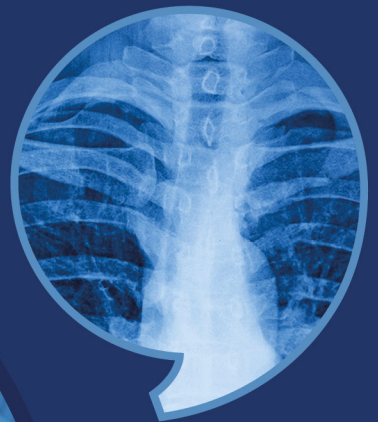


Unlocking Solutions in Imaging: working together to learn from failings in the NHS



Unlocking Solutions in Imaging: working together to learn from failings in the NHS

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Foreword

For many patients, medical imaging marks a crucial point in their NHS care. The results of an X-ray, CT or MRI scan can provide reassurance and relief, or the start of essential medical care and treatment. This means that, when something goes wrong in the way imaging is requested, carried out, or reported on, it can have life-changing consequences for patients and their families. The impact of delays and other failings can be severe.

I am publishing evidence from our casework about failings in the way imaging is reported on and followed up within the NHS. It is clear from the complaints PHSO has seen that the issues are not limited to radiologists, radiographers, or imaging services, but relate to the whole system. These findings have significant implications for all clinical professionals who are responsible for requesting imaging and acting on its findings. I provide recommendations based on these findings to support the whole system to improve.

We found that some NHS trusts do not have clear and effective policies, processes or systems to ensure that imaging results are reported and acted upon. Many of the issues we have identified are well known throughout the health sector, and some work to make improvements has begun. It is acknowledged across the NHS that quality improvement in this area requires a system-wide, multi-faceted and collaborative approach that includes significant updates to guidance, working practices and digital capabilities. It is now essential that the whole system collaborates to drive through the changes required to ensure patients receive timely and effective diagnosis and treatment.

The ongoing impact of COVID-19 means the NHS and its staff face significant pressures. These are unlikely to ease as the system seeks to recover from the pandemic and prepare for the structural changes proposed by forthcoming legislative reform. There are 5 million people waiting for elective care, and imaging will be an essential component for many patients who are on this waiting list.

These challenges are not a reason to avoid or postpone making improvements to the quality and safety of care. Rather, they underscore the urgent need for Government and the NHS to address the failings we have identified, so the challenges created by the pandemic are not compounded by problems with care.

The NHS must use the insights from PHSO's casework to support improvements. Going forward, the NHS must develop a culture of continuous learning to benefit patients and also staff, to ensure the same mistakes don't happen again.

**Rob Behrens, CBE,
Parliamentary and Health Service Ombudsman**

Executive summary

This report shares findings from complaints made to PHSO about failings in imaging in the NHS. The majority of these complaints involve people who had cancer at the time they used imaging services.

In highlighting the learning from these complaints, PHSO's objective is to support NHS services to improve. Doing this will require significant collaboration between NHS leaders in radiology services and those who work in other clinical specialties that request and act on the findings of X-ray, CT and MRI scans. This includes GPs, physicians, surgeons, physiotherapists, paediatricians and clinicians working in emergency departments.

Failings in imaging services can only be addressed and learned from through collaboration across clinical specialties, looking at the whole imaging journey and its intersections as part of the patient's care pathway.

Our findings

We analysed 25 complaints relating to failings in the imaging journey since 2013. Most concluded between 2018 and 2020. This report focuses on four key findings we have seen in our casework.

The failings we found did not just relate to imaging services, but often told a more complex story of weaknesses in interactions with other services. For example, in secondary care services, problems were often amplified by ineffective communication mechanisms and an absence of clear local policies for the handover of care.

When imaging errors occur along the patient pathway, they compound the negative impact on the patient and their family. For many patients, there were missed opportunities to be diagnosed earlier or have more appropriate treatment that may have prolonged their life. In the most serious case, there was an avoidable death. Families told us they experienced great distress because the outcome for their loved one could have been different if these failings had not happened.

We found:

1. Failure to follow national guidelines on reporting unexpected imaging findings

- Half of the cases show that Royal College of Radiologists' guidelines on reporting clinically significant unexpected findings were not followed.
- This meant opportunities to spot serious health conditions earlier were missed.

2. Failure to act on important unexpected findings

- Half of the cases show that local NHS trust policies were either not followed or were not clear enough to enable adequate follow-up of important unexpected findings.
- This meant significant findings were not escalated and acted on as appropriately or efficiently as they should have been.

3. Delays in reporting imaging findings

- In nearly a third of the cases, there were delays in reviewing or reporting on an image.
- This often compounded the issues experienced by the patient and meant missed opportunities to diagnose and treat a condition sooner.

4. Failure to learn from past mistakes.

- In nearly half of the cases there were missed opportunities to learn from mistakes, both in imaging services and in other clinical specialties that rely on imaging services.
- In some cases this meant the same mistake happened to the same patient more than once, or there was a missed opportunity to resolve issues earlier for them. This led to a worse outcome for the patient.

We make the following recommendations

The following **four** recommendations focus on improving the system as a whole.

1. Recommendations from previous work related to imaging must be implemented as a priority. This should have central coordination and oversight from NHS England and Improvement (NHSEI), including:

- a) recommendations made by the [Healthcare Safety Investigation Branch \(HSIB\)](#)¹ following their national investigation

¹ Health and Safety Investigation Branch, Failures in communication or follow-up of unexpected significant radiological findings, 2018.

