Developing RCR standards:
a guide

The Royal College of Radiologists

1. Publishing policy at The Royal College of Radiologists

Faculty publications are produced to provide professional standards and guidance for members and Fellows, to contribute to the provision of high-quality healthcare, in accordance with the charitable aims of the College. Publications are prepared by Fellows of the College, and focus on specific areas of professional practice, arising from the ongoing work of Faculty Board and its sub-committees, or prepared in response to a particular aspect of the healthcare context.

By publication we mean any printed or online guidelines or standards document approved by the relevant Faculty Board aimed at targeted groups of members, the membership as a whole, and non-members such as stakeholders, potential members or the general public.

Types of documents

Evidence-based standards

The Professional Support and Standards Boards undertake to commission standards or documents to provide guidance to individuals and departments involved in the delivery of radiological and oncological services with the aim of defining good practice, advancing practice and improving services for the benefit of patients.

The standards documents cover a wide range of topics. All have undergone an extensive consultation process to ensure broad consensus, underpinned by published evidence, where applicable. Each is subject to review four years after publication or earlier, as appropriate. The standards are not regulations governing practice but attempt to define the aspects of radiological and oncological services and care which promote the provision of high-quality service to patients.

Professional advice

Statements which provide an overview of areas that have some influence or effect on daily clinical practice but do not provide specific evidence-based recommendations. These may be developed from working party reports which are deliberations of groups established specifically to address a particular issue; for example, the purpose may be to provide guidance for those providing, managing and commissioning services. Occasionally, the RCR publishes intercollegiate documents with other Royal Colleges.

Position statements

The RCR publishes regular position statements to set out the College's stance on areas of practice or topical issues.

Prior to publication, all documents are approved by the relevant specialty Faculty Board or by Council.

2. Improving quality

The aim of this document is to raise the standards of basic information provision within Faculty publications and to ensure that the advice produced is robust. The intention is to encourage best practice and promote consistency. This document provides concise advice and guidance about the preparation of draft documents and what needs to be considered by those involved. The College's publishing policy is based on principles laid down by the Appraisal of Guidelines for Research and Evaluation (AGREE) collaboration.

Advice on general presentation of the document can be found in Appendix 1.

Not all the points below will be relevant to all types of publications produced but should be considered when drafting a publication. The detail with which points are covered will depend on the type of document produced – evidence-based standard or professional advice. Appendix 2 provides a template form which should be filled in by the Chair leading on the publication before any work is commenced. The objectives should be agreed in advance with the Dean of the Faculty.

2.1   Membership

Publications are developed by working parties or committees. Membership will be determined by the relevant Faculty Board. Where appropriate and of value, a lay representative should be a member of the sub-committee or working party.

2.2 Aims and objectives

All documents should have clear aims and should include an overview indicating what is the purpose of the document (ie, provide guidance, define good practice/best practice, improve quality, inform strategy etc), what it intends to cover and who it is meant for.

2.3 Relevance

In order to ensure clarity of purpose, it is important to state the intended target audience for the publication and the ways in which it is relevant. Where appropriate, drawing out relevance to patients and carers as well as healthcare professionals will promote wider usage. It may also be helpful to clearly state who the information is not for and what it does not do.

2.4 Content

A detailed description of the clinical or other questions covered by the proposed publication should be included.

Where a publication deals with clinical questions, clear recommendations specific to the clinical circumstances should be covered by the guidance. A recommendation should provide a concrete and precise description of what is appropriate, in which situation and in which patient group, as permitted by the body of evidence. The different possible options for the management of the condition should be included, if relevant, for example, screening, prevention, diagnosis or treatment of a condition it covers.

As all documents are available in the public area of the website, the language used should always be as clear as possible and the content and style should be suitable for the specified target audience. For example, if patients or service users are part of the audience, the language and format should be appropriate.

