

# Optimising patient safety in ED - a Radiology perspective

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# Missed fractures 2022 recommendations

1. **Workforce:** optimise, training, supervision
2. **Models of care:** Best practice pathways
3. **ED multi-disciplinary meetings:** ED/Radiology MDTM's
4. **Training and competence:** emergency x-ray interpretation
5. **Hip fractures:** access to CT/MRI

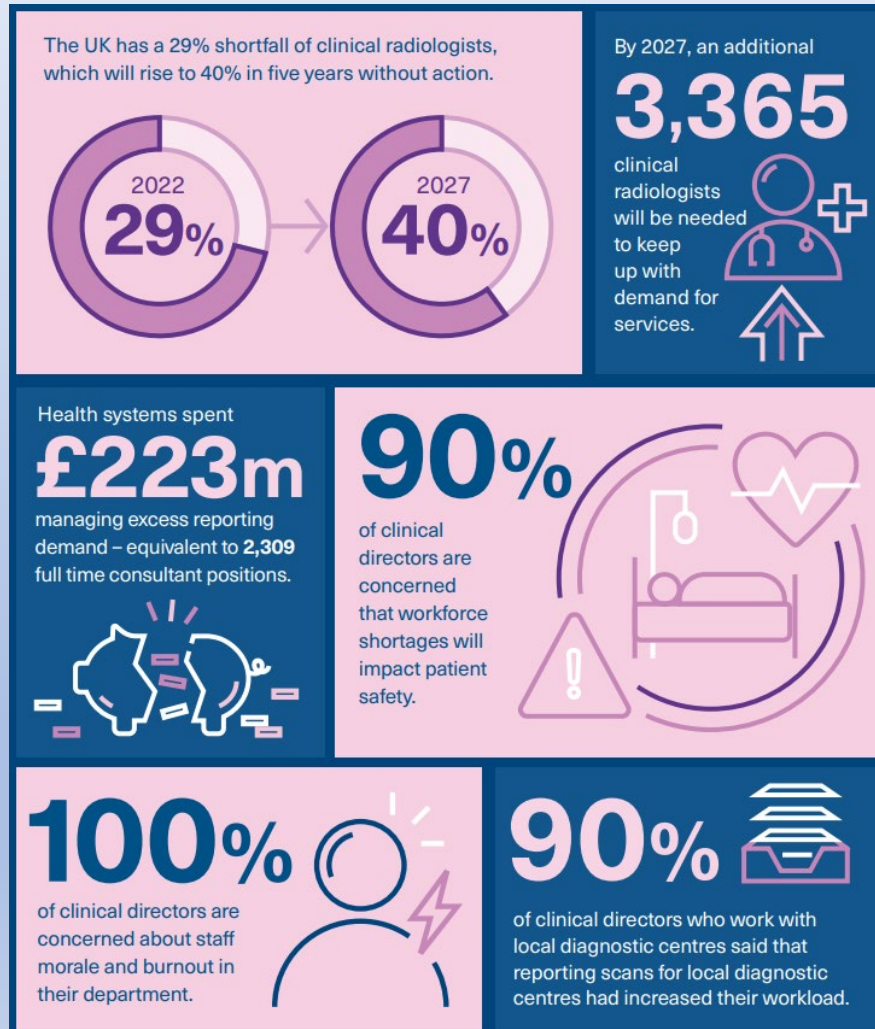


# Content

- Landscape changes since 2022 recommendations
- Workforce
- Access to CT/MRI
- Radiology results management and safety nets
- ED/Radiology team working
- Artificial Intelligence

Implementation!

