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29 May 2019

VIA E-MAIL: birmingham.coroner@nhs.net

Mrs Emma Brown
Area Coroner for Birmingham and Solihull
Birmingham Coroner's Court
50 Newton Street
Birmingham
B2 5DB

Dear Mrs Brown

Inquest touching the death of Mr Ronald Lowe
Response to Regulation 28 Report to prevent future deaths

I write in response to the Regulation 28 Report made by you following the Inquest into the death of Mr Lowe, which concluded on 2 April 2019.

University Hospitals Birmingham NHS Foundation Trust (the Trust) has carefully considered the concerns raised within your report to prevent future deaths. Before I address the specific concerns you raised, in response to this incident I implemented a review of all out-patient CT Pulmonary Angiogram (CTPA) studies carried out at Good Hope Hospital over the past 12 months (April 2018-2019). I would like to share with you the results of this review.

1. **Review of all out-patient CTPA studies carried out at Good Hope Hospital April 2018-2019.**

   There were 1275 reports on 1267 CTPA's. Of these:

   - 91.6% were reported within 1 hour of completion of the study (17-18 = 89.0%)
   - 97.8% within 3 hours of completion of the study (17-18 = 96.5%)
   - 98.7% within 24 hours of completion of the study (17-18 = 97.6%)

Chair: Rt Hon Jacqui Smith

Chief Executive: Dr David Rosser

Excluding Mr. Lowe's scan, of the remaining 1.3% (16) none were diagnosed with pulmonary embolism (PE).

In 3 of these cases, the scan had been checked by a radiologist prior to the patient leaving the department.

Of the remaining 13, 10 were undertaken for non-PE indications, for example the assessment of chronic pulmonary hypertension. Of the remaining 3, all were assessed as low risk, the investigation being undertaken for undiagnosed chest pain. None of these 3 patients were explicitly referred for the investigation of PE, although this must be considered a differential diagnosis.

Management of the risk associated with these cases (with Mr Lowe 0.3% of all CTPA's) led to a new policy being introduced in December 2018 where all out-patient CTPA examinations are now placed in the in-patient folder to ensure prompt reporting. This policy has been under continual review and there has now been complete alignment with the Queen Elizabeth Hospital in that there will be a review of all out-patient CTPA examinations prior to the patient leaving the department, followed by specialist reporting of the scan by a cardiothoracic radiologist.

This data suggests that this serious incident was consequent upon exceptional circumstances. The responses set out to specifically address these exceptional circumstances.

2. Mr Ahmed and Standard Operating Procedures (SOPs) in relation to CT scan

I recognise that you heard evidence during the Inquest that [redacted] had not seen the standard operating procedures for CT scanning which were applicable in September 2018. Specifically, you made the following points in your letter

i. Investigations have identified that there is no evidence that the radiographer, [redacted], who undertook Mr Lowe's scan on 20 September 2018 had seen the standard operating procedures for CT applicable in September 2018.

ii. It was Mr Ahmed's evidence that he had not seen the SOP's

iii. I am concerned that it has previously gone unnoticed that [redacted] had not signed a copy of the SOPs for CT indicating that there is not a robust system for ensuring radiographers have seem all SOPs relevant to their practice. Consequently there is a risk that radiographers are practicing with an incorrect understanding of their duties and obligations which could endanger life.

A subsequent review of our records has identified that [redacted] had in fact signed a document to confirm that he had read and understood the SOP for CT Radiographers dated February 2015. This is signed and dated 1 April 2015. The form was retained in a central record held by the CT leads. It was not however retained within [redacted] personal training records.

The practice in place at the time was that when a new procedure was launched, a global email was sent to all radiographers attaching the document and asking that staff sign and return a form to the CT lead. This form was reviewed by the CT lead and retained by them in a central folder within the CT department. Where staff did not return their forms, this was followed up by the CT lead with the individual radiographer to ensure that every radiographer is aware of any new procedure/document relevant to their area of practice.

We have unfortunately been unable to locate the global email that was circulated in February 2015 however our records evidence that all our radiographers have seen and signed to confirm that they have seen all SOP's and that they have read and understood them.