2.5 Methodology

Information on how the publication was developed should be included; for example, an evidence review using a literature search, consensus view, formal Committee approach, peer review, derived from previously published guidelines. The use of more than one method of development provides further assurance of robustness and validity.

If a literature search to locate the evidence base has been carried out, the details of the search strategy including search terms used, sources consulted (such as Cochrane Library, Medline, Embase etc), dates of the literature covered and the date of search should be included. If relevant patient experience literature exists, consideration should be given to including this within the literature search. This information can be included as an appendix to the document (see Appendix 3 for an example by the Royal College of Physicians).

If possible, criteria for including or excluding evidence for recommendations identified by the evidence review should be described and reasons for including and excluding evidence should be clearly stated (such as not published in English language). The strengths and limitations of evidence and acknowledgement of any areas of uncertainty, including areas where there is insufficient or inadequate quality evidence, should be noted. In some cases where there is a lack of evidence or contradictory data, standards or guidelines may be based on established clinical practice (clinical commonsense/good practice).

The balance of health benefits against any potential side-effects and risks of the recommendations should be evaluated. These may include: survival, quality of life, adverse effects, and symptom management or a discussion comparing one treatment option to another. There should be an explanation of how the balance was assessed and evidence of how any identified issues have been addressed.

Include a clear description of the methods used to formulate the recommendations and how final decisions were arrived at. For example, outline whether a voting system or a formal consensus technique such as the Delphi consensus was used. Areas of disagreement and methods of resolving them should be specified. There should be explicit links between the recommendations and the evidence on which they are based. Each recommendation should be appropriately referenced.

2.6 Consultation and peer review

The draft document should be sent out for consultation by key stakeholders before publication. The RCR uses a process of consultation among members and Fellows to Information on this process should be included, such as via e-consultation, face to face consensus, consultation with the working group, peer

review, consultation with other specialties, and information on the length of consultation process should be provided.

The draft document should be peer-reviewed by independent experts. Appendix 4 provides a template review form based on the AGREE principles and features the sort of questions an independent review, for example, accreditation by NHS Evidence would be required to answer. These questions may be adapted as necessary for each individual title. External peer reviewers (for example, other Royal Colleges, other medical bodies, experts in the clinical area or methodological experts) should not have been involved in the original development group. Inclusion of a lay representative at this stage could be useful as it would wider the applicability and support patient choice.

Intended target users of the guidance should also be consulted to assess if the information provided is relevant to them and that the format used is the most appropriate for them. The guidelines should, where possible, also be pre-tested by the end user, for example, if a guideline has been piloted, this process should be documented.

All comments from the consultation and peer review process should be discussed by the Working Party and any changes made as a result documented or, if no change is made, the reasons for this should be recorded.

2.7 Measurement

How the recommendations from the publication will be implemented should be considered. How will the message be conveyed to potential users of the document? For a document to be effective, it needs to be disseminated and implemented with additional materials. These may include, for example, a summary document, a quick reference guide, educational tools, patients' leaflets, computer support, and should be provided with the publication.

Measuring the adherence to a guideline can enhance its use. This requires clearly defined review criteria that are derived from the key recommendations in the guideline. These should be presented. Where appropriate, a method of quantifying the implementation of the standards or recommendations should be included such as an audit tool and perhaps a data collection tool to assess compliance with the audit criteria. The development of audit tools should be discussed with the relevant faculty Audit Committee.

Any potential organisational (such as department reorganisation and training) and financial barriers (such as staffing costs or new equipment) in applying the recommendations should be discussed.

The working party should consider potential circulation groups for dissemination of the publication and any suggestions sent to the Dean for consideration. The final decision rests with the Dean. The RCR's general principles for dissemination and implementation can be found in Appendix 5.

2.8 Editorial independence

All individuals involved in the guidance development should declare whether they have any potential conflicts of interest including pecuniary and non-pecuniary, specific and non-specific and personal and non-personal.