# RCR Workforce Census 2022

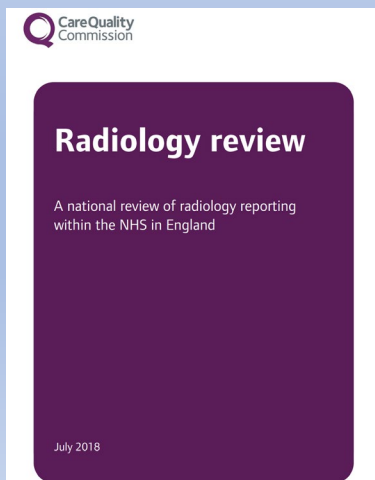


## Key short-term solutions:

- Extended roles
- Outsourcing
- NHS Networks

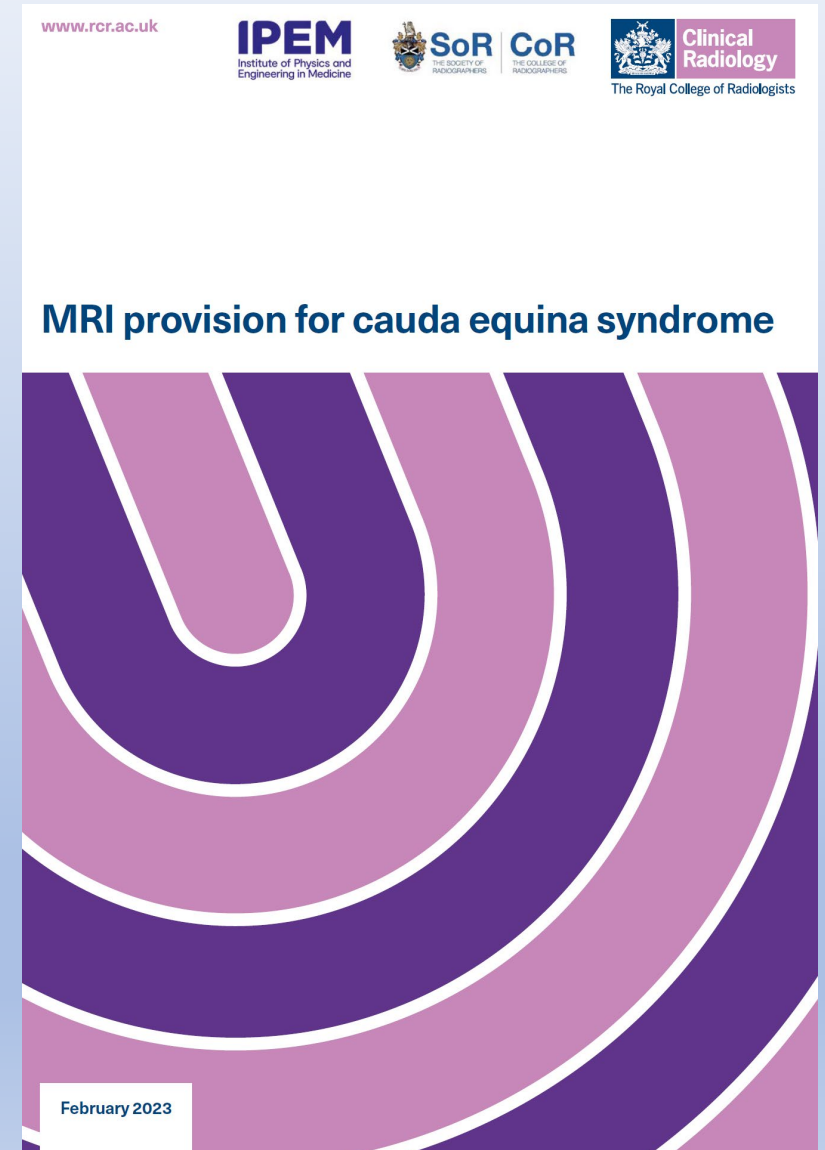
# Diagnostic imaging reporting turnaround times

- NHS England guidance: August 2023
- Developed in consultation with and supported by The Royal College of Radiologists and The Society of Radiographers
- Aspirational; “enabler”.
- For ED, Maximum TAT:
  - Cross sectional imaging: 12 hours TAT, with <4 hours post acquisition of images
  - Plain Film: 12 hours TAT, ideally <4 hours during normal working hours



# Emergency MRI provision

- Every acute imaging service should provide access to a 24/7 MRI imaging
- Imaging should be undertaken urgently within four hours of request
- The final report should be issued by an appropriately trained professional within one hour
- All acute services should aim to have on-site 24/7 MRI by June 2024

