University Hospitals of Morecambe Bay
NHS Foundation Trust

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Paul O'Donnell, HM Assistant Coroner
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Our Ref: JD/PO
30 June 2016

Dear Mr O'Donnell

Re: Regulation 28 Report To Prevent Future Deaths – Constance Pridmore (deceased)

Thank you for your report dated 12 May 2016, requesting a review of the Trust's procedures with regard to the assessment of x-rays, on the basis that delays in obtaining radiologists' reports creates a foreseeable risk of future deaths.

The Trust's Clinical Director for Core Clinical Services and Consultant Radiologist has reviewed our procedures and I can advise as follows.

Introduction

The number and range of imaging investigations performed per day varies but the reporting workload is broadly predictable and University Hospitals of Morecambe Bay NHS Foundation Trust (UHMB) does not have sufficient reporting capacity to promptly report all the images that are acquired. As identified in your report, there is a shortage of radiologists and this is reflective of a national problem. The Royal College of Radiologists (RCR) has produced several snapshot surveys demonstrating the scale of the issue. The most recent RCR survey (February 2016) showed that in fact, UHMB was in the upper quartile with no studies >1 month.

In addition, radiology services nationally have experienced continual growth over the last eight years and this trend is expected to continue. In relation to changes in clinical practice, as clinical applications within imaging technology advance, the Trust will continue to increase demand for the service. There is also an increased dependence upon radiological investigations by clinicians to support the clinical decision-making process.

In 2013, Professor Sir Bruce Keogh's report recommended that all inpatient imaging investigations be completed and reported within 24 hours. However, the shortage of radiologists and increase in workload means that this

standard, intended for achievement by 2016/17, is widely accepted to be an ideal rather than a realistic target. The Trust continues to work towards this but it is a challenge. The lack of reporting capacity and associated risk is appropriately recorded on our corporate risk register, which is reviewed at least on a quarterly basis. In addition to prioritisation, the main actions to address this are around recruitment, skill mix and use of technology.

Background

Approximately 300,000 imaging investigations per annum are performed at UHMB, of which 170,000 are x-rays. For these to be useful, the images need to be considered and an opinion documented. For those tests which involve radiation, this is also a statutory duty under the Ionising Radiation (Medical Exposure) Regulations. For many studies the images will be immediately available and will be reviewed by the clinician who has requested them. It is normal practice in this trust and elsewhere that their opinion is used as the basis for treatment, at least until such time as the study is 'reported'. The documentation of an opinion by someone whose main role is evaluating imaging is known as 'reporting' and is usually carried out by a radiologist or a specially trained 'reporting radiographer'.

Reporting and Referrer Evaluation

A small number of studies are considered suitable for 'referrer evaluation' and the opinion documented will be that of the referrer, with an option to ask for the film to be reviewed and reported by a radiologist. In these cases there would be no formal report issued by a radiologist. Examples of x-rays that are considered suitable for referrer evaluation at UHMB include x-rays of the teeth reviewed by a dentist and follow up x-rays of healing fractures in adults reviewed by an orthopaedic surgeon.

The reason for reporter evaluation is to make best use of reporting capacity and also because the referrer is sometimes in a better position to judge whether the findings are acceptable, for instance when an x-ray relates to previous surgery and the surgeon is the best judge of whether any implanted hardware is where they intended it to be.

Referrer evaluation is standard practice in NHS hospitals, although its scope varies. There are many centres, for example, which apply this to all in-patient x-rays but the policy at UHMB is considerably less extensive. The potential for increasing the scope of referrer evaluation to provide greater reporting capacity for other studies has been considered through the Trust's Governance procedures but our preferred option has been to try to maximise the reporting capacity available to us. We believe the scope of referrer evaluation within the Trust to be reasonable and safe and there is a standard operating procedure to guide reporters on the Trust's working practices relating to image reporting.

Some Trusts do not report images where a patient has died between the acquisition and the reporting of the image but having sought advice on this from the Medical Protection Society, UHMB continues to do so.

Working arrangements and Prioritisation

Within UHMB the Picture Archiving and Communication (PACS) system is shared across five sites and as far as possible the departments prioritise on the basis of urgency rather than geography.