- b) recommendations made by the Care Quality Commission's (CQC) [national review of radiology reporting within the NHS](#),² including on national standards for radiological reporting times
 - c) recommendations made in the [Independent Review of Diagnostic Services](#)³ for NHSEI around digital connectivity and improved 'failsafe' digital infrastructure.
- 2. Digital infrastructure must now be treated as a patient safety issue.** The Department of Health and Social Care (DHSC) and NHSEI, working with NHSX and NHS Digital, should prioritise improvements to digital reporting capabilities across the imaging system.
- 3. DHSC and NHSEI should ensure there is national guidance on the roles and responsibilities of clinicians, and expected timeframes, at each stage of the imaging journey.** This guidance should apply to referring clinicians of all specialties, as well as radiologists and radiographers. This is so that all clinicians have a shared understanding of their respective roles. The guidance should involve the Academy of Medical Royal Colleges (AoMRC) and other relevant professional bodies to ensure all clinical professions involved in the imaging journey are involved and able to operationalise the guidance. Professional bodies should support the roll-out of the guidance, which should cover processes including:
- a) the journey from requesting imaging to reporting on the image
 - b) the journey from reading the radiological report to acting on the radiological report
 - c) communicating the findings of the radiological report to patients and families.
- 4. DHSC and NHSEI should write to the Health and Social Care Select Committee and the Public Administration and Constitutional Affairs Committee by the end of March 2022.** They should provide an update on progress in implementing these recommendations and include input from the Academy of Medical Royal Colleges.

The following **three** recommendations are specifically for imaging services.

- 5. All NHS-funded providers that have a radiology service should ensure staff working in those services have sufficient allocated time in their job**

² Care Quality Commission, Radiology review: a national review of radiology reporting within the NHS in England, 2018.

³ Mike Richards, Diagnostics: Recovery and Renewal - Report of the Independent Review of Diagnostic Service for NHS England, 2020.

plans for meaningful learning and reflection. This should include identifying and sharing the learning from discrepancies, and peer review of radiological reports. NHSEI should have system oversight of this, working with RCR and SOR to identify how much job plan time should be allocated to learning and reflection per month.

- 6. Clinical directors and senior managers of NHS-funded radiology services should triangulate the learning from across their departments on a regular basis.** This should be no less than four times a year to identify systemic or recurring issues and share their findings with staff in radiology services and other relevant departments. This should include, for example, the learning from REALM meetings, complaints, claims, serious untoward events, patient safety issues, Freedom to Speak Up Guardian data and candour learning.
- 7. The Royal College of Radiologists should review existing guidance on reporting unexpected findings and peer review of radiological reports to learn from the findings of PHSO's casework.** This should ensure there is clear guidance for radiologists and reporting radiographers to report on all clinically significant unexpected findings, not only those which relate to the clinical question set by the referring clinician.

Introduction

About us

The Parliamentary and Health Service Ombudsman (PHSO) makes final decisions on complaints that have not been resolved by the NHS in England.

PHSO has an important role in sharing insight from the casework we investigate to help improve public services and complaint handling. This includes highlighting both failings in systems and failures to comply with guidance if the complaints we receive indicate there is a need for further learning.

About this report

PHSO has analysed the findings of 25 complaints where there were failings linked to imaging and other services relating to the content, communication and follow up of radiological reporting. By imaging we mean any kind of X-ray or scan, such as an MRI scan or a CT scan.

We did this to identify learning from our unique evidence base to support NHS leaders and organisations make improvements to their services. We found a number of common themes across the complaints we looked at which highlight where these improvements need to be made.

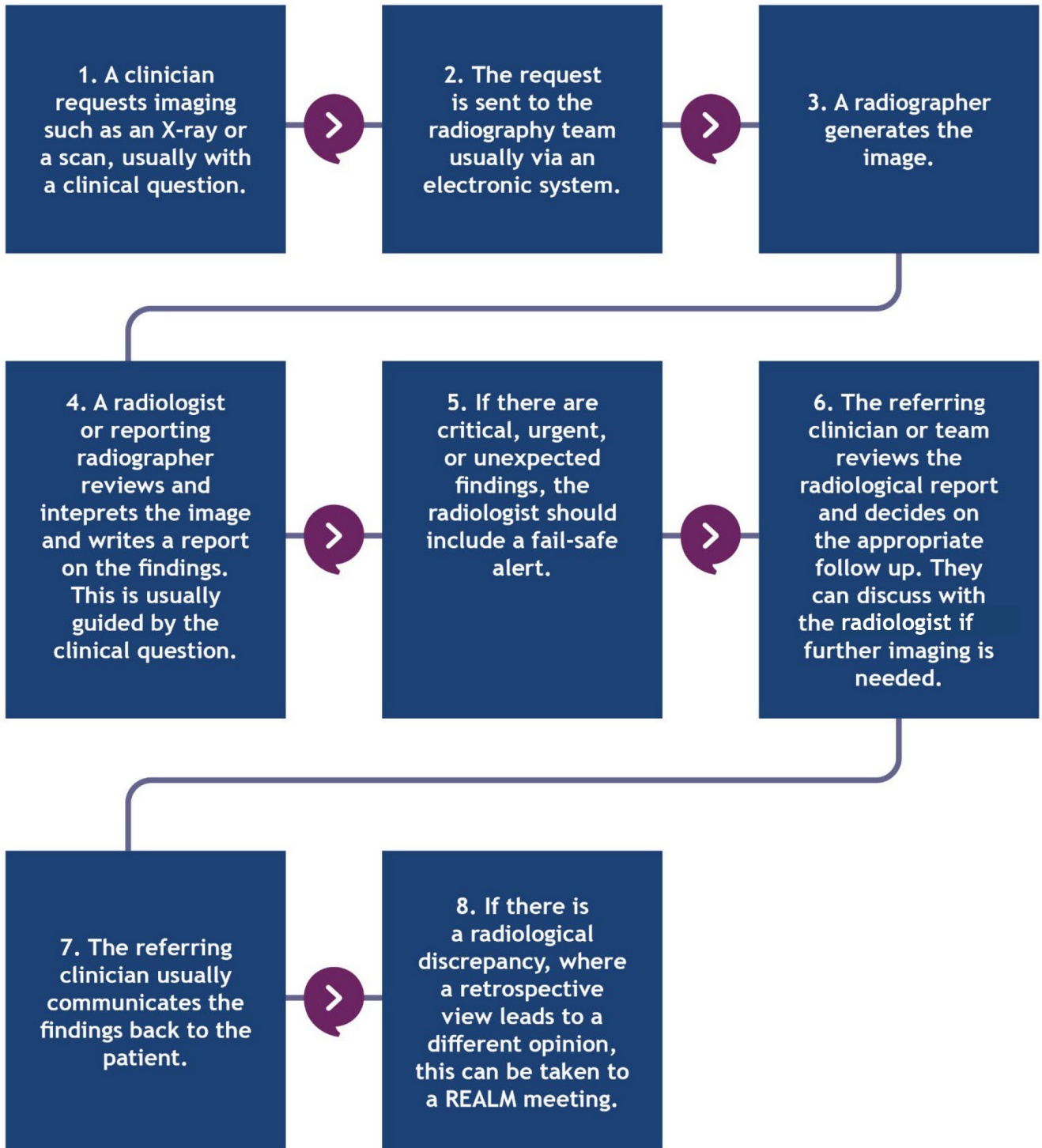
We closed most of these cases between 2018 and 2020 and they relate to failings in the imaging journey since 2013. The complaints involve different NHS trusts with only two trusts linked to more than one case. This suggests that the failings we have seen are not limited to one service, one organisation, or one part of the NHS, but are symptomatic of wider issues that can pose a barrier to high-quality, safe care.