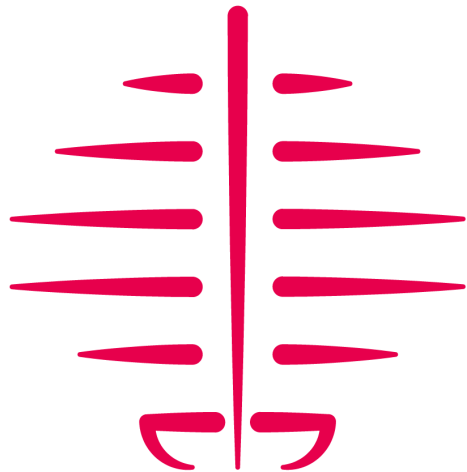


# Radiology results management and safety nets

October 2022



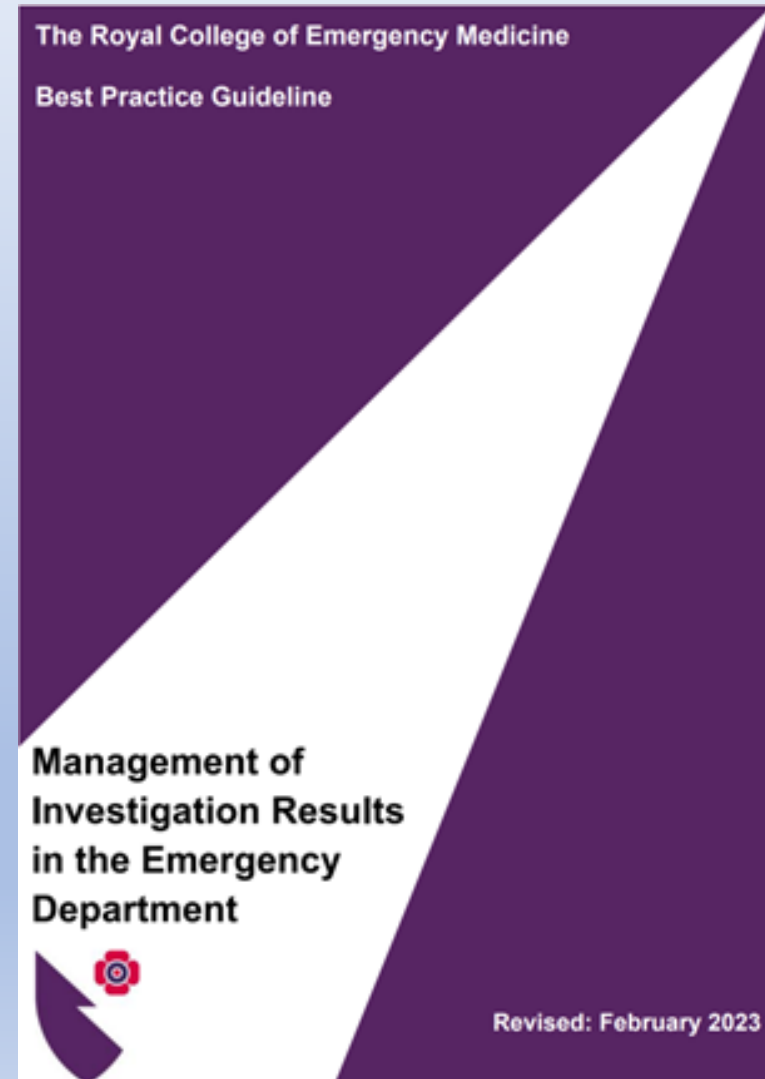
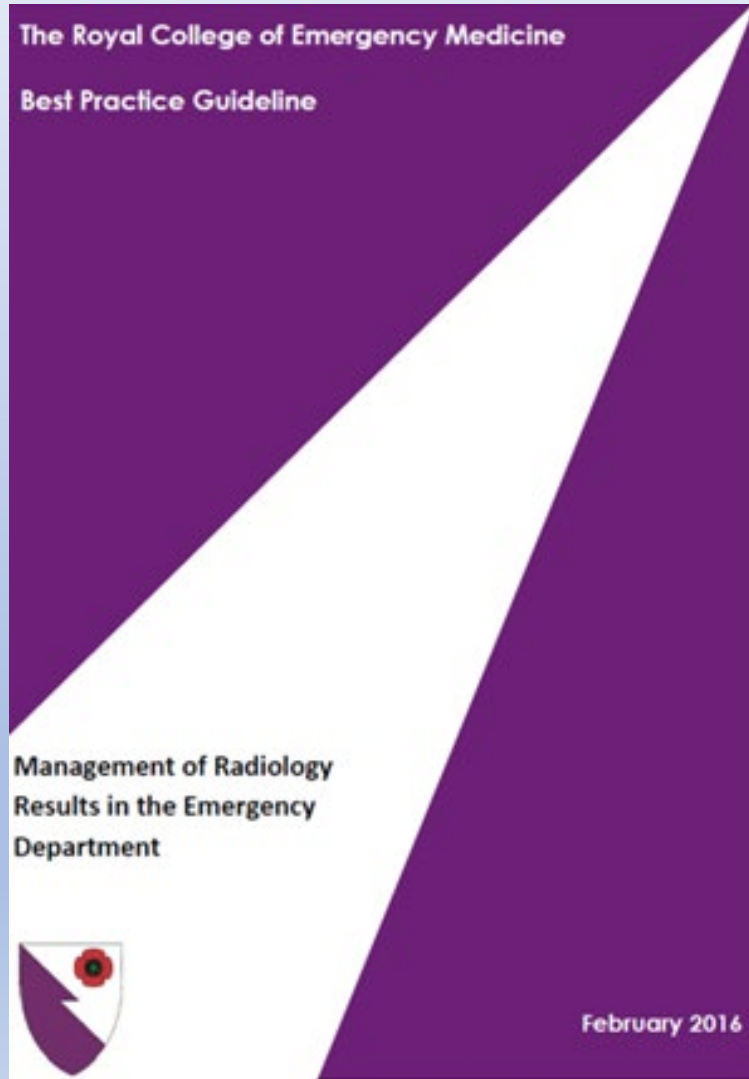
## Alerts and notification of imaging reports *Recommendations*



