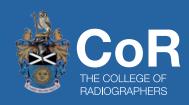


# 2021· 2026·





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#### **Foreword**

Dr Ruth Strudwick, Chair of the Society of Radiographers Research Advisory Group.



I have had the privilege of leading the working party to review and write this, the fifth research strategy presented by the College of Radiographers (CoR). I am grateful to all the working party members for all their help, support and constructive feedback. The working party members were Martine Harris, Helen McAlinney, Philip Plant, Pam Shuttleworth, Julie Woodley, Rachel Harris and Tracy O'Regan. We are also thankful to all of those from our profession who contributed to previous editions of the strategy, which have shaped this edition.

As a group, we decided that with this edition we wanted to move away from just having one large reference document. Rather, we felt that the research strategy needs to be much more accessible to all stakeholders, and so this edition will be the start of a new way of showcasing the strategy; an infographic and a series of online articles are also available for different audiences. This strategy will also be updated regularly to reflect any changes that occur over the next five years, so that it becomes more of a 'living' strategy.

In the last five years, there have been considerable developments within healthcare and healthcare research. As I write we are still in the middle of a global pandemic (Covid-19) which has influenced all our lives. However, we are in a stronger position as a profession with more radiographers working towards and gaining doctoral and masters level qualifications. Since the publication of the fourth research strategy the CoR commissioned work on patient and public partnership the result of which was the Guiding Principles for Patient, Public and Practitioner Partnerships (4Ps) document<sup>1</sup>, which places research as a key aspect of service user involvement. All patients undergoing diagnostic imaging or radiotherapy deserve evidence-based practice to underpin their care. This updated research strategy supports the radiography profession in delivering research-based practice over the next five years.

## **Background**

The radiography workforce cares for many people across their life course and beyond. For example, undertaking ultrasound imaging in fertility clinics pre-pregnancy at one end of the spectrum of life through to forensic work, which includes post-mortem imaging after a person has died. The radiography workforce consists of diagnostic radiographers; therapeutic radiographers; sonographers; nuclear medicine technologists; dosimetrists; assistant practitioners and students. Most of the workforce are therapeutic and diagnostic radiographers who are allied health professionals (AHPs), regulated by a statutory body, the Health and Care Professions Council (HCPC). The whole radiography workforce along with radiologist, oncologist and physics colleagues are pivotal to delivering timely, efficient and reliable examinations. These include screening services, diagnoses of diseases and trauma, treatments, which include curative and palliative treatment and care for people with cancer, and on-going surveillance for some people post-treatment. The radiography members of the team have direct responsibility and interaction with patients on the frontline of healthcare. They use science and technology to support the health and wellbeing of the population. They are the faces which people see when they visit clinical imaging and radiotherapy departments. They are the people that patients remember.

The Society of Radiographers (SoR) is the membership organisation and professional body for imaging and radiotherapy workforce professionals. Provided that a practitioner is sufficiently trained and educated, with underpinning knowledge, skills and proven competencies and written agreement from their employer, then the SoR is clear that it sees no boundaries to professional practice in clinical imaging and radiotherapy. To support practitioners who may have a changing scope of practice, to enhance services for people and to develop new technologies, it is advocated that research is a key component in that process. The CoR offers a range of services to support SoR members to undertake their research. Research is essential to both provide and ensure that there is an up-to-date evidence base for the profession.

## **Patient and Public Partnerships**

To ensure all patients receive the provision of the highest quality services, a patient centred model for care is advocated by taking, recognising and understanding real patient experiences. As part of the continuing improvement of this model and to ensure all research in this field improves and enhances patient experience and outcomes, relevant patient input to all research is seen as an essential requirement.

A patient and public liaison group was established in 2007, now the Patient Advisory Group, acknowledging the contribution patient engagement makes to our services. From 2018, the Society of Radiographers and the College of Radiographers strategies stated to "ensure the patient voice is integral" and "be informed by the voice of the patient". Determined to embed these priorities throughout the whole organisation and across the profession the College Board of Trustees organised a research workshop in May 2017 to explore "how best to engage/involve patients as stakeholders", inviting a wide range of participants including patients. One of the recommendations from the workshop was to commission a piece of work to devise a strategy which would ensure that the priorities relating to the centrality of patient voice would become embedded throughout the organisation. In March 2018, a small task and finish group of 13 people comprised of patients, practitioners, researchers, educationalists and officers was convened to carry out the work.

