

## Assessing the barriers and enablers to the diagnostic radiographer X-ray reporting service within the NHS in England: A Systematic literature review

### Citation

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### Review question

What are the barriers and enablers of the diagnostic radiographer X-ray reporting service within the National Healthcare Service in England?

### Searches

The following databases will be searched:

PubMed, Ovid MEDLINE; Embase; CINAHL; Scopus; Radiography, Radiology & Medical Imaging Sciences specific publications; NHS Evidence Database; The Cochrane Library; Google Scholar.

A search of the grey literature will be undertaken, using the OpenGrey and GreyNets Collection database as well as the British Library EthOS (depository for English Theses). Reference checking will also be performed on the studies.

Restrictions:

The search will be restricted to English language papers only, published after 01/01/1995 (graduation of the first cohort of X-ray reporting radiographers in England).

### Search strategy

[https://www.crd.york.ac.uk/PROSPEROFILES/384191\\_STRATEGY\\_20221214.pdf](https://www.crd.york.ac.uk/PROSPEROFILES/384191_STRATEGY_20221214.pdf)

### Types of study to be included

Inclusion Criteria:

- Articles that discuss or identify the enablers or barriers to the reporting radiographer service in England.
- Grey literature (such as reports, annual, research, technical, project, etc.), working papers, conference papers, government documents, white papers, evaluations, and thesis) as defined by the 'Luxembourg definition' (1997) as literature produced on all levels of government, academics, business and industry in print and electronic formats, that discuss or identify the enablers or barriers to the reporting radiographer service in England. Whilst identifying where bias may be present and the level of empirical evidence found with the grey-literature.

Exclusion Criteria:

- Non-English language papers, radiographer practice outside of England or private healthcare settings.

-Observer performance studies, diagnostic imaging equipment, non-reporting radiographer roles, case studies.

-Therapeutic radiographers, Ultrasound, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Fluoroscopy, Mammography, Dual Energy X-Ray (DEXA), Nuclear Medicine (NM) or other advanced practice roles reporting outside of the X-ray imaging.

### Condition or domain being studied

Reporting radiographers (diagnostic) are defined by the Society of Radiographers, the Royal College of Radiologists, Health Education England, and the British Society of Skeletal Radiologists (2022) as radiographers “who report on musculoskeletal (MSK) plain radiographs within a clinical imaging service”.

### Participants/population

The population being investigated are diagnostic radiographers in the enhanced, advanced or reporting role of X-ray reporting. This includes diagnostic radiographers and radiologists.

### Intervention(s), exposure(s)

Enablers and barriers to the radiographer X-ray reporting service in England.

### Comparator(s)/control

No comparators, this study is not assessing the consultant radiologist role or service.

### Context

The United Kingdom (UK) government’s healthcare policy in the early 1990s paved the way many healthcare professionals to adopt wider clinical practice roles, as a result, Canterbury Christ Church University ran the first UK accredited postgraduate radiographer X-ray reporting course 1994. Developing the diagnostic radiographer advanced practice career pathway to formally report X-ray examinations. Embedding the reporting role into clinical practice has historically seen both support and opposition from medical professions and professional bodies.

There are currently still the same pressures of demand of patient imaging and capacity of the reporting workforce (radiographers and radiologists) as there were in 1994, but many other factors and elements have since affected the UK National Healthcare System (NHS) which affect the service delivery of radiographers reporting X-rays.

This review aims to determine the barriers and enablers to the radiographer X-ray reporting service delivery within England.

### Main outcome(s)

The enablers and barriers of the diagnostic radiographer reporting service in the National Healthcare Service in England.

### Measures of effect

Outcomes recorded at any point.

### Additional outcome(s)

Subthemes identified;

To identify, define and assess the macro, meso, and micro levels of enablers and barriers of the diagnostic radiographer reporting service in the NHS in England.

### Measures of effect

Outcomes recorded at any point.

### Data extraction (selection and coding)

Screening and data extraction will be performed with Rayyan software and the assistance of reference management tool of Mendeley Desktop.

Two reviewers will independently evaluate the title, abstract and keywords to determine the article for inclusion. If there is uncorrelated information in the title and abstract to determine inclusion, the full paper will be retrieved and reviewed to resolve and determine the decision. In cases of disagreement between the reviewers. If a consensus outcome cannot be attained, a third reviewer will be consulted.

Studies will be excluded based upon unrelated title, abstract and full text review, or duplication with a record documenting the reasoning.

The search and filtering process will be documented in a PRISMA flowchart.

Data will then be extracted from the selected studies. This will be performed by one researcher and verified by the second reviewer.

The extracted information will include:

Author, output type; year of publication, country of origin;

Participant group and characteristics;

Location of participants (healthcare setting, professional body);

Outcomes measured (enablers, barriers, at macro, meso, and micro level);

Subthemes identified;

Summary of results.

### Risk of bias (quality) assessment

Two researchers will independently assess the quality of the studies using the Joanna Briggs Institute critical appraisal checklists against the range of found sources and literature for validity, transparency and rigour. If any appraisal disparities emerge and cannot be resolved, a third reviewer will adjudicate.

### Strategy for data synthesis

It is proposed that the found literature in this review will assess the barriers and enablers using different databases and assess a wide range of sources. To address the wide and diverse range of data found the results will be analysed against a validated critical appraisal checklist for validity and transparency, the findings will be provided in a thematic matrix as well as a narrative synthesis of the subthemes. A meta-analysis will not be performed.

### Analysis of subgroups or subsets

Subgroups will include the following:

Diagnostic Radiographers;

Consultant Radiologists;

Professional Healthcare Bodies;

At least one or some of these subgroups will be included in each of the studies selected for inclusion in the review. Each will be interpreted and the results from each subgroup will be reported on.

### Contact details for further information

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### Organisational affiliation of the review

Canterbury Christ Church University

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### Review team members and their organisational affiliations

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### Type and method of review

Systematic review

### Anticipated or actual start date

23 December 2022

### Anticipated completion date

01 March 2023

### Funding sources/sponsors

Not applicable

### Grant number(s)

State the funder, grant or award number and the date of award

Not applicable

### Conflicts of interest

None known

### Language

English

### Country

England

### Stage of review

Review Ongoing

### Subject index terms status

Subject indexing assigned by CRD

### Subject index terms

Allied Health Personnel; England; Humans; Palliative Care; State Medicine; X-Rays

### Date of registration in PROSPERO

15 December 2022

### Date of first submission

14 December 2022

### Stage of review at time of this submission

The review has not started

Stage	Started	Completed
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

### Versions

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15 December 2022