Work is divided into emergency cover, 'duty radiologist' sessions and multi-disciplinary team meeting (MDT) support, with the remaining clinical time as reporting time. This is subdivided into different modalities (plain x-rays, CT, MRI, etc.) with the split depending on the reporters' area of expertise and the volume of work.

Information about the number of studies waiting and the date of the oldest studies in each modality are sent to every reporter twice a week. Within each session the default position is to start with the studies marked clinically urgent and then chronologically with the oldest study and work towards the present, but reporters are expected to exercise their clinical judgement as to exactly which studies to report. Not all reporters can report the same range of studies and no one person can report every kind of study.

The waiting images are actively managed by a radiographic manager who will also send work to outsourcing companies as required.

Without additional reporting capacity prioritisation remains important. There are no national guidelines on this and although consideration has been given to constructing a flow diagram to assist with this, the complexity of what is ultimately a clinical decision based on a number of factors across a range of modalities does not lend itself to such simplification.

Urgency of imaging

Some studies are more urgent than others. Sometimes this is apparent from the moment of referral, for instance a patient brought into the Emergency Department in extremis. At other times, however, it is not apparent that there are critically important findings that might immediately change the patient's treatment until after the image has been reported.

When it appears that a study is urgent then it is prioritised accordingly using the professional judgement of those in the x-ray department. However, clinical risk occurs if prioritising urgent cases causes delays in reporting of routine requests, as significant findings are also discovered in this group of patients. Balancing this is a further challenge.

Key Performance Indicators

Key Performance Indicators are measured via data extraction from the Computerised Radiology Information System (CRIS) and a performance dashboard is populated.

Reporting backlog is monitored daily

- Waiting list tracking and activity measures are reported weekly
- Regular job plan review and productivity monitoring is in place for all radiologists
- Capacity and demand work is regularly undertaken

Workforce

The Dalton Review reported that the UK has around 48 trained radiologists per million population. This figure has remained static for the last five years and represents half the total in other EU countries. The paper considers different ways of working in terms of outsourcing, skill mix and the use of technology to overcome the challenge and UHMB has already implemented some of these ideas. In the UK, no appointment was made to 41% of unfilled consultant posts advertised and the North West showed a higher vacancy rate than other regions. This reflects the experience in UHMB where there are currently 5 vacancies, based on workload calculations from 2011, since which time CT and MR have both doubled in volume and increased in complexity.

Clearly recruitment is central to developing further capacity and the Trust has made progress and appointed three radiologists in the past 12 months with ongoing recruitment efforts, including international recruitment.

Further actions relating to recruitment and skill mix include:

- Rolling programme of in-house training for CT/MR radiographers
- Radiographer training plans have been identified to future proof services, with funding opportunities for training identified
- Additional programmed activities and payment are on offer to substantive consultants to report additional work beyond their normal employed hours

- Support for undergraduate radiographer training from the University of Cumbria and elective placements from other universities to attract new recruits
- Maximisation of advanced practitioner skills
- 8 honorary contracts with external radiologists who provide ad hoc support
- Trust associate specialist posts available
- Rotas for 7 day and extended day services agreed for radiographers in CT/MR and sonographers in Ultrasound.
- Locum radiologists employed when suitable and available
- Advice and guidance introduced to enable GPs to have email conversations for advice and access to more complex diagnostics – to avoid unnecessary imaging requests and streamline the patient pathway
- Workforce planning to review skill mix and age profile of staff

Actions relating to technology include:

- Home reporting to be explored with the advent of new PACS from September 2016, which should improve recruitment and retention opportunities
- Voice recognition technology has been rolled out across all radiology staff, streamlining the process and speeding up report turnaround times

Other actions and developments include:

- Continued involvement in the 'Better Care Together' strategy with partner health care providers to develop clear patient pathways, optimising use of imaging services, reducing unnecessary requests and improving patient outcomes
- Optimisation project to ensure relevant diagnostic tests are performed at the right time within specific patient pathways and unnecessary imaging requests are avoided

I hope that you find this information helpful but if you should require any further information, please do not hesitate to contact me.

Yours sincerely,

Jackie Daniel
Chief Executive

cc The Rt Hon Jeremy Hunt MP, Secretary of State for Health, Department of Health