Details on the credibility and any potential bias of the guidance in general, and the conclusions and recommendations in particular should be noted.

If the publication has been funded by an external body, please include a statement that the views or interests of the funding body have not influenced the final recommendations.

2.9 Review cycle

The date of publication or last update and the proposed date for a formal review (usually after a three- or four-year period) will be added at the editorial stage to the document by the Publications and Website Officer.

The procedure for updating the guidance and maintaining and improving guidance quality will be assessed by the Dean of the relevant Faculty. This may also include any updates in light of post-publication feedback.

3. Copyright

Working party members are requested to transfer (assign) ownership of copyright to the RCR. Assignment enables the RCR to appear as the author of the publication, for cataloguing purposes, rather than the individual/s who put it together. However, all individuals involved will be acknowledged within the publication itself.

If a document uses previously published material, written permission for print and online usage from the publishers of the work must be obtained. Advice is available from the Publications and Website Officer. Please remember to ensure your permissions include publishing on the web.

4. Editorial phase

Once the draft has been finalised, it will enter the approval and editorial phases of its production.

1. The document will go to the relevant Faculty Board for approval for publication.

2. Once approved by Faculty Board, the document will be sent by the Faculty Executive Officer to the Publications and Website Officer for editing and design.

3. The Chair and the Dean of the Faculty sign off the final proofs to print.

Approved by the Board of the Faculty of Clinical Radiology: 25 June 2010

Approved by the Board of the Faculty of Clinical Oncology: 2 July 2010

Appendix 1. A guide for authors preparing RCR documents

1. Presentation: general

1.1 Please prepare draft papers or articles in plain Arial or Times New Roman font (point 12), using single line spacing.

1.2 The structure of the document in terms of sections and sub-sections should be clear – in order to aid comprehension and the approval process. Reports should be written in a paragraph-by-paragraph format, to which numbered headings may be applied.

1.3 Authors do not need to incorporate different font sizes, small caps, bold type, centred headings, layout tabs, columns etc in line with the style of final documents, as such formatting will be applied by the typesetter according to RCR style. A variety of styles and coding within the text can lead to problems at later stages of the process. If the structure of the document is clear, subsequent editing and/or re-structuring will be more straightforward, and risk fewer errors being introduced.

1.4 The use of bulleted lists is encouraged where such use will add clarity, but please turn off all automatic lists and numbering (Format, Bullets and Numbering) because these introduce codes into the document structure and format, which can be difficult to edit out during the editing and publication process. Insert bullets from the symbols selection. If multiple levels of list are needed, use bullets for the first level, and dashes for the next.

1.5 Please run a spell check (UK spelling) on all documents before they are submitted, and ensure that all specialist or technical terms are correctly presented. All abbreviations should be spelt out at the first mention.

2. Important information to provide when submitting your draft document to the RCR

2.1 *Contributors*

Please list all contributors, including their full names or initials and their role and hospital base. This information will be used to acknowledge the contributors.

2.2 *Other bodies*

Please indicate whether the document has been or is to be sent for approval by other professional bodies, indicating likely approval dates.

2.3 *Other input needed*

Please clearly indicate whether you recommend that further or wider specialist input (be that clinical, professional or legal for example) should be sought before the document is approved by the Faculty Board.

3. Guide document structure

3.1 *Title page (p.1)*

The title should be concise yet comprehensive (if possible please avoid using titles starting with 'A', 'The' or 'Guidance').

3.2 *Imprint page (p.2)*

This will be provided by the RCR during editing.

3.3   *Contents page (p.3)*

This will be compiled by the editor.

3.4   *Foreword (p.4)*

Proposed text could usefully be drafted – sometimes the Foreword provides an opportunity to discuss some wider issues. The definitive foreword text will be finalised by the Dean.

3.5   *Main text section (p.5)*

The text should be divided into chapters with appropriate chapter titles. Subheadings should be used for clarity and ease of navigation through the document.

