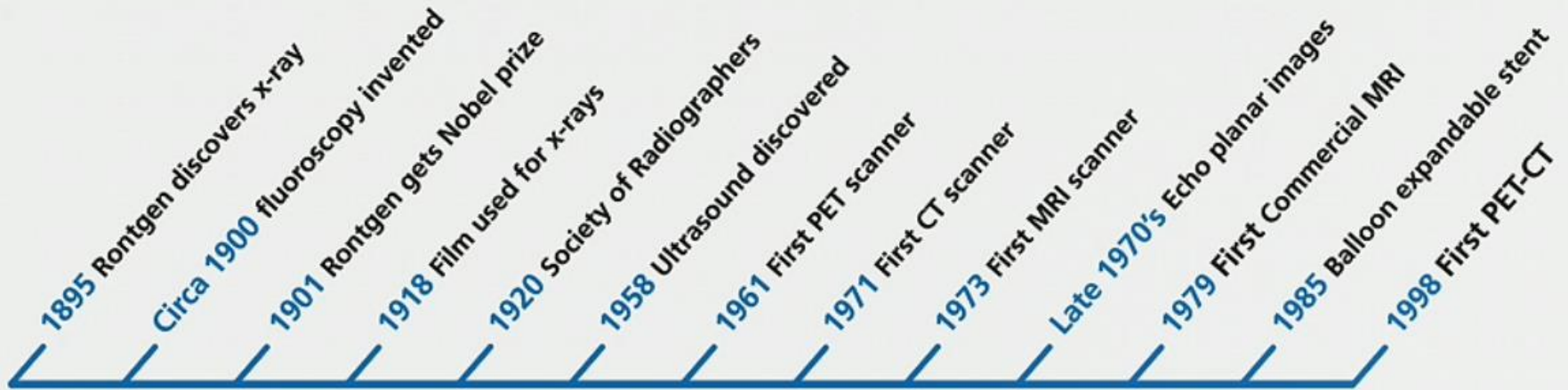


IN RISP

Background to image sharing

Developments in radiology



Developments in Radiology in the past decades have revolutionised almost every aspect of medicine.

However, sharing of radiology reports and images among healthcare providers, particularly between acute Trusts, remains a challenge.

had to be imported into their local PACS by administrative staff. Out-of-hours emergency and urgent care are particularly affected by this arrangement when administrative staff are not normally at work, making it difficult for clinicians to access vital information.

Length of time to access external images and reports

Only 25% of clinical oncologists and radiologists responding to this survey had instant access to external images and reports. Instant access is important when providing emergency care. For many respondents, external images were often not accompanied by a report or the reports took longer to access than the images. **Some 47% of respondents said it took them one day or more to access external reports** compared to only 33% for images.

1. Main findings

Accessing external radiology images and reports

Across the UK, only 52% of clinical oncologists and radiologists responding to the survey had online access to picture archiving and communication systems (PACS) in organisations external to their own. Access to external PACS is important given that patients are often scanned and subsequently their images and results are held at a different hospital to that of the clinician making diagnosis or treatment planning decisions. Of those who had online access, 54% reported experiencing difficulties searching for and retrieving images from external PACS. There was a wide regional variation, with all respondents in Wales experiencing these difficulties compared to 18% in Scotland. For radiotherapy planning, multidisciplinary team meetings (MDTMs) and follow-up image reporting, between 87% and 96% of survey respondents had experienced difficulty accessing images and reports at some time.

Sending images and reports to external organisations

Many trusts and health boards still rely on manual processes requiring administrative support when sharing images and reports. Only 28% of survey respondents had electronic systems in place to automatically send images and reports from their local PACS to PACS in external organisations, and some 86% stated that this information had to be imported into their local PACS by administrative staff. Out-of-hours emergency and urgent care are particularly affected by this arrangement when administrative staff are not normally at work, making it difficult for clinicians to access vital information.

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Impact on clinical work

Non-availability of external images and reports can affect the work of clinicians in three important domains: productivity, efficiency and quality. This conclusion is drawn from the free text comments made by respondents to the survey. Instances were given where clinicians were required to work with incomplete information, work was being duplicated, scans were being unnecessarily re-reported and patients were being subjected to repeat imaging and other medical (including invasive) procedures. Discussions, decision-making and treatment planning during multidisciplinary team meetings (MDTMs) were particularly affected, resulting in process delays, time wastage and postponement of patient cases. If instant access to external images and reports was available, nearly all respondents agreed that it would prevent clinicians' time being wasted, reduce healthcare costs and lead to improvements in the image-reporting process and subsequently quality of reports.