## HSIB report July 2019: Failures in communication or follow-up of unexpected significant radiological findings

- Collaborative approach
- System for ensuring all reports are acknowledged and acted upon
- Standardised processes and alert thresholds
- Referrers must provide contact information
- *System for passing on results*
- *Funded “Results Coordination Team” using digital systems*

# Radiology results management and safety nets

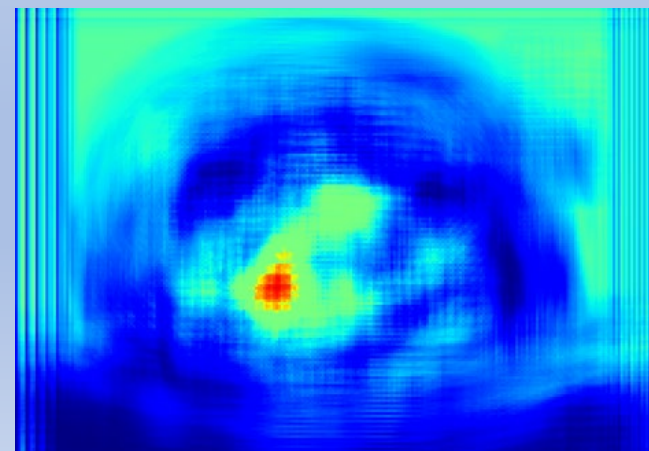
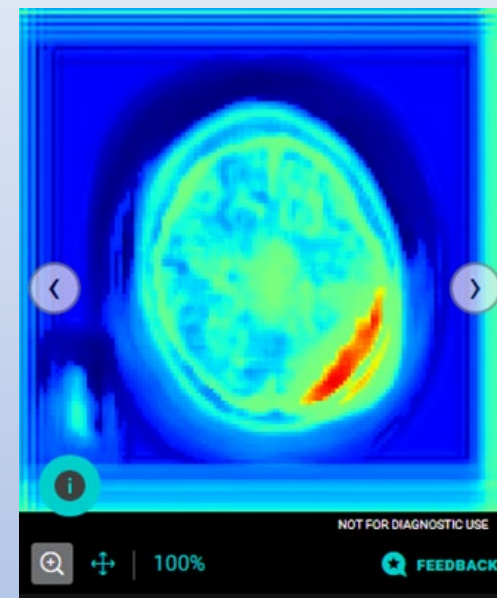
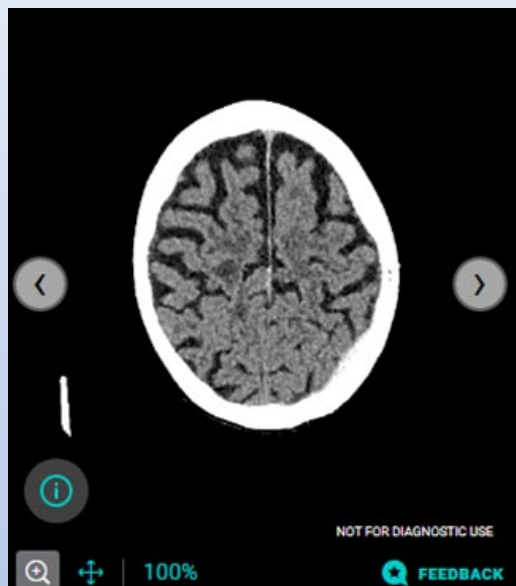