This report provides a detailed analysis of the issues raised in these complaints and sets out recommendations based on our findings.

The learning we have identified from these cases is not only relevant to imaging services. Many of the failings we found offer essential learning for clinicians working in other specialities, from emergency medicine, to surgery, to primary care.

The imaging journey

The following chart maps out a typical imaging journey. It does not account for every scenario.



The findings in detail

Analysis of our casework identified four key findings. The first two relate to unexpected findings in imaging. An unexpected finding is one that is clinically significant but unrelated to the issue that the image was initially requested for.

We found failings in:

- following national guidelines on reporting unexpected imaging findings, and
- acting on significant unexpected findings.

1. Failure to follow national guidelines on reporting unexpected imaging findings

What should happen

The Royal College of Radiologists (RCR) sets the standards for imaging reporting in England. Its [guidance on standards for interpretation and reporting](#)⁴ is clear that clinically significant unexpected findings in any image should be included in the radiological report. It states ‘the images must be specifically interrogated [...] to ensure that all findings have been noted’.

Reporting unexpected findings is important because it provides an opportunity to identify health problems sooner, which can lead to earlier diagnoses. [RCR guidance](#) states that not including unexpected findings in a radiological report is a failing, which can have serious consequences.

The RCR also sets [standards for learning when things go wrong in imaging](#).⁵ It outlines that radiologists or reporting radiographers are not expected to be entirely free from error when reviewing imaging. Radiology relies on individual clinical judgement, which means that very subtle or ambiguous findings may be missed, or their significance unrecognised. A radiological discrepancy is when a clinician has overlooked a finding which could reasonably be expected to have been identified by a majority of radiologists or reporting radiographers. In the cases PHSO has investigated, where appropriate, a specialist radiology adviser will have looked at a scan to determine if there has been a discrepancy.

Evidence from our casework

In **more than half the cases** we looked at, we found that significant unexpected findings were captured in scans and X-rays but were not included in radiological reports. In some cases this was because the clinical questions prompted the

⁴ Royal College of Radiologists, Standards for interpretation and reporting of imaging investigations, Second edition, 2018.

⁵ Royal College of Radiologists, Standards for radiology event and learning meetings, 2020.

radiologist or reporting radiographer to look for something else. This often caused excessive delays in diagnosis and missed opportunities for more appropriate treatments.

For example, in one case, a patient had a scan to look for enlarged lymph nodes which could indicate a possible systemic inflammatory disorder. The scan also showed that the patient had emphysema, a lung condition. Despite this, the emphysema was not reported because it was not the reason the scan had been requested. This meant there was a missed opportunity to diagnose the patient's condition sooner and discuss appropriate treatment. The report gave no assurance that these areas were considered.

In another example, the radiological report for a CT scan stated that a patient had a lesion in their right pelvis but did not include an unexpected finding of potential bladder cancer. This oversight meant the patient could have missed out on five months of diagnostic testing, increasing their risk of death.

The case was considered by a urology multidisciplinary team (which included radiology, oncology and urology specialists) but the issues with the bladder were still not identified. This is because the radiologist's clinical opinion guided the urologist to focus on a particular area. There was a missed opportunity to diagnose the bladder cancer sooner. Sadly, the patient died while undergoing chemotherapy.

In some cases, we saw that a significant unexpected finding was missed or not reported on in patients who had another existing serious health condition.

For example, a patient who had existing lung problems had two chest X-rays, one year apart, that showed abnormal shadowing on their lung. This was not reported on in either X-ray and no further action was taken. This delayed a diagnosis of terminal lung cancer.

While the clinical outcomes in these cases may not have been different if the appropriate action had been taken, they demonstrate missed opportunities to provide palliative care earlier and more time for the patients and their families to come to terms with terminal conditions. These failings compounded what were already very difficult experiences for people.