In response to the remit, the group co-created a set of Guiding Principles for Patient, Public and Practitioner Partnerships (4Ps), intended for use by all those with a stake in the quality of radiography practice. The resulting document was published in the Autumn of 2018 and is commended to be read in conjunction with this document<sup>1</sup>. It contains core values as described by patients or carers, illustrated by real patient stories, and supported by guidance as to how each core value can be achieved. It concludes with facilitative resources. The patient voice/perspective is very strong in that document and it makes essential reading for all radiographers and researchers who want to listen and learn from their patients.

#### Introduction

This is the fifth research strategy presented by the College of Radiographers continuing upon the work of previous editions. The strategy recognises the progress that has been made since the publication of the last strategy in 2016, as well as the on-going work required to expand research capability and capacity. It is intended that this edition will form the start of a new way of highlighting our profession's research strategy and will link to our website and to a series of bespoke leaflets and posters.

The College of Radiographers will promote imaging and radiotherapy science and practice for the benefit of all. We will do this through:

- Standards for education and practice
- Promoting and conducting research
- Listening to patients and service users

It should be noted that this new research strategy is not exclusive to the objectives above; it will also underpin many of the other strategic objectives ensuring that radiography continues to grow as an evidence-based profession with the emphasis on improving patient care and service delivery. It will also guide the next generation of radiographers to assertively contribute to the development and implementation of research that strengthens the profession and practice.

This strategy is inclusive and is targeted at all levels of the profession from student to expert practitioners and at all levels of research, from novice through to research professorships. Service users and carers are also key contributors. The SoR vision is that all members of the team are required to engage with research and this strategy aims to detail how the profession will be supported over the next five years.

This document has been aligned with the research strategies of other AHPs and the Government drivers across the UK. It is targeted at both UK radiographers and external audiences.

During 2020, the global Covid-19 pandemic had an impact on all of us. The pandemic had an impact on service provision and the workforce, diagnosis and treatment of non-Covid conditions was delayed with patients waiting for diagnostic imaging and radiotherapy treatment. Education models and service delivery have required significant adjustment, and there was also an impact on research within healthcare. Unfortunately, most of the ongoing research was paused or stopped altogether. However, there are also new learning and research opportunities that will come from the pandemic which has been a positive outcome of the pandemic.



#### **Vision for Research**

The vision for research is to improve patient care and outcomes by continuing to develop, grow and implement a high-quality evidence base that addresses key patient-focussed research priorities.

#### Aims

This strategy has three key aims:









Students / Education

Imaging and radiotherapy healthcare professionals







## **Aspirations**

In the previous research strategy (2016-2021) there were ten expectations listed. It is acknowledged that many of these expectations have not yet been fully achieved, but that there has been some considerable progress in these areas. The table below outlines the expectations outlined in the previous strategy and the progress made.

Expectations by 2021	Progress
1: By 2021 all research undertaken within the radio	
profession will clearly demonstrate a potential in	pact on patient progress in this area,
care and/or service delivery.	and this is ongoing.
2: By 2021 <b>all</b> research projects undertaken within t	9 , ,
profession will have evidence of involvement of p	patients and the in the 4Ps document <sup>1</sup> .
public and/or relevant stakeholders.	
3: By 2021 all clinical and academic radiotherapy ar	
departments will have a local research strategy.	evidence but informal
	professional networks
	show that progress has
A. D. 2024 all managed and articles within the gradient	been made.
4: By 2021 <b>all</b> research undertaken within the radio profession will be disseminated to a relevant force.	
5: Research funding income across the radiography	
increase year on year, with a greater number of r	
acting as Principal Investigator for nationally, or i	• .
competitive grants.	in this area.
6: By 2021 clinical research careers will be well esta	blished within Ongoing.
radiotherapy and imaging departments, supporte	
researcher job profiles for Allied Health Professio	•
7: By 2021 there must be an expectation that all pra	
radiography at advanced level hold a full master'	s degree.
8: By 2021 there must be an expectation that all pra	
radiography at consultant level will hold, or be w	orking towards,
a Doctoral level award.	
9: By 2021 1% of the radiography workforce (about	
or be working towards, a Doctoral level award. T	
Radiographers holds a log of SoR members that a	
doctoral candidature or, having been awarded a	
the post-doctoral stages of their careers.	number is expected to continue rising and
	CoR continue to
	support professionals
	with their endeavours.
10: An increased number of radiographers will be Re	
Framework (REF) returnable.	considerable progress
, - 100000000000000000000000000000000000	in this area.

