professionalism	S	US
5.1 Demonstrates appropriate interest, enthusiasm, motivation, perseverance in work & learning		
5.2 Punctuality		
5.3 Maintains professional appearance		
5.4 Complies with patient information confidentiality and privacy legislation and policies		
5.5 Follows health and safety requirements		

Assessor's overall comments:

Supervisor's Name: _____

Supervisor's Signature: _____ Date: _____

Student's overall comments:

Student's Signature: _____ Date: _____

Days absent: _____

Medical Certificate provided for all days absent: Yes / No

Appendix B

User Guide – Domains of Practice: Generic Descriptors and Prompts

1. Knowledge & Understanding
1.1 Applies & adapts <i>previous</i> knowledge to clinical practice situations
Prompts: • Is prepared for their level of clinical experience • Demonstrates knowledge and skills learned at university or on previous placements by actively participating in procedures • Is able to adapt knowledge or skills to similar clinical practice procedures
1.2 Applies & adapts <i>new</i> knowledge to clinical practice situations
Prompts: • Demonstrates continuing development of knowledge and skills throughout the placement • Actively participates in learning opportunities • Demonstrates that they can apply “on the job” learning
1.3 Demonstrates knowledge of the role and responsibilities of the Radiation Therapist and how this fits within the multidisciplinary team
Prompts: • Recognises the members of the multidisciplinary team (i.e. RO, nursing, physics etc) and their roles in providing a holistic approach to the care of the patient • Develops an understanding of how Radiation Therapists fit within the team, and their roles and responsibilities
2. Critical Thinking & Evaluation
2.1 Demonstrates the ability to be self-directed
Prompts: • Should include skills relative to both patient treatment and care, and operation and management of the area/unit/department • Seeks resources or information during machine down time or periods when workload is reduced, or as negotiated with their supervisor • Carries out administrative/ organisational related activities that contribute to workflow without the need for continual prompting
2.2 Demonstrates appropriate time management skills and use of available resources
Prompts: • Uses and sources appropriate information to prepare for simulation/ treatment prior to patient arrival • Consults protocols before undertaking unfamiliar treatment or planning techniques • Performs tasks in the correct order e.g. correctly aligns the patient before attempting to fit immobilisation casts or aids • Performs tasks in the appropriate amount of time
2.3 Demonstrates problem solving skills to formulate appropriate clinical decisions
Prompts: • Able to progress a plan toward completion • Uses appropriate planning skills and reasoning to justify or optimise dosimetry • Checks documentation in a logical sequence to problem solve a set-up difficulty • Double checks measurements when tattoo or landmark reference do not correlate • Can make or identify EPI judgments resulting in the decision to treat/ move/repeat • Investigates the reasons behind FSDs being out of tolerance and determines possible actions and understands their importance
3. Professional & Ethical Practice
3.1 Assumes responsibility for own actions <i>and</i> works within accepted departmental protocols and standards of practice for Radiation Therapy
Prompts: • Student actively seeks out procedural information relative to treatments or accepted practices and either seeks clarification or further discussion with staff and follows accordingly • Understands responsibility for a duty of care to the patient • Acknowledges errors and seeks advice regarding the appropriate course of action
3.2 Recognises own abilities and level of professional competence <i>and</i> consults with an experienced practitioner when expertise is required beyond own level of competence
Prompts: • Is aware of the student role of developing competence and does not move beyond accepted boundaries of supervision • Sets goals that are achievable in conjunction with supervisors • Reflects on level of ability in order to build on and increase competence • When consulting an experienced practitioner, the student does so appropriately (i.e. time, place and manner)