3.6   *Information about the approval process at the end of main text*

This will be supplied by the Faculty Office when the final document is approved by the Faculty Board.

4. References

4.1   All statements, claims, figures and statistics should be backed up with clear and appropriate references. Any references to published material (particularly publications/studies mentioned by name), websites, quotes, figures, tables and boxes should have a reference.

4.2   If appropriate, a reference number should be cited in the title of the box, figure and table and in the text where it is mentioned. Reference numbers for tables, figures and boxes should follow in the order of where the box, figure or table is mentioned in the text.

4.3   Citations to references should be provided outside punctuation, as superscript numbers; for example, as shown by Smith *et al.*[1]

4.4   All authors up to four should be listed in the reference list. For references with more than four authors, list the first three and then *et al.*

4.5   In the text, use surname(s) for one/two authors but only the first *et al* for three or more.

4.6   The style for references is as follows below. Please do not cut and paste reference material in from PubMed. This introduces a lot of code into the text. This needs extensive removal at later stages and can lead to errors being introduced.

Journals

- Muren LP, Ekerold R, Kvinnsland Y, Smith AB, *et al.* On the use of margins for geometrical uncertainties around the rectum in radiotherapy planning. *Radiother Oncol* 2003; 70: 11–19.
- Muren LP, Smaaland R, Dahl O. Conformal radiotherapy of urinary bladder cancer. *Radiother Oncol* 2004; 73: 387–398.

Books

- Fletcher GH. *Textbook of Radiotherapy,* 3rd edn. Philadelphia: Lea and Febiger, 1980.
- Hunter RD, Davidson SE. Low dose-rate brachytherapy for treating cervix cancer: changing dose rate. In: Joslin CAF, Flynn A, Hall EJ (eds). *Principles and Practice of Brachytherapy Using After-Loading Systems*. London: Edward Arnold, 2001: 343–353.
- Joslin CAF, Flynn A, Hall EJ (eds). *Principles and Practice of Brachytherapy Using After-Loading Systems*. London: Edward Arnold, 2001: 343–353.

References from papers

- Department of Health. *Clinical Effectiveness*. London: DH, 2006.
- The Royal College of Radiologists. *Guidelines for the Management of the Unscheduled Interruption or Prolongation of a Radical Course of Radiotherapy*. London: The Royal College of Radiologists, 2002.
- Shelley MD, Barber J, Mason MD. Surgery versus radiotherapy for muscle invasive bladder cancer. *Cochrane Database of Systematic Reviews* 4, 2001.
- Brinkman K. Mitochondrial toxicity. 1st US Congress on adverse drug reactions, Ohio, 1999 (Abstract 41).

References from database/website/lecture/personal communication

- Neal M. Briggs M. Validation therapy for dementia (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.
- www.rcr.ac.uk/index.asp?PageID=184 (last accessed 8/2/07)
- Filshie J, Scase A. A study of the acupuncture effects on pain, anxiety and depression in patients with breast cancer. Pain Society meeting, 1997.
- Tenchel I. Personal communication, 2007. The Royal College of Radiologists, London.

5. Figures

5.1   All figures should be supplied in separate files (with an appropriate file name) with their position in the main text clearly marked.

5.2   Please supply any figures as Excel, .tiff or .jpeg files. Any lettering on the figures should be minimum 9 point in size and in Arial or Times New Roman font. Please supply us with the raw data so that we can redraw the figures accurately.

5.3   Graphs should be one-dimensional, unshaded, and with the minimum of 'clutter'.

5.4   A comprehensive legend should be used to define any symbols, or statistical parameters. Each figure requires a self-explanatory title, which should be in italics and without closing full-stop. Text references to figures should be written as Figure 1 (not Fig.)

5.5   Do not start figure titles with 'A' or 'The'.

5.6   If you are using a figure that has been previously published elsewhere in a book or a journal, please provide us with the details of the publisher so that we can contact them and ask permission. Most will agree as long as they are credited, although some will charge the College a reproduction fee.