The decision was made that these should continue to be our aspirations for the next five years in order to maintain the momentum.

#### Aspirations for the period of this research strategy (2021-2026)

- **All** research undertaken within the radiography profession will clearly demonstrate a potential impact on patient care and/or service delivery.
- **All** research projects undertaken within the radiography profession will have evidence of involvement of patients and the public and/or relevant stakeholders.
- **3: All** clinical and academic radiotherapy and imaging departments will have a local research strategy.
- **4: All** research undertaken within the radiography profession will be disseminated to a relevant forum.
- 5: Research funding income across the radiography profession will increase year on year, with a greater number of radiographers acting as Principal Investigator for nationally, or internationally, competitive grants.
- 6: Clinical research careers will be well established within radiotherapy and imaging departments, supported by the national researcher job profiles for Allied Health Professionals.
- 7: There must be an expectation that all practitioners in radiography at advanced level hold a full master's degree.
- 8: There must be an expectation that all practitioners in radiography at consultant level will hold, or be working towards, a Doctoral level award.
- 9: The number of radiographers with a Doctorate will increase year on year, with a greater number of practitioners holding or be working towards, a Doctoral level award.
- 10: An increased number of practitioners will be Research Excellence Framework (REF) returnable

Reporting on progress with these ten aspirations will occur at the SoR Research Group where the *Research Strategy Aspirations* will be a standing agenda item for discussion. There will also be an annual report to the CoR Board of Trustees.



## Aim 1: Embed research at all levels of radiography practice and education

## 1.1 Develop a radiography workforce that engages critically with research to ensure that care provided to service users is based on the best available evidence.

Recom	nmendations to achieve this:	Responsibility for implementation:
1.1.1	All undergraduate and postgraduate training programmes must contain components that develop critical research appraisal skills.	Higher Education Institutions (HEIs), SCoR, academics.
1.1.2	Job descriptions across the radiography profession should include a responsibility to engage with research evidence at an appropriate level, guided by national job profiles.	Radiography service managers, SCoR.
1.1.3	All four levels of practice - assistant, practitioner, advanced and consultant – must include the domain of research, as noted in the Education and Career Framework (available from the SCoR document library) and the multiprofessional frameworks for higher levels of practice.	Radiography service managers.
1.1.4	The job plans of staff should incorporate time for research, proportionate to their role. For example, research practitioners, consultant practitioners and clinical academics will have research as a core domain of their practice.  Research nevertheless should be a concern of everyone; the development of an active research culture requires the involvement of a whole team, in all roles and at every stage of career.	Radiography service managers, SCoR, HEIs, consultant practitioners, advanced practitioners, academics.
1.1.5	Engagement in evidence-based practice and research activities to be evaluated at annual staff appraisals.	Radiography service managers and appraisers, SCoR.
1.1.6	Promote critical engagement with the evidence base through initiatives such as journal groups. These should be supported at a local, regional, national and international level through a mixture of face-to-face and virtual forums e.g. #medradjclub.	All professionals, SCoR, research active professionals, radiography service managers, practice educators.
1.1.7	Local clinical policies and protocols should be regularly assessed against the appropriate national guidance, particularly National Institute of Health and Care Excellence (NICE), Health and Social Care Northern Ireland or Healthcare Improvement Scotland guidelines and the current evidence base.	Radiography service managers, consultant practitioners, all professionals.
1.1.8	All formal Continuing Professional Development (CPD) activities should include engagement with the wider literature/evidence base.	CPD event organisers, practice educators, SCoR.
1.1.9	In order to foster a culture that values research, pre- registration students and staff are encouraged to be familiar with the content and ethos of the SCoR guide 'Getting into research' (available in SCoR document library).	HEIs, academics, students, all professionals.