Case study one: Failure to report on unexpected findings led to an eighteen-month delay in cancer diagnosis

- A patient was diagnosed with breast cancer in August 2017. In January 2019, various scans showed they also had pancreatic cancer, at which point they were placed on a palliative care pathway.
- In August 2017, a CT scan showed a lesion on their pancreas and indicated locally advanced pancreatic cancer, but this was not reported on or escalated.
- The radiologist should have included a 'red flag' alert on the radiological report as this was a serious unexpected finding. Had they done so, further investigations would have been carried out.
- The primary purpose of the scan was to stage the patient's breast cancer, and this contributed to the pancreatic cancer not being identified. This is contrary to [RCR guidelines](#) that say radiologists must report unexpected findings.
- Despite repeated scans in December 2018, radiologists did not identify the presence of a pancreatic tumour.
- The August 2017 scan was reviewed in January 2019 because the patient was admitted to hospital again. The review identified the previously unreported lesion and further tests led to an eventual diagnosis. The patient was informed of their diagnosis in February 2019.
- There were several missed opportunities to diagnose the cancer earlier (up to 18 months earlier), which might have led to different or more effective treatment options that could have prolonged the patient's life. The family were greatly distressed by not knowing if there could have been a different outcome.
- The Trust did not take any action to address this mistake. We recommended the Trust apologise, pay the complainant £2,500, and create an action plan to ensure staff learn from the failure to correctly report and review images.

2. Failure to act on important unexpected findings

What should happen

[RCR national guidelines](#)⁶ state that every trust should have a clear local policy that sets out exactly what to do when there are significant unexpected findings in scans and X-rays. They outline two categories of findings:

- **critical findings and urgent findings** - when emergency action is required as soon as possible, or medical evaluation is required within 24 hours
- **significant, important, unexpected, and actionable findings** - when a fail-safe alert should be added to the agreed communication method to ensure findings are acted upon in a timely manner.

[RCR guidelines on the communication of radiological reports](#) state that it is the radiologist's responsibility to flag reports where a fail-safe alert is required. It is the requesting doctor or clinical team's responsibility to read and act upon the report findings and alerts as quickly and efficiently as possible. A fail-safe alert or policy aims to ensure that these important findings are always acted on appropriately.

When an unexpected finding is reported by the radiologist, the requesting clinician is required to follow the pathway set out in their local policy. This could mean bringing a scan to a multidisciplinary meeting for discussion by radiologists, radiographers and colleagues in other specialisms. Here, they can seek a second opinion from a senior radiologist or relevant clinician, or follow up with additional scans or X-rays to investigate the finding further.

Failing to communicate or follow-up on unexpected significant radiological findings is a [nationally recognised patient safety risk](#). [RCR guidance](#) states that referring departments should have appropriate mechanisms for handover, clear audit trails and an understanding of the local fail-safe alert policy. [Work is underway](#)⁷ to strengthen the guidance and support around this.

Later this year, the RCR [will publish guidance](#) on criteria for identifying whether findings should be reported as 'unexpected significant', 'critical' or 'urgent'. It is also developing a simplified national framework for coding alerts on radiological reports, as well as a list of criteria to determine when an alert should be applied.

⁶ Royal College of Radiologists, Standards for the communication of radiological reports and fail-safe alert notification, 2016.

⁷ Health and Safety Investigation Branch, Failures in communication or follow-up of unexpected significant radiological findings, 2018; Royal College of Radiologists, [The Quality Standard for imaging](#), 2019.

Evidence from our casework

In half of the cases we looked at, unexpected findings in imaging were not followed up in line with the local trust policy. In some cases, we found there was an absence of clear and robust local policies and processes for the follow up and communication of an unexpected finding. This meant the appropriate actions were not taken, including communicating with patients and families. This was not in line with [national guidelines](#).

For example, in one case there were missed opportunities to diagnose a patient's pancreatic cancer, and discuss appropriate treatment, because of issues with the handover of care. A scan requested by a GP identified abnormal findings on the patient's liver, so the GP referred the patient to a general physician, a urologist, and the radiology department. The patient also had other symptoms that, when looked at alongside the abnormal scan findings, should have warranted an urgent cancer referral. The GP did not mark the referral as urgent, which was not in line with [NICE guidance](#)⁸ and was a failing.

The GP did flag the weight loss in the patient's notes. Upon referral to the Trust, we found that the medical team should have recognised that this was a red flag symptom and investigated further with scans, rather than referring back to the patient's GP. Sadly, the patient died shortly after this from pancreatic cancer.

We found that a lack of effective policies, processes, and appropriate communication mechanisms often led to issues in the handover of care and clarity on roles and responsibilities. This was true of the handover between primary and secondary care services, and between emergency departments, inpatient care and other settings. In many cases, this had significant consequences for patients. In several cases, the radiologist had included a fail-safe alert but there were issues with how this was followed up.

For example, in one case, an X-ray report found that an older patient with stomach cancer had a hole in their oesophagus. The radiological report flagged that this was a critical unexpected finding. In line with the Trust's local policy, emergency action should have been taken, but it took a further 24 hours before the scan was looked at by the referring Acute Medical Unit doctor or discussed with the surgical team. We found that this was a failing. Sadly, the patient died four months later. While their outcome probably would not have been different, we found that their quick deterioration could have been avoided if the escalation protocols had been followed correctly.

The radiological report was faxed to the requesting doctor, which we found was not a sufficient method for flagging the critical finding. The Trust did not have a

⁸ National Institute for Health and Care Excellence, Suspected cancer: recognition and referral, 2021.

formal process for reading and acting on radiological reports, or a formal process for communicating critical alerts. This was not in line with [RCR guidelines](#). This case highlights the critical importance of having digital reporting capabilities, rather than relying on a paper-based system.

In another case, a patient was admitted to the emergency department with abdominal pain and had a CT scan. In their report, the radiologist identified that an urgent patient management review was required as there was an issue with the patient's bowel. No urgent action was taken by the referring surgeon and the report was only followed up a month later, which was a failing. If urgent action had been taken, the patient might have been fit for a colonoscopy. This would have investigated the issue further and led to a quicker diagnosis. The surgeon who requested the scan should have contacted the patient or their GP urgently after reviewing the scan report.

Having appropriate policies, processes and communication mechanisms, that clearly state roles and responsibilities, is not simply good administrative practice but is essential to ensuring patient safety.