5.7   If you are using line drawings or tables that have been taken from or adapted from published papers, then the College is responsible for getting the publisher's permission to republish or adapt them. We would then publish such an image with a legend saying something like 'Adapted with permission from... [ref]' or 'Reproduced with permission of the American Academy of Sciences from xxx et al[ref]'. Please provide us with the relevant details.

6. Images

6.1   All images should be supplied in separate files with their position in the main text clearly marked.

6.2   Supply any pictures as jpeg or tiff files (at least 300 dpi for photos).

6.3   Please ensure that you have either obtained permission (we would need to see confirmation of this) or provided us with the details of who to contact to obtain permission to use the pictures from the relevant source.

6.4   If an image has no copyright, please tell us the precise details of where you obtained it and who gave you permission to use it in our publication. Please note that many medical illustration departments expect to be acknowledged. If images come from your colleagues, the College will need to seek their written permission and check whether the photographs have been published previously in other books and journals. If they feature patients, consent must be obtained. Please provide us with any relevant contact details in both instances.

6.5   Please provide appropriate captions and ensure that the file is appropriately named.

7. Tables

7.1   Tables should be simple and not duplicate any information in the text.

7.2   All tables should be supplied in one separate file with their position in the main text clearly marked. Each table should be supplied on a separate page.

7.3   Present tables laid out with tab stops (do not use the Word table editor, or scanned .pdf files as these will have to be rekeyed and errors may be introduced).

7.4   There should be no vertical rules in tables.

7.5 Use rules at the top and bottom to differentiate column headings from body of table, and avoid rules in body of the table, except straddle rules to clarify the hierarchy of column columns.

7.6 Align column headings 'top'.

7.7 Each table should bear a comprehensive title, which should be in italics and without closing full-stop.

7.8 Footnotes should be labelled using superscripted symbols (*†‡§¶; order: left to right, top to bottom).

7.9 There should not be any blank cells in table: use NA (not applicable) or ND (not determined), or a dash to indicate no relevance.

8. Readability

8.1 The target audience for College documents is generally members and fellows, radiology trainees, and interested members of the public. Most College documents are made available on the College website.

8.2 Reports should be written in a straightforward, easy-to-read style. Avoid the use of flowery and complicated statements.

8.3 Some editing of the document will be undertaken where necessary in accordance with RCR's house style and discussion by the Faculty Board during the approval process.

9. Footnotes

9.1 Footnotes are used to provide additional details that would disrupt the continuity if included in the body of the text. They should be kept to a minimum.

9.2 Generally, very short notes can be included in parentheses.

9.3 If absolutely unavoidable, use superscripted Arabic numerals to identify footnotes after any punctuation.

10. Submission

10.1 The report should be submitted to the Dean of the Faculty after approval by the Working Party or Sub-committee. The report will be formally approved for publication by the Faculty Board.

10.2 The chair of the group will be asked to 'sign off' the final text after approval by Faculty Board and before the publication process commences. All substantive queries raised during the editorial process will be raised with the chair.

10.3 The document should be submitted in Word or rich text format. Please ensure if you are working on a Mac that you add the appropriate document extension to the end of the document when saving (for example, .doc or .rtf).

Please note that all published material will be copyrighted to The Royal College of Radiologists.

Appendix 2. Publication template form

FROM	
REVISION OR NEW	
BRIEF STATEMENT OF THE OBJECTIVES OF THE REPORT	
PROPOSED CO-PUBLISHER(S) (IF APPLICABLE)	
NUMBER OF MEETINGS	
TIMESCALE	
LAUNCH DATE (conferences/events particularly relevant for launch/dissemination?)	
FUNDING AND MEMBERSHIP **If the report will be co-published (eg, with specialist society or another College), the co-publisher will be expected to contribute funding to the costs of producing the report (see *Working Party Draft Terms of Reference*)**	
Funding including names of possible co-publishing organisation(s)	
Suggest membership	
Potential members' conflicts of interest	
CONTENT	
What are the overall objective(s) of the guidelines?	
What are the clinical areas to be covered?	
What is the patient group covered if applicable?	
Who is the target audience?	
Does the working party include individuals from all relevant groups?	
Will patients' view and preferences be sought? Please clarify	
Will the publication be piloted among end users? Please clarify	
What methods will be used to search for evidence?	
What criteria will be used to select evidence?	
What methods will be used for formulating the recommendations?	