## 1.2 Foster a culture across the radiography profession that values research and evaluation activities as a core part of delivering high quality patient care for all.

Recon	nmendations to achieve this:	Responsibility for
		implementation:
1.2.1	All research activities should clearly demonstrate an impact on patient care and service delivery.	Research active professionals, SCoR, radiography service managers.
1.2.2	Education and CPD events aimed at leadership and management should include elements that highlight the wide-ranging benefits of research within clinical and academic departments.	HEIs, academics, CPD organisers, practice educators, SCoR.
1.2.3	Develop and implement local research strategies. These should be proportionate, reflecting the priorities and size of each individual department.	Radiography service managers, research active professionals, consultant practitioners.
1.2.4	Encourage dissemination of case studies where research activities have led to improvements in patient care and service delivery.	SCoR, research active practitioners.
1.2.5	Research to become a standing item on staff meeting agendas in all imaging, radiotherapy and academic departments.	Radiography service managers, Heads of HEIs, consultant practitioners, practice educators, SCoR.

## Aim 2: Raise the impact and profile of radiography through high quality research focussed on improving patient care and service delivery

## 2.1 Ensure all research conducted by practitioners has a clear benefit to patient care and service delivery.

Recom	mendations to achieve this:	Responsibility for implementation:
2.1.1	Update the CoR research priorities based on consultation with service users and public engagement, this incorporates the results of the Delphi consensus study undertaken in 2016 <sup>3</sup> and the 4Ps document <sup>1</sup> .	SCoR.
2.1.2	Encourage departments to use the research priorities in their own research strategies.	Heads of HEIs, radiography service managers.
2.1.3	All submissions for College of Radiographers Industry Partnership Scheme (CoRIPS) funding must match one of the College research priorities for the profession.	Research active professionals, SCoR.
2.1.4	Public patient involvement to be consulted upon in the development stage of all research studies.	Research active professionals, SCoR.
2.15	Engage public and patient involvement throughout the research process where appropriate, to include all patient-focussed research projects.	Research active professionals, SCoR.
2.1.6	Encourage researchers to include demonstration of impact planning within the development of their research proposals.	Research active professionals, SCoR, consultant practitioners.
2.1.7	Recognise that all of the profession have a responsibility to translate current research findings into practice.	All professionals, practice educators, radiography service managers.
2.1.8	Recognise the potential roles that Artificial Intelligence (AI) will play in the improvement of diagnostic and therapeutic services for patients	All professionals, practice educators, radiography service managers, Research active professionals, SCoR, consultant practitioners, Heads of HEIs.

## 2.2 Strengthen and focus research to address international, national, regional and professional priorities.

Recon	nmendations to achieve this:	Responsibility for implementation:
2.2.1	Regularly circulate current international, national and regional research priorities to membership and maintain a resource on the SCoR webpages with links to relevant external organisations.	SCoR.
2.2.2	Promote radiography research within the Council for Allied	SCoR, research active
	Health Professions Research (CAHPR).	professionals.
2.2.3	Encourage individual radiographers to join key multi-professional / multi-agency research-related committees (For example, Research ethics committees, funding boards, National Institute for Health and Care Excellence (NICE) committees and National Institute for Health Research groups).	SCoR, radiography service managers, practice educators, all professionals.

## 2.3 Continue to drive up quality of research supported by strong research leadership.

	nmendations to achieve this:	Responsibility for implementation:
2.3.1	Support a research mentorship programme within the radiography profession, to enable senior radiography academics, clinical-academics, and other experienced researchers to support and develop novice researchers.	SCoR, academics, research active professionals.
2.3.2	Work collaboratively in research as a method for strengthening research studies and improving quality.  Work to be supported by the SoR research network research network and CAHPR hubs.	Research leaders, academics, research active professionals.
2.3.3	Audit research activity across local departments (Clinical and HEIs) every five years with an appropriate audit tool, for example, an adapted audit tool has been used in radiotherapy <sup>4</sup> .	Heads of HEIs, radiography service managers, SCoR.
2.3.4	Increase research outputs eligible to be submitted to the Research Excellence Framework, supported by mentorship and increased peer working.	HEIs, academics, research active professionals, SCoR.
2.3.5	Increase the number and quality of grant applications across the profession by ensuring members use the CAHPR network, National Institute for Health Research (NIHR) resources and other mentorship and support schemes.	Academics, research active professionals, SCoR.
2.3.6	Develop resources to support quality in research, including 'how to' articles on all aspects of the research process and sharing of success stories.	Academics, research active professionals, SCoR.
2.3.7	Supported by annual appraisals and mentorship, encourage research active professionals, and those interested in research, to identify gaps in their research knowledge and skills to help direct and focus individual training plans.	Academics, research active professionals, SCoR, radiography service managers and team leaders, practice educators.