# ED/ Radiology Team working

- Radiology/ED MDM's
  - Training, case review
  - Learning from discrepancies/incidents/litigation cases
  - Understand pressures: workload, radiation protection, cost pressures
  - Agree, develop, monitor clinical protocols
- Good communication:
  - Accuracy of clinical information
  - Past medical/surgical/imaging history
  - Senior assessment
  - Telephone communication on complex cases
  - If the report doesn't fit the clinical picture, THINK AGAIN!

# Artificial intelligence



qure.ai

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qMSK Ankle Fracture (Demo) - 8 | Patient\_2bak



KT

STUDIES

12-SEP-2023

S: 0 NA



Support

3: 4000 qMSK Overlay



1

qMSK



This is an AI generated report

qure.ai



REPORTING

GENDER AGE  
F 22 Y

✓ Last edited by Aradhana Kumar

Abnormal Study  
Fracture Detected

Edit Report

11:09

Safari

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Christina Knight |  
2ZYCW3XV



31-Mar-2023 | "  
AI Overlay



Support

Reporting

Screened by qure.ai

Abnormal Study  
Fracture Detected

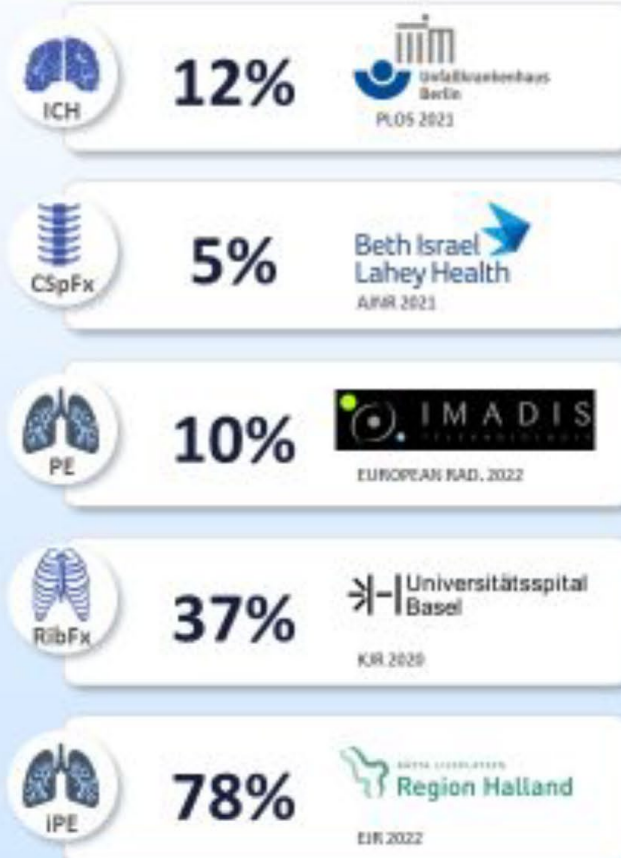
# Significant Impact on Outcomes

80+ Abstracts and Papers

## Reduction in LoS



## Quality Improvement



## Turn-around Time Reduction



## Read Time Reduction





Aa



GETTY IMAGES

HEALTH

# Radiologists outperform AI in diagnosing lung disease from x-rays

[Kat Lay](#), Health Editor

Tuesday September 26 2023, 3.00pm, The Times

Artificial intelligence is not yet ready to take over from humans in hospital lung clinics, according to a



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# Artificial intelligence

- Still in infancy
- Undoubtedly having impact
- Provides a safety net to human interpretation BUT:
  - False negatives
  - Doesn't compare prior imaging
  - Limitations in certain anatomical areas
- Immediate impact on workflow:
  - Filtering and prioritising abnormal imaging
  - Faster TAT

# Summary

- Develop and standardise new pathways
- Share best practice
- Improve training at the front end
- Use national guidance to drive change
- Local conversations about ED/Radiology teamworking
- Continue to improve access to cross sectional imaging 24/7
- Progress AI