What are the potential organisational barriers in applying the recommendations?	
What are the potential cost implications of applying the recommendations?	
What support tools would be useful to aid implementation? Eg, summary document, quick reference guide or patient version	
What are the key review criteria for monitoring/audit purposes?	
Once the document has been written, please consider the following points	
Have the health benefits, side-effects and risks been considered in formulating the recommendations?	
Is there an explicit link between the recommendations and the supporting evidence?	
Has the publication been externally reviewed by experts before publication?	
When should the publication be updated/reviewed?	
Are the recommendations specific and unambiguous?	
Are the different options for management presently clearly?	
Are the key recommendations easily identifiable?	
Is the publication editorially independent from the funding body?	

Appendix 3. Example of a guideline development process

The full guidelines have been developed in accordance with the principles laid down by the Appraisal of Guidelines for Research and Evaluation (AGREE) collaboration.

Scope and purpose	
Overall objective of the guidelines	To provide simple and pragmatic advice for clinicians with regard to screening and assessment of pain in older adults
The patient group covered	All older people coming into contact with healthcare professionals
Target audience	All healthcare professionals, including those in primary care, hospitals and care home settings
Clinical areas covered	The assessment of pain
Stakeholder involvement	A multidisciplinary Guideline Development Group (GDG) was convened by the British Development Group Geriatrics Society and the British Pain Society in conjunction with the Clinical Standards Department of the Royal College of Physicians, with representatives from: • nursing • pain medicine • patient group • geriatric medicine • physiotherapy.
Funding	British Pain Society British Geriatrics Society
Conflicts of interest	None declared
Rigour of development	
Evidence gathering	*Search strategy*: Relevant full length articles were identified using electronic searches in Medline, PubMed, OVID Medline, CINAHL, EMBASE, AMED, SciSearch & Cochrane. Evidence-based reviews were identified from OVID, Cochrane, ACP Journal Club, DARE and CCTR. Psychological and social science literature was sought through PsychINFO and ASSIA. Conference papers were searched via IASP, the British Pain Society and the European Pain Society. Relevant publications were included. *Inclusion criteria*: Papers describing original studies, evidence-based guidelines or systematic reviews Studies including older people (65 and over) with or without cognitive impairment Pain was defined as both acute and persistent, according to the International Association for the Study of Pain (IASP) definitions, but the focus was on persistent pain (www.iasp-pain.org/terms-p.html). Studies including pain assessment Papers published after 1990 *Exclusion criteria:* Paediatric literature *Search terms:* Combination of search terms used included: pain or discomfort or agitation and assessment or scales or measurement or behavioural measures or multidimensional measures of pain or quality of life or depression or anxiety and older people or elderly or aged or dementia or cognitive impairment. Qualitative and quantitative studies were included.
Review process	The Scottish Intercollegiate Guideline Network tool was used for critical appraisal. Two centres were identified – Cardiff and Sheffield. Three reviewers conducted the appraisal in Sheffield and one reviewer in Cardiff.
Link between evidence and recommendations	The GDG developed recommendations on the basis of the evidence presented by the critical appraisal team.
Piloting and peer review	The guidance was circulated to a multiprofessional and international consensus group of 11 experts for peer review, prior to production of the final draft.