3.3 Documents accurately
Prompts: • Documentation can be written or electronic, and may include stamping In-patient notes, transferring information from planning to treatment, stating agreed placement goals and reflection on performance or other administrative or quality assurance documentation • Completes documentation according to department protocols • Follows up missing data and information
3.4 Works and communicates effectively with, and demonstrates respect for, all members of the multidisciplinary team
Prompts: • Actively participates in the team • Clarifies what degree of participation is appropriate/permissible • Shows initiative to assist the team through tasks such as calling the next patient, directing patients to get changed where appropriate, preparing the room, aiding patient transfer, etc. • Accepts and responds positively to feedback from team members and uses feedback to reflect on practice • Is cordial with all team members • Communicates with other health professionals where appropriate • Informs the team of activities requiring them to leave the workstation
3.5 Demonstrates effective verbal and non-verbal communication with patients, their carers and families
Prompts: • Correctly identifies patients • Introduces and identifies themselves as a student appropriately to patients • Greets patients by name and maintains conversations to build rapport • Demonstrates active listening skills • Obtains and imparts correct and appropriate information to patients and their carers • Seeks clarification of information where unsure before communicating with patients or carers • Shows continual progression to maintaining dialogue with patients when completing a treatment or planning set-up, providing explanation of the procedure where appropriate • Exhibits suitable non-verbal behaviours (e.g. eye-contact, facing patient and attentive, supportive persona, does not appear intrusive or distant)
4. Care & Clinical Management
4.1 Demonstrates empathy and respect for individuals and their carers/families
Prompts: • Includes individual's rights, dignity, values, culture, customs, spiritual beliefs and practices E.g. observing privacy and providing gowns or sheets where possible • Respects patient's rights to refuse having a student attend the procedure • Responds to patient needs attentively and with empathy • Provides material comfort/ assistance where appropriate e.g. blankets, tissues, water, a quiet place to wait if distressed
4.2 Demonstrates awareness of patient's needs and health issues and takes appropriate action
Prompts: • Is aware of special needs of patients with and takes due care where required (e.g. wheelchair or sick bowl if unwell) • Examples include care and transfer of palliative or unwell in-patients, assisting with transport and showing care for their condition • Responds to patients requests for assistance promptly or refers on to the appropriate party without delay • Knows when to consult an appropriate professional for advice regarding patient care
4.3 Performs technical skills to an appropriate level of competence relative to the stage of their academic programme in:
• Treatment • Planning • Simulation/CT Note: this criterion is based on an overview of performance of technical skills. All students undertake a separate competency assessment requiring demonstration of specific skills, and this is assessed using a separate form. Please refer to each University's specific technical performance indicators for competency assessment.
Treatment Prompts: • Has an understanding of the positioning, stabilisation, and localisation principles of the treatment process • Has knowledge of the data they need to obtain and record for treatment quality assurance purposes • Has an understanding of the principles and protocols of imaging for treatment verification • Has an understanding of the record and verify facility

Planning Prompts: • Able to achieve a clinically acceptable treatment plan that follows ICRU and departmental guidelines, and is deliverable • Can accurately perform any required calculations • Able to prepare the documentation for the treatment chart/record • Has an understanding of the record and verify facility
Simulation/CT Prompts: • Has an understanding of the positioning, stabilisation, imaging, and localisation principles of the simulation/CT process • Has knowledge of the data they need to obtain and record for dosimetry and treatment purposes • Assists in the development of ancillary equipment constructed in the mould room
5. Professionalism – rate these items S or US
5.1 Demonstrates appropriate interest, enthusiasm, motivation, perseverance in work & learning
Prompts: • Has a positive demeanour • Is attentive • Exhibits open body language • Asks relevant questions where appropriate • Initiates own further learning where required • Uses equipment appropriately (e.g. computer, internet, telephone)
5.2 Punctuality
Prompts: • Advises of any lateness or absence • Reports to workstation on time and ready to work and learn • Returns from breaks within the acceptable timeframe • Refer to each university's attendance policy
5.3 Maintains professional appearance
Prompts: • Personal tidiness and appearance • Adheres to University uniform policy • Wears name badge • Wears radiation monitor • Wears appropriate footwear
5.4 Complies with patient information confidentiality and privacy legislation and policies
Prompts: • Ensures removal of identifying data from clinical information required for University assessment purposes • Personal identifying information/data should not be disclosed to staff/students not involved with the care of the patient • Observes data removal protocols where applicable • Understands that confidentiality extends to conversations between patients, conversations overheard and information obtained directly and indirectly
5.5 Follows health and safety requirements
Prompts: • Observes radiation safety • Correct manual handling skills • Uses infection control procedures • Operates machinery and equipment safely • Observes other legislative policies