Case study two: Failings in communication, policy and processes left a patient and family unaware of a terminal cancer diagnosis

- A patient had an X-ray through an NHS-funded subcontracted provider which did not pick up on unexpected findings. The patient's symptoms persisted, so their GP organised a follow up CT scan. At this point, a radiologist at the Trust reviewed the first X-ray and discovered it had not reported unexpected findings.
- The first CT scan revealed the patient had terminal and inoperable lung cancer, and the mistake meant they started palliative treatment six weeks later than they should have.
- The patient's GP made an addendum to the patient's records about the X-ray error, but failed to make them or their family aware of this. The GP also failed to tell the the patient that their condition was terminal and they were receiving palliative care.
- Several opportunities were missed to inform the patient of their diganosis. This meant the patient could not discuss their prognosis with their doctor or family, make informed decisions about treatment and their quality of life, get their affairs in order or see their son before they died. This was a significant service failure.
- The Trust and the outsourced company should have had arrangements in place for reporting the error and the diagnosis. The Trust did not have an up to date contract with the company that carried out the X-ray to ensure they addressed duty of candour appropriately.
- We recommended that the Trust apologise, create an action plan and make a duty of candour agreement with the subcontracted provider.
- These recommendations were included in the provisional report for this case. At the point this report was issued, PHSO's investigation was paused as the complainant sought to resolve the complaint directly with the Trust. When the complainant brought their complaint back to PHSO after two years, we found the Trust had still not addressed the gap in their duty of candour policy.

3. Delays in reporting imaging findings

What should happen

[RCR national guidelines](#) state that all radiological reports should be ‘produced, read, and acted upon in a timely fashion’. However, there is currently no national guidance on clear reporting timelines.

Delays in relation to imaging can occur at a number of points in the process of requesting, carrying out, reporting and acting upon scans, including when:

- the image is requested (which is the responsibility of the referring clinician)
- the radiologist or reporting radiographer reviews the image (once it is generated by the radiographer)
- the image is formally reported on in a radiological report by the radiologist or reporting radiographer
- the requesting clinician communicates the report findings to the relevant department, the patient or their family.

In 2018, CQC called for [clearer national standards on reporting timelines](#). It recommended there should be ‘agreed national standards to ensure consistent, timely reporting of radiological examinations’, as having no formal national guidance makes it difficult to judge what ‘good’ looks like. Much research and testing has been conducted into [potential national standards for radiological reporting turnaround times](#)⁹, but they are yet to be published. This is because of difficulties in meeting these standards.

Timeliness of reporting can also be supported or challenged by the availability of technology and the quality of local processes. [RCR standards](#) say that ‘fail-safe systems should be IT-based to reduce error and increase efficiency, but if facilities are not available, alternative manual processes should be in place’. The NHS is still not paperless. Work is being carried out to advance capabilities around digital reporting in imaging to support quality improvement in this area.¹⁰

⁹ Radiology, Getting It right first time, GIRFT programme national speciality report, 2020.

¹⁰ NHS England and Improvement, Transforming imaging services in England: a national strategy for imaging networks, 2019 < allcatsrgrey.org.uk/wp/wpfb-file/transforming_imaging_services-pdf/ > ; Mike Richards, Diagnostics: recovery and renewal - report of the independent review of diagnostic service for NHS England, 2020 < <https://www.england.nhs.uk/publication/diagnostics-recovery-and-renewal-report-of-the-independent-review-of-diagnostic-services-for-nhs-england/> > .

Evidence from our casework

In nearly a **third of the cases** we looked at, we found failings relating to delays in requesting, reviewing and reporting on a scan or X-ray, as well as delays in acting on the radiological report. In some trusts there was an absence of clear and effective local policies and processes around timelines for these steps.

Each step in a patient's imaging journey relies on different clinical personnel. This can include the clinician who requested a scan, the radiology team who carried it out and reported on it, and the clinician responsible for acting on the results of the scan. Issues with poor handover between clinical teams can exacerbate delays. In some cases, we saw how failures from more than one department compounded delays and negatively impacted the patient.

For example, in one case, an older adult was admitted to hospital after they fractured their hip and had a stroke. Following this, two X-rays were carried out but the diagnosis and subsequent treatment were delayed due to failures to request and report the X-rays in a timely way. This meant the patient was left in pain for longer than they should have been. The X-ray was initially returned to the doctor for consideration without a report from the radiologist, and it was an additional 16 days before the X-ray was formally reported on. The delay in the request for the X-ray was linked to the medical team, but the failure to report on the X-ray for 16 days was linked to failures in imaging services. Both failings negatively impacted the patient.

As well as poor handovers between departments, issues relating to paper-based systems, or ICT systems that do not support robust audit trails, also contributed to delays in reporting on or reviewing the results of images.

For example, in one case, the findings from an MRI scan were not acted on for two months because the locum radiologist who originally viewed the scan did not complete the reporting of it and nobody else picked this up. The radiology information system was also not working, which contributed to a backlog of cases. This was contrary to the Trust's own local policy on the reporting and follow up of radiological reports. The delay in reporting the results of the scan meant a late diagnosis of liver cancer and a missed opportunity for the patient to start chemotherapy earlier and improve their prognosis and life expectancy. By the time of the diagnosis, the patient was too ill to consider chemotherapy or surgery options.

In another case, due to issues with uploading an image when shared with a different trust, there was a three-week delay in reviewing an X-ray, which delayed a diagnosis of myeloma. If diagnosed some weeks earlier, we found that the patient's health condition might have been better, and they might have been in a position to undergo chemotherapy treatment. This could have potentially

increased their life expectancy by 18 months. The family told us that it was distressing to know there could have been a different outcome for their loved one.

In one case, a Serious Incident Investigation found an outdated paper-based system to be the cause of serious failings.

In some cases, we saw all three issues: failures to report unexpected findings, issues with follow up and issues with delays. This compounded the negative impact on the patient.