Appendix 4. Template for review

Instructions for use
- Each item is rated on a four-point scale from 'Strongly agree' to 'Strongly disagree'. The scale measures the extent to which a criterion has been fulfilled.
- If you are confident that the criterion has been fully met, you should answer 'Strongly agree'.
- If you are confident that the criterion has not been met at all, you should answer 'Strongly disagree'.
- If there is no information available or the criterion is deemed relevant, please answer 'N/A'.
- If you are unsure if a criterion has been met due a lack of information or only some of the recommendations have been met, then please tick either 'Agree' or 'Disagree'.
- Each item has a box for comments. Please use this to explain your reasons for the responses.

Title:					
Name:					
Date:					
	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**	**N/A**
SCOPE AND PURPOSE					
1. The objectives of the publication is (are) specifically described					
Comments					
2. The clinical question(s) covered by the publication is (are) specifically described					
Comments					
3. The patients to whom the publication is meant to apply are specifically described					
Comments					
STAKEHOLDER INVOLVEMENT					
4. The working party includes individuals from all relevant professional groups					
Comments					

5. The patients' views and preferences have been sought					
Comments					
6. The target users of the publication are clearly defined.					
Comments					
7. The publication has been piloted among end users					
Comments					
RIGOUR OF DEVELOPMENT					
8. Systematic methods were used to search for evidence					
Comments					
9. The criteria for selecting the evidence are clearly described					
Comments					
10. The methods used for formulating the recommendations are clearly described					
Comments					
11. Health benefits, side-effects and risks have been considered in formulating the recommendations					

Comments					
12. There is an explicit link between the recommendations and the supporting evidence					
Comments					
13. A procedure for updating the publication is provided					
Comments					
CLARITY AND PRESENTATION					
14. The recommendations are specific and unambiguous					
Comments					
15. The different options for management are clearly presented					
Comments					
16. Key recommendations are easily identifiable					
Comments					
17. The publication is supported with tools for application					
Comments					

18. The potential organisational barriers in applying the recommendations have been discussed					
Comments					
19. The potential cost implications of applying the recommendations have been discussed					
Comments					
20. The publication presents key review criteria for monitoring and/or audit purposes					
Comments					

EDITORIAL INDEPENDENCE			
21. Conflicts of interest of working party members have been recorded	**Yes** ❑		**No** ❑
Comments			
Any further comments			

OVERALL ASSESSMENT				
Would you recommend this publication for use in practice?	**Strongly recommend**	**Recommend (with provisos or alterations)**	**Would not recommend**	**Unsure**

Appendix 5. The RCR's principles of dissemination and implementation

If guidelines or standards are to be effective and the effort spent on their development not wasted, healthcare professionals need to change behaviour and incorporate recommendations into practice. They need to be aware that a guideline exists (dissemination), decide to adopt it and then regularly use it (implementation). This requires preparation and planning.

There is evidence that guidelines can be made to work, but it is not just a matter of issuing a booklet. Such a policy, without any additional information or assistance, is likely to result in the filing of guidelines, which may never be referred to again. If clinical guidelines are drawn up in a sensible and 'user-friendly' way, the implementation should result in reduced uncertainty in management and a more uniform approach to clinical practice. This results in improved control of healthcare costs and, within the area of secondary care, guidelines should aim to achieve more appropriate referrals.

The key issues to implementation are:
- Dissemination
- Ownership
- Barriers to change
- Sustainability.

Dissemination involves communicating with relevant stakeholders and healthcare professionals and an effective means of disseminating the guidelines will need to be established, as well as decisions about which healthcare professions should receive them. The Dean of the Faculty normally decides the circulation groups for each publication and this may include, for example, sending a copy to all chief executives of NHS trusts and/or clinical directors. If the working party or committee has suggestions for circulation, these should be forwarded to the Dean for consideration.