Impact on patients

In some parts of the UK nearly all clinical oncologists and radiologists responding to the survey were concerned about the length of time it took to access external images and reports in the context of providing care to patients. Just over half of those responding stated that there had been at least one instance where patient care had suffered in the past 12 months as a result of the length of time taken to access external images or reports. The nature of these comments is that a lack of access to images and reports causes clinical data, has adverse effects on patient care, results in the recall of patients, delays treatment of cancer and impacts on out-of-hours and urgent and emergency care.

Areas of good practice

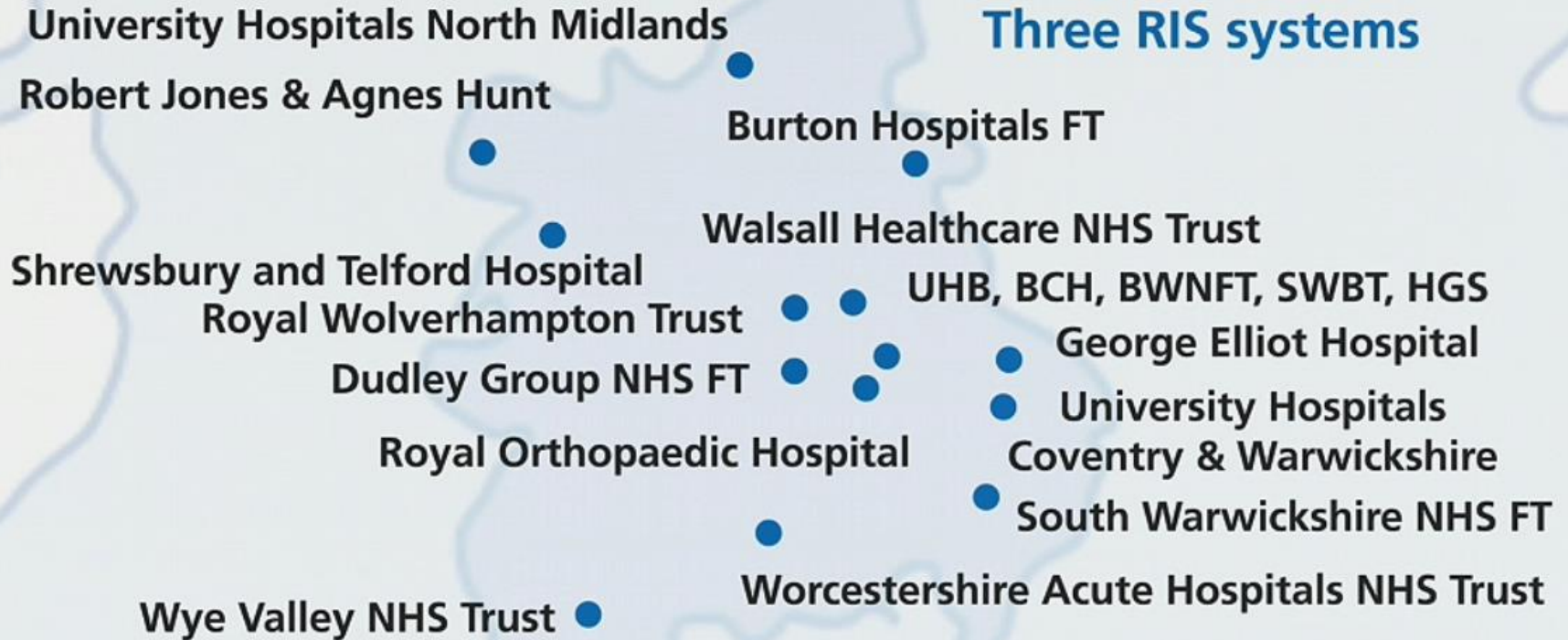
The survey identified a number of areas of good practice in the sharing of images and reports. The need to balance patient confidentiality with the clinical benefits of sharing information is recognised. Good working relationships between health service providers will facilitate co-operation and collaboration when sharing information. Scotland has a national PACS which (although not perfect) has greatly facilitated the sharing of information. It is notable that respondents in the North West and South West of England, where regional PACS/radiology information systems (RIS) have emerged, report fewer instances of patient care suffering and concerns about the length of time it takes to access external information in the context of patient care, compared to their colleagues in other parts of England.

The Royal College of Radiologists report; 'It's good to share' found that nearly half of clinicians had to wait one day or more for external radiology information to be accessed and, in many cases, the report did not accompany the images. This figure was particularly high in the West Midlands.



A number of Image sharing networks have come into existence in the past few years where a unified PACS system has been in place. While these are not perfect, they significantly improve some of the issues faced.

Eight PACS & Three RIS systems



In the West Midlands, at the point of this videos production, there are 8 different PACS systems and 3 different RIS systems in use across the participating Trusts.



IT network connectivity and low data transfer speed makes streaming of large radiology images unreliable.

It is anticipated that the advent of HSCN (the new version of N3) will improve speed and reliability of data transfers.