I believe that [redacted] failure to recall this fact was due to the length of time that had passed since signing the document and possibly because he may not have a copy of the signed form because this was retained by the CT lead. This may have been compounded by the stress that [redacted] felt at the time of giving evidence, for which we are currently providing him with support.

iv. [redacted] has now had additional training on PE and been provided with updated SOPs which he has signed and has been through his training records with the CT Lead to ensure that he has seen, and it is evidence that he has seen, all applicable SOPs and training.

In December 2018, following this incident, the Lead CT Radiographer for Heartlands, Good Hope and Solihull Hospitals took the following steps with [redacted]

1. Reviewed the incident with [redacted] on 30 October 2018.
2. Reviewed the CT SOP February 2015 and the updated CT SOP from November 2018 with [redacted] on 30th November 2018.
3. Began an update on the CT SOP refreshed version of the CT training document in early December 2018.
4. Established a plan to further continue to review training with [redacted] on his return to include a CPD session on pulmonary emboli.
5. Distributed a learning document for CT staff by email.

I can confirm that [redacted] understands the importance of allocating imaging studies to the appropriate folder so that they are visible to a radiologist for formal reporting. He understands the significance of the diagnosis of pulmonary embolism and complying with measures to ensure prompt reporting of all out-patient CT pulmonary angiograms where acute pulmonary embolism is suspected. Since the incident, the process to ensure this is achieved has been revised to reduce the chance of errors of execution. It requires simply that all CTPA's are placed within a single 'in-patient' folder for expedited reporting.

There is no evidence that the lapse which resulted in the failure of allocation of the CTPA into a reporting folder was part of a pattern of behaviour by Mr Ahmed.

3. **Evidence of Dr Forde**

5. The evidence of [redacted] Consultant Radiologist at QEH who conducted the RCA, was that all radiographers have now been provided with and required to sign the updated CT SOPs but there has been no audit or review of radiographers files to check that other aspects of their training are documented and up to date.

6. It was the evidence of [redacted] that the radiographers are managed differently at QEH to those at GHH therefore the report is directed at the training records of radiographers at the former Heart of England NHS Foundation Trust hospitals, being Good Hope, Birmingham Heartlands and Solihull Hospital.

The Imaging Practice and Education Lead for Good Hope Hospital (GHH) Birmingham Heartlands Hospital (BHH) and Solihull Hospital (SH) has met with her equivalent at the Queen Elizabeth Hospital in order to align practice.

Importantly, the Queen Elizabeth Hospital recently underwent a significant change which established a central register of competencies and documentation, rather than relying on annual appraisal documentation and local departmental records. This was established as part of a quality improvement programme that culminated in ISAS accreditation for the radiology department (one of only 33 sites in the UK). A medium-term goal of the organisation is full integration of service delivery creating a single multisite department with unified documentation and to achieve ISAS accreditation across all locations.

In the interim, a central register of staff has been composed for GHH, BHH and SH. This will be overseen in a manner that is modality specific e.g. CT, MRI, ultrasound rather than location and modality specific. This register will be a record of all the training required and undertaken by radiographers across these locations. The register will allow for continual monitoring and audit of the training provided to the whole radiographer workforce. It will provide additional assurance that radiographers have received all necessary training and have been exposed to all the information required in their role.

A review of personal files has provided initial evidence of training to populate the register. Ongoing review of SOPs and subsequent sign off by staff will then be added to the central register.

All our staff receive an annual appraisal and as part of this process staff training will be reviewed against the register and staff will be asked to complete a 'self-declaration' of fitness to practice. This process will include equipment training, any rules to the specific area, Ionising Radiation Medical Exposure Regulation (IRMER) Procedures as well as any appropriate SOPs. The senior radiography education lead has produced a template of the expected radiographer competencies and this will be used in conjunction with individual appraisals going forward.

Finally, I would like to assure you that the concerns raised within the Regulation 28 Report have been taken extremely seriously which I hope is demonstrated by the steps we have already taken and those we will continue to take going forward.

Yours sincerely

Dr David Rosser
Chief Executive