## 2.4 Strengthen collaborative links between clinical and university departments and industry partners to encourage the transfer of research ideas, skills and people.

Recon	nmendations to achieve this:	Responsibility for implementation:
2.4.1	Formalise managerial support for collaborative research. To include pathways for secondments, joint appointments and honorary contracts.	SCoR, radiography service managers, heads of HEIs, research active professionals, industry partners.
2.4.2	Encourage and enable Master's and Doctoral level research students to build links and networks between clinical departments and HEIs.	Academics, Heads of HEIs, research students, radiography service managers, SCoR.
2.4.3	All research active departments should set local themes and priorities that reflect local expertise and specialisms. These will guide suitable collaborative links and enable the development of joint visions across clinical and academic sectors.	Heads of HEIs, radiography service managers, consultant practitioners, practice educators.
2.4.4	Utilise SoR research network and special interest groups as a forum for developing collaborations.	Research active professionals, SCoR.
2.4.5	Provide opportunities and support for research active staff to attend networking events (e.g. conferences). To be achieved, for example, through dissemination of opportunities at local, regional and national level.	SCoR, radiography service managers, research active professionals.
2.4.6	Identify, develop and foster links with industry partners to encourage the transfer of research ideas, skills and people.	Industry partners, radiography service managers, Heads of HEIs, research active professionals, SCoR.

## 2.5 Increase high quality dissemination of radiography research both within and outside the profession with a focus on maximising impact on patient care and service delivery.

Recon	nmendations to achieve this:	Responsibility for implementation:
2.5.1	Share research findings both nationally and internationally. This includes continuing support for the professional peer reviewed journal <i>Radiography</i> and developing the role of professional publications to support both novice and experienced researchers.	Consultant and advanced practitioners, research active professionals, SCoR.
2.5.2	Departmental research strategies should include strategies for support of staff to disseminate research findings at conferences and other events.	Radiography service managers, research active professionals.
2.5.3	Dissemination to patient groups and the general public to become an expectation for researchers. Through utilising social media (e.g. Facebook and Twitter feeds), the SoR research web pages and relevant public engagement events.	Research active professionals, SCoR.
2.5.4	Encourage discussion between authors of research publications through editorial correspondence and formalised online journal discussion forums with a focus on improving quality.	Research active professionals, SCoR, journal editorial boards.
2.5.5	Support researchers at all levels to write quality research reports, supported by initiatives such as mentoring and collaborative writing.	Research active professionals, SCoR, research leaders.
2.5.6	Commission and encourage publication of opinion and discussion articles on aspects of quality in research within the journal <i>Radiography</i> .	SCoR, <i>Radiography</i> editorial board.
2.5.7	Encourage UK radiographic practitioners to join international research groups through partner organisations and international special interest groups.	SCoR, research active professionals.
2.5.8	Encourage practitioners to take up positions as journal reviewers and to join editorial boards.	Consultant and advanced practitioners, research active professionals, SCoR.

# Aim 3: Expand UK radiography research capacity through development of skilled and motivated research active professionals