Case study three: There was a three-month delay in identifying reoccurrence of bladder cancer because of a failure to identify unexpected findings and to follow the right pathways.

- A patient was diagnosed with bladder cancer in December 2013, which was removed during surgery in March 2014. A scan in July 2015 showed the reoccurrence of the cancer and sadly, the patient died three months later.
- There was an avoidable delay of three months in diagnosing the reoccurrence of the cancer. This was due to delays in reporting, as well as the misreporting of a CT scan in July 2014.
- While waiting for a radiologist to formally report on the scan, the patient's urology consultant reviewed a low definition scan in August 2014 at an appointment with the patient and initially determined there were no abnormal findings. The correct protocol would have been to escalate the scan to a weekly multi-disciplinary meeting where urologists, oncologists and radiologists could review it.
- The scan was not formally reported on until October 2014 and only mentioned the left kidney, not identifying the reoccurrence of the bladder cancer.
- We found that the patient was denied opportunities to have better palliative care and an increased life expectancy, and the family also lost time to prepare for their loved one's death.
- There was a missed opportunity to learn from mistakes as the Trust did not review the scan or the processes at a REALM meeting. This was contrary to RCR guidance at the time.
- We recommended the Trust apologise, pay £950 and create an action plan in line with the recommendations from the 2018 [CQC report](#) to ensure radiology reporting was timely. We noted that RCR guidance on timeliness of scan reporting was withdrawn as targets could not be achieved, so there was an absence of formal guidance at the time. these failings occurred.

4. Failure to learn from past mistakes

What should happen

[National RCR guidelines](#) set standards for learning from when things go wrong in imaging. Radiology Events and Learning Meetings (REALM) are framed as educational opportunities to discuss what went wrong in individual instances and what learning can be taken away, as well as to identify systemic issues. The standards stress that there should be systems in place for proactive sharing of learning within a blame-free space when significant radiology discrepancies are identified.

RCR also sets [standards for peer review](#)¹¹, to enable radiologists to provide feedback on colleagues' radiological reports. This is in line with [NHS England and Improvement's Just Culture Guide](#)¹², which encourages managers to treat staff involved in patient safety incidents in a consistent, constructive and fair way for the sake of continuous learning.

Learning from mistakes is crucial because it drives improvement in the quality and safety of care and helps prevent the same harm from happening again. However, learning is only meaningful if it is acted upon. A true learning culture is one that embraces positive accountability and recognises that learning is a continuous, ongoing process that requires action as well as thought.

[The NHS Complaint Standards](#)¹³ were co-developed by PHSO with a range of health professionals, regulators and advocacy groups. They emphasise that organisations should have clear processes in place to demonstrate they are using learning from complaints to improve services. Organisations should routinely share learning, both locally and nationally, to build insight and best practice.

[Being Fair](#)¹⁴, the recent report by NHS Resolution, emphasises that there is 'rarely intent by staff to provide care that did not go as expected or planned'. Their [Just and Learning Culture Charter](#) helpfully describes accountability as 'sharing what happened, working out why it happened, and learning and being responsible for making changes for the future safety of staff and patients'.

Patients and their families and carers are affected by the consequences of the failings described in this report - but so are staff. [Research published by the British](#)

¹¹ Royal College of Radiologists, Lifelong learning and building teams using peer feedback, 2017 (as of April 2021, it is available for reference only and will not be updated).

¹² NHS England and Improvement, A just culture guide, 2019.

¹³ Parliamentary and Health Service Ombudsman, NHS Complaint Standards: summary of expectations, 2021.

¹⁴ NHS Resolution, Being fair: supporting a just and learning culture for staff and patients following incidents in the NHS, 2019.

[Medical Journal](#)¹⁵ has found that clinicians' mental health, confidence, and ability to cope can be seriously adversely affected by a clinical failing they were involved in. [These challenges have been found](#)¹⁶ to be more common among those who report feeling blamed for what went wrong, or victimised for highlighting that something had gone wrong. A learning culture can not only support improvements to the quality and safety of care, but also support the wellbeing of NHS staff in the wake of a serious incident.

Evidence from our casework

In nearly half of cases we saw missed opportunities to learn from mistakes in imaging. It is important to emphasise that the failings related not only to imaging services but also to other clinical services that involve imaging. These failings included:

- failures to bring cases to weekly REALM meetings in a timely way or at all. In one case it took three years.
- failures to embed learning from Serious Incident Investigations and REALM meetings
- failures to act on recommendations that PHSO has made.

In some cases, we saw that failures to learn from mistakes and failures to embed this learning compounded the original failing. Often, the lack of learning was a source of distress to the complainant and we were not assured that the trusts in question had put measures in place to prevent the same mistakes from happening again.

We also found that NHS organisations were not consistently putting things right for patients and families after something went wrong. There were several cases where a trust had not sufficiently apologised to a patient or family for what had happened, or not put things right for them.

When we make final decisions on a complaint, PHSO makes recommendations so the organisation complained about can put things right. In some cases we found that PHSO's recommendations were not implemented and that opportunities to learn and review systems and ways of working were missed. Some of the recommendations we made in these cases include:

- take action to ensure that RCR standards are applied when interpreting images by implementing an auditing system

¹⁵ BMJ, The impact of complaints procedures on the welfare, health and clinical practise of 7926 doctors in the UK: a cross-sectional survey, 2014.

¹⁶ BMJ, Supporting "second victims" is a system-wide responsibility, 2015.

- ensure staff learn from failures to correctly report and review scan images
- ensure urgent alerts are flagged and dealt with in a timely way
- review the policy on communicating critical unexpected findings
- create a duty of candour policy with any outsourced providers
- review whether communication mechanisms are sufficient
- create a formal policy for communicating imaging findings internally and with patients and families
- comply with [CQC's 2018 report](#) recommendations on reporting timelines.
- provide assurances that patients with abnormal chest X-ray findings will be offered prompt and appropriate investigations and referral, in accordance with [NICE guidelines](#).¹⁷

Though systems and processes are crucially important to the safety of care, they are not the only cause of, or solution to, the failings set out in this report.