In the development of local guidelines, it is important to decide which key stakeholders should be involved to ensure a sense of ownership and the success of the project. Stakeholders are those individuals or groups who are likely to be affected by the implementation of the guideline concerned. Clearly one or more clinicians who are recognised as local experts in the particular disease area will be required to lead the development process. Additional input from an equivalent person from primary or secondary care, as well as some input from the local healthcare commission, might also be valuable. Other people to recruit will depend upon local circumstances – for example, the presence of a strong local patient support group can be useful.

Measuring current practice

Clinical audit can provide a framework for implementation (see Figure 1). Audit criteria can be used to determine the extent to which recommendations are currently being adhered to and to identify any deficiencies in local practice. The audit results will also highlight the benefits of implementation of the guideline.
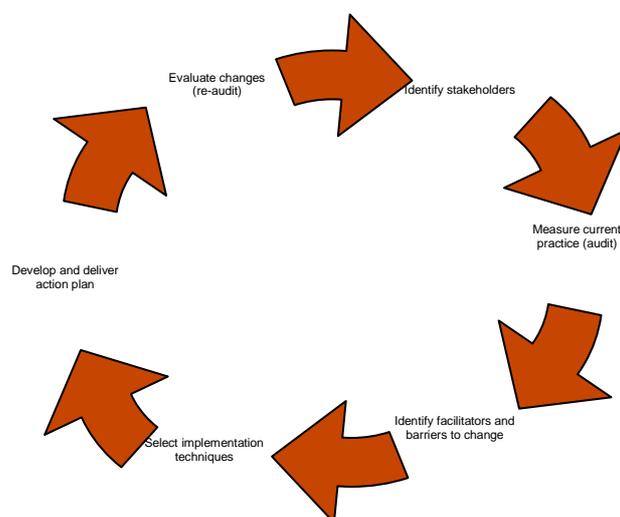

Figure 1. The audit cycle as a framework for implementation

The audit should be carried out within the framework of a robust audit methodology, which should be predetermined by the local trust audit committee.

Identify facilitators and barriers to change

Once the audit has been completed, an analysis should be performed to identify any potential barriers to change. The barriers may be related to health professionals, the guideline itself or to the environment. Healthcare professionals may be reluctant to alter their practice where there is no perceived necessity for change or where patient preferences differ to the recommendations. They may lack the necessary skills and knowledge to carry out care as recommended by the guideline or doubt the validity of evidence upon which the guideline is based. Once the barriers have been identified, those that are most likely to prevent uptake should be highlighted.

The analysis should also identify factors that may facilitate change. These may include a multiprofessional collaboration, ownership from key professionals, good project management, user involvement, access to expert advice and a supportive environment that is receptive to change.

Implementation strategies: individuals and teams

The findings of the analysis of barriers to change together with the audit findings can be used to select an appropriate intervention that is likely to influence change. A list of some of the interventions that can be used to change behaviour is below:

- Educational outreach such as short versions or summaries
- Educational meetings such as lectures, conferences or educational sessions
- Interactive workshops
- Local opinion leaders to influence the practice of peers
- Audit and feedback
- Reminders or prompts requiring immediate action. These can be in the form of computerised alerts.

Computer decision support systems are becomingly increasingly available and can be used to remind professionals to perform a particular action.

There is no agreement about which intervention is more likely to effective and a multi-faceted approach may be more successful. However, the implementation strategy should be appropriate to the setting and target group.

Developing and delivering an action plan

The approach to be taken should be incorporated into an action plan agreed by all stakeholders. It should identify the action needed to make the changes, who will lead each activity, the target dates for completion and identify which areas of service change should occur first. It is important to ensure engagement by the senior managers at an early stage as implementation may have resource implications.

Evaluating change

The implementation process is continuous and ongoing. Once the recommendations have been implemented locally, it will be important to assess the effects on improving health outcomes for patients. Progress should be assessed in terms of adherence to recommendations, awareness and the impact of changes on quality of care. A re-audit should be carried out and the results compared to those from the original audit to highlight successes and any deficiencies and the reasons for such.