## 3.1 Embed research skills in the learning experience of every radiography student.

Recom	nmendations to achieve this:	Responsibility for implementation:
3.1.1	All undergraduate and postgraduate training courses must ensure there is a strong and positive culture towards research.	HEIs, academics, SCoR.
3.1.2	Development of basic research skills should form part of all pre-registration training programmes.	HEIs, academics, SCoR.
3.1.3	Provide opportunities for pre-registration students to be exposed to ongoing research and research-focussed activities within the academic and clinical environments (e.g. attendance at research seminars, clinical research placements).	HEIs, academics, SCoR, clinical placement sites, practice educators.
3.1.4	Utilise the NHS Research Ethics Committee Proportionate Review Service for research studies that raise no material ethical issues to provide the opportunity for final year preregistration students to undertake a research project.	HEIs, academics, SCoR.
3.1.5	Research active educators and post graduate research students should act as role models for undergraduate students (e.g. through initiatives which encourage attendance at research presentations/seminars).	HEIs, academics, practice educators, SCoR.
3.1.6	Continue support for the student CoRIPS awards.	SCoR.
3.1.7	Students should be are directed towards e-learning for health (e-LfH) and CoR <i>Introduction to research sessions</i> and <i>Getting into Research</i> guidance document <sup>2</sup> .	HEIs, academics, SCoR, clinical placement sites, practice educators.

## 3.2 Increase practitioner engagement with clinical research activities and postgraduate research degrees.

Recon	nmendations to achieve this:	Responsibility for implementation:
3.2.1	Explore initiatives aimed at engaging students and staff in clinical research (e.g. elective placements or internships within a clinical research setting).	Research active professionals, research leaders, academics, practice educators, SCoR.
3.2.2	Provide information and guidance on the webpages on the different research training routes, supported by appropriate case studies.	SCoR, research active professionals.
3.2.3	Develop pathways for final year pre-registration students who demonstrate high academic competence to move straight to Doctoral study. Encourage applications to the NIHR bridging programme as a 'stepping stone'.	HEIs, academics, SCoR.
3.2.4	SCoR to continue to work with relevant organisations, including charities to support research degree training for radiographic practitioners, whether through joint fellowship awards or other initiatives.	SCoR.
3.2.5	Opportunities for doctoral study to be made available in the form of studentships or fee-waivers where possible by utilising existing schemes within HEIs for Doctoral scholarships/studentships or as part of an external grant application.	Heads of HEIs, academics, radiography service managers.
3.2.6	Promote Doctoral awards as the preferred qualification for those seeking to work in academia and at consultant practitioner level, thus expanding the capacity for doctoral supervision within HEIs and local departments.	HEIs, academics, SCoR.
3.2.7	Enable isolated researchers to build collaborative and supportive links through the SoR research network and special interest groups.	SCoR, research active professionals.
3.2.8	Develop local research champions, to encourage colleagues and provide signposting.	Research champions, research leaders, academics, SCoR.

## 3.3 Embed the clinical-academic role and increase the number of practitioners in research posts.

Recon	nmendations to achieve this:	Responsibility for implementation:
3.3.1	Explore opportunities for pump priming research practitioner posts and development prospects with recognition that these individuals will ultimately become self-funding through research income.	Radiography service managers, research active professionals, consultant practitioners.
3.3.2	Those in research posts should provide support to clinical colleagues to enable and support these individuals to engage more fully in research activities (e.g. consultant practitioners, clinical academic practitioners).	Research practitioners, radiography service managers.
3.3.3	Encourage all research practitioners to identify an appropriate research mentor when first in post.	Research practitioners, radiography service managers.

#### 3.4 Encourage researchers at all levels to apply for funding.

Recon	nmendations to achieve this:	Responsibility for implementation:
3.4.1	Radiographic practitioners who have been successful at gaining funding to share their experiences in Synergy news, within the research network and on the web pages.	Research active professionals, SCoR.
3.4.2	Explore and develop increased opportunities for CoR funding.	SCoR.
3.4.3	Researchers to target funding opportunities from research councils, charities and the NIHR.	Research active professionals.
3.4.4	Utilise the NIHR Research Design Service and their training opportunities.	Research active professionals.
3.4.5	To continue to update resources and guidance on how to gain research funding.	SCoR, research active professionals.

#### References

- 1. SCoR (2018) Patient Public and Practitioner Partnerships within Imaging and Radiotherapy: Guiding Principles. SCoR, London.
- 2. SCoR (2019) Getting into Research: A Guide for members of the Society of Radiographers. SCoR, London.
- 3. SCoR (2016) The College of Radiographers Research Priorities for the Radiographic Profession: A Delphi Consensus Study. SCoR, London.
- 4. Probst H, Harris R, McNair H A, Baker A, Miles E A & Beardmore C (2015) Research from therapeutic radiographers: An audit of research capacity within the UK. Radiography, Volume 21, Issue 2, May 2015, P112-118.