Without a just culture that ensures organisations learn from mistakes and put learning into practice, the quality and safety of services can suffer. This in turn means patients and staff may also suffer.

¹⁷ National Institute for Health and Care Excellence, Lung cancer: diagnosis and management, 2011.

Case study four: Avoidable death after Trust failed to embed learning from a mistake with following up an X-ray

- In July 2014 and May 2015 a patient had two separate chest X-rays that detected abnormalities, suggesting a slowly growing lung tumour. The patient was not diagnosed or treated for this, but was instead treated for the stroke-like symptoms they were presenting with, as neither X-ray was reported on. On both occasions, clinicians in the emergency department requested the chest X-ray.
- In July 2017, the patient had another chest X-ray that showed advanced lung cancer. They were diagnosed but by this point the lung cancer was no longer treatable, as it had spread to their brain. They died in August 2017.
- We found that they would likely have survived if they had received radical treatment after their first X-ray. We found that this was an avoidable death.
- The Trust failed to follow national guidelines as well as their own. In line with GMC guidance, the referring clinicians in the emergency department should have notified the medical team that a chest X-ray had been requested and undertaken. At this point the responsibility to review the results would have passed to the medical team, in line with the Trust's own guidance.
- There is no evidence that the original chest X-rays were ever reviewed due to this confusion in responsibility, which was a significant failing. The same issue happened in May 2015, which meant no action was taken on the tumour until the third X-ray, three years after the original X-ray.
- The Trust carried out a Serious Incident Investigation (SII) which found that the root cause of these mistakes was an outdated paper reporting system. It also commented that a 'mind set change' in the culture of the emergency department may not be possible. The Trust failed to share the findings of the SII with the local CCG.
- Following the SII the Trust implemented a 'failsafe' pathway (a triggering code that would involve the lung Multi-Disciplinary Team) but it did not trial or audit the pathway as it said it would (two years after event). While the pathway is broadly in line with RCR guidance, we therefore could not say if the pathway was working.
- We also found failings in how the complaint was handled. The complaints process was not timely or clear and the Trust did not communicate with the patient's family well. The Trust did not apologise to the family for their loved one's avoidable death.
- We recommended the Trust apologise, audit the fail-safe pathway that involves the lung multidisciplinary team and pay the patient's family £10,000.

Next steps and call to action

Some progress has been made to identify and act on the issues we have identified

Many of the issues raised in this report are well known and documented by NHS regulators and oversight bodies. This includes issues with reporting, escalating and actioning significant unexpected radiological findings in an appropriate and timely way.

It is also known that having effective policies and processes, as well as adequate digital reporting capabilities, are intrinsically linked to these issues and that these should be implemented in order to support quality improvement.

Publications in the last three years have shed light on the impact of failures when following up on unexpected findings in imaging. These include [publications from HSIB](#), the independent patient safety investigation body for England, and the [CQC](#), the independent regulator of health and social care. They have presented a call to action to address, amongst other things:

- variation in local trust policies on reporting timelines for imaging results
- improving the coding of alerts
- improving escalation pathways
- digitising systems to improve communication mechanisms.

In July 2019, HSIB published the [findings of a national investigation](#) which found that a Trust had failed to appropriately follow up and communicate an unexpected finding of lung cancer. The patient died two months later. HSIB made a number of recommendations that triggered significant national collaborative work to address the issues identified.

As a result of the investigation, [work is being carried out](#), including:

- differentiating between reporting findings that are ‘expected’ and ‘unexpected’
- improving the escalation protocol when there is an unexpected cancer for critical findings
- setting clear timeframes for the notification of results over weekends and bank holidays
- developing a notification system for imaging results
- improving the communication of results to patients directly
- working with NHS Digital to standardise the process of result notification via an electronic system.

In addition to this work, existing guidance on [fail-safe pathways](#), [digital audit trails](#) and [interpreting and reporting imaging](#) has recently been updated.¹⁸ The [Quality Standard for imaging](#)¹⁹ has brought standards to each step on the pathway and is currently due to be updated later in 2021 to enable further quality improvement. New standalone guidance on duty of candour is due to be published soon. However, there is currently no cross-speciality guidance used by all the Royal Colleges for mapping the imaging journey. Although RCR guidance exists, it is not routinely used as a resource by clinicians working in specialties that request imaging or act on its findings.

In 2019, the RCR, the professional body for radiologists, [said](#) there had been ‘a number of attempts to resolve the challenges of alerts and acknowledgements of unexpected findings over the years’. They said there is [likely to be limited progress in these areas](#) unless there are ‘digital systems and infrastructure capable of adapting to an agreed national framework’.

The development of imaging networks and improvement of the capabilities of digital systems in imaging services is a national priority. The National Imaging Board is carrying out work in line with the [National Strategy for Imaging Networks](#)²⁰ which aims to improve digital systems and communication mechanisms that support imaging. This will help to avoid errors and stop reports and requests from falling through the gaps. This goal is supported by findings from the [Independent Review of Diagnostic Services](#) for NHSEI on digital connectivity and improved ‘failsafe’ digital infrastructure. Alongside the National Strategy, the work will enable a more cohesive approach to quality improvement across imaging.

A just and learning culture is essential

The progress being made to improve systems and processes must sit alongside the adoption of a just and learning culture across the NHS.

The collaborative efforts being made to address the issues identified by HSIB, CQC, the [Diagnostics Services Review](#) and this report will not be enough to achieve the necessary improvements. To improve the quality and safety of care, a wider cultural shift is needed. Staff must feel able to raise concerns about the safety of care, or an incident where something has gone wrong, without fearing punitive consequences. Clinical and managerial leaders must actively promote and model a just culture that prioritises learning when things go wrong, rather than blame. NHS organisations must demonstrate accountability for acting on their learning so that

¹⁸ Royal College of Radiologists, The Quality Standard for imaging, 2019.

¹⁹ Society of Radiographers, [Quality Standard for imaging to undergo external review](#), 2020.

²⁰ NHS England and Improvement, Transforming imaging services in England: a national strategy for imaging networks, 2019.

staff, patients and families can trust that failings result in changes that will help prevent errors from happening again.

Learning from complaints is a crucial component of a just and learning culture. Feedback from patients and families offers invaluable insight that can help services improve. [The NHS Complaint Standards](#) set out that ‘[a]n effective complaint handling system promotes a culture that is open and accountable when things do not go as they should’.

The [Standards](#) stress that ‘senior staff should make sure every member of staff knows how they can create and deliver a just and learning culture in their role’. Governance structures should ensure senior staff review information arising from complaints regularly. Organisations should also put in place practices to clearly demonstrate how they have used learning to improve. The principles of the Complaint Standards must be implemented.

The experiences of patients, families and frontline staff offer invaluable insight to support learning. Both clinicians and patients themselves should be given an opportunity to share feedback to inform the learning process within and across NHS organisations.

Taking action

The continued pressure on the NHS means it is more important than ever to make improvements to these services.

The impact of [COVID-19 continues to place pressure](#)²¹ on staff and services. Both clinical and non-clinical NHS staff have been working under sustained pressure throughout the pandemic. This includes sometimes working outside their usual areas of expertise, to care for acutely unwell COVID-19 patients as well as maintain NHS care for patients with other conditions. As we move beyond the first peaks of the pandemic, additional challenges lie ahead.

The number of patients being [urgently referred by their GPs](#)²² with suspected cancer is returning to normal levels. However, the large waiting lists to [access cancer treatment](#)²³ and other treatments are likely to grow and increase the pressure on both the system, and on staff. This includes queues for elective care, where imaging services are often crucial, and where the [waiting list stands at over 5 million](#).²⁴

²¹ Kings Fund, The road to renewal: five priorities for health and care, updated April 2021

²² The Health Foundation, Restoration of cancer referrals a positive milestone but backlog of routine care still a major concern, 2020.

²³ Nuffield Trust, Cancer waiting times, 2021.

²⁴ The Health Foundation, Significant investment needed as waiting list for routine hospital care continues to grow, 2021.

We know that some of the work being carried out in this area has faced delays. But these challenges are not a reason to avoid or postpone making improvements to the quality and safety of care. Rather, they reinforce the importance of addressing the failings we have identified, so that the problems presented by the pandemic and its aftermath are not compounded.

This report represents an opportunity for the NHS to commit to a positive recovery. It should use the wake of the pandemic as a springboard to improve the way services work, and the quality and safety of care those services deliver. The NHS must use the insights from PHSO's casework to support this positive improvement. Learning from complaints is key to driving improvements within organisations. The NHS must develop a culture of continuous learning and improvement, which will ultimately benefit patients and staff, and which will make sure that mistakes are not repeated.

PHSO recommendations

The following **four** recommendations focus on improving the system as a whole.

1. **Recommendations from previous work related to imaging must be implemented as a priority.** This should have central coordination and oversight from NHSEI, including:
 - a. [recommendations made by HSIB](#) following their national investigation
 - b. recommendations made by CQC's [national review of radiology reporting within the NHS](#), including on national standards for radiological reporting times
 - c. recommendations made in the [Independent Review of Diagnostic Services](#) for NHSEI around digital connectivity and improved 'failsafe' digital infrastructure.
2. **Digital infrastructure must now be treated as a patient safety issue.** DHSC and NHSEI, working with NHSX and NHS Digital, should prioritise improvements to digital reporting capabilities across the system of requesting and reporting imaging.
3. **DHSC and NHSEI should ensure there is national guidance on the roles and responsibilities of clinicians, and expected timeframes, at each stage of the imaging journey.** This guidance should apply to referring clinicians of all specialties, as well as radiologists and radiographers. This is so all clinicians have a shared understanding of their respective roles. The guidance should involve the Academy of Medical Royal Colleges (AoMRC) and other relevant professional bodies so all clinical professions in the imaging journey are involved and able to operationalise the guidance. Professional

bodies should seek to support the roll-out of the guidance. The guidance should cover processes including:

- a. the journey from requesting imaging to reporting on the image
 - b. the journey from reading the radiological report to acting on the radiological report
 - c. communicating the findings of the radiological report to patients and families.
4. **DHSC and NHSEI should write to the Health and Social Care Select Committee and the Public Administration and Constitutional Affairs Committee by the end of March 2022.** They should provide an update on progress in implementing these recommendations and include input from the Academy of Medical Royal Colleges.

The following **three** recommendations are specifically for imaging services.

5. **All NHS-funded providers that have a radiology service should provide staff working in those services with sufficient allocated time in their job plans for meaningful learning and reflection.** This should include identifying and sharing the learning from discrepancies and peer review of radiological reports. NHSEI should have system oversight of this, working with RCR and SOR to identify how much job plan time should be allocated a month to learning and reflection.
6. **Clinical directors and senior managers of NHS-funded radiology services should triangulate the learning from across their departments on a regular basis.** This should be no less than four times a year, to identify systemic or recurring issues. They should share their findings with staff in radiology services and other relevant departments. This should include, for example, the learning from REALM meetings, complaints, claims, serious untoward events, patient safety issues, Freedom to Speak Up Guardian data and candour learning.
7. **The Royal College of Radiologists should review existing guidance on reporting unexpected findings and peer review of radiological reports to learn from the findings of PHSO's casework.** This should ensure there is clear guidance for radiologists and reporting radiographers to report on all clinically significant unexpected findings, not only those which relate to the clinical question set by the referring clinician.

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