NHS
Health Education England

# Imperial College Healthcare NHS Trust

## Clinical Radiology

### Risk-based review (on-site visit)

## Quality Review report

**31 October 2018**

**Final**

Developing people for health and healthcare

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# Quality Review details

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| **Background to review** | Health Education England planned the risk-based review (on-site visit) based on worsening results in the General Medical Council National Training Survey (GMC NTS) from 2017 to 2018. In 2018 the results for clinical radiology returned four red outliers for clinical supervision, clinical supervision out of hours, workload and supportive environment and two pink outliers for induction and feedback. |
| **Training programme / learner group reviewed** | Clinical radiology, including interventional radiology and nuclear medicine. |
| **Number of learners and educators from each training programme** | The review team met with 16 trainees at specialty training levels one to three (ST1-3) and 21 trainees at ST4-6, as well as three neuroradiology fellows. The review team also met with clinical and educational supervisors from a range of sub-specialties within the department and Trust representatives including:<br>• Clinical Director<br>• Associate Medical Director<br>• Director of Medical Education for Women's and Children's Services and Clinical Support<br>• Divisional Director for Operations<br>• Head of Operations<br>• Service Manager<br>• Guardian of Safe Working Hours<br>• Educational Leads<br>• Business Manager. |
| **Review summary and outcomes** | The review team identified several areas of good practice, including the significant improvements in clinical supervision resulting from increased consultant presence, the range of learning opportunities available to trainees, the comprehensive teaching programme, the introduction of the neuroradiology fellow rota and the collegiate culture of the department.<br>One immediate mandatory requirement was issued. The Trust was required to establish a formal arrangement for consultants to review trainees' reports at weekends. At the time of the review, no such arrangement was in place and weekend general radiology reports were not routinely reviewed and signed off until the following Monday morning. The review team found that this presented a risk to patient safety.<br>Some other areas for improvement were noted:<br>• The trainees expressed concern that the radiology department was not always consulted when Trust guidelines and standard operating procedures were developed<br>• There was a lack of clarity around the roles of the responsibilities of the neuroradiology fellows when working with junior trainees<br>• The service demands of the renal team on the clinical radiology team were not covered by a written protocol and had not been agreed between the teams |

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| | • It was reported that the renal team put undue pressure on clinical radiology trainees and used inappropriate language and behaviour when interacting with the trainees. |

| Quality Review Team | | | |
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| **HEE Review Lead** | Jane Young<br>Head of School of Radiology, London | **External Clinician** | James Pilcher<br>Consultant Radiologist<br>St George's University Hospitals NHS Foundation Trust |
| **Deputy Postgraduate Dean** | Orla Lacey<br>Deputy Postgraduate Dean for North West London | **Lay Member** | Jane Chapman<br>Lay Representative |
| **HEE Representative** | Louise Brooker<br>Learning Environment Quality Coordinator<br>Quality, Patient Safety & Commissioning Team<br>Health Education England (London and Kent, Surrey and Sussex) | **Observer** | Paul Smollen<br>Deputy Head of Quality, Patient Safety and Commissioning<br>Health Education England (London and Kent, Surrey and Sussex) |
| **Observer** | Bindiya Dhanak<br>Learning Environment Quality Coordinator<br>Quality, Patient Safety & Commissioning Team<br>Health Education England (London and Kent, Surrey and Sussex) | | |

## Educational overview and progress since last visit – summary of Trust presentation

The Trust acknowledged the challenges raised by the General Medical Council National Training Survey (GMC NTS) results and outlined the actions taken to address these. It was reported that some of these measures had commenced prior to the release of the GMC NTS results and formed part of long-term plans for improvement.

The review team heard that there were 58 trainees in the department and 89 consultant posts, over half of which included training responsibilities. In the 18 months prior to the review 19 new consultant posts had been funded and 14 of these had been filled. There were three training programme directors (TPDs) and two deputy TPDs for clinical radiology. The trainees worked across the three Trust sites; St Mary's Hospital, Hammersmith Hospital and Charing Cross Hospital. The Trust was a regional referral centre for a number of specialist services including major trauma, hyperacute stroke, interventional radiology, neuroradiology and renal transplant. The department paediatric radiology service had been consultant-run but was now delivered by trainees under supervision with enhanced training. The breadth of service provision allowed trainees exposure to the full range of sub-specialties.

The department offered a comprehensive teaching programme, covering both general radiology and sub-specialty teaching. It was reported that delivery of teaching to all trainees was a challenge due to the size of the Trust and physical distance between sites, so the department had invested in technological solutions to allow

trainees to remotely view teaching sessions at other sites. There were also small group teaching sessions at each site and online training resources available.

The Trust was part of a pilot scheme to allow remote access to imaging and reports between hospitals in the north west London area. This was due to begin in February 2019 and work was ongoing to review the implications for training and for patient flow.

In response to the concerns raised by the GMC NTS regarding workload out of hours, the department had introduced an on-call rota for an additional neuroradiology 'fellow' to cover acute neuroradiology reporting, during weekday evenings and daytime at weekends. New guidelines for some specific urgent indications had been introduced which did not require prior radiology registrar approval, which had reduced the number of calls made to trainees on-call. The department had reviewed consultants' job plans and introduced a 'hot' consultant rota to cover acute work in hours. One consultant was assigned to supervise acute CT at each of the three Trust sites on weekdays and acted as the first point of contact for trainees to discuss cases. The department had updated the session cancellation policy so that trainees were not expected to cover consultant lists when consultants were on leave.

A business case had been made for increased consultant cover for reviewing out of hours work at weekends, which the department planned to implement from February 2019. The review lead enquired about the current arrangements for trainee supervision out of hours and was informed that there was no on-call consultant rota for general radiology. The neuroradiology consultant job plans included weekend working so consultants could check trainees' reports within 24 hours. The interventional radiology consultants covered any requested reviews of general cross-sectional work, as well as covering IR, but this was not formalised. Some interventional radiology consultants came in to check trainees' reports at weekends, but this was by choice and not part of their job plans. Consultants were able to access the picture archiving and communications system (PACS) from home so they could respond to trainee queries without needing to attend the hospital.

The review team was informed that the department had a backlog of approximately 3000 examinations, which was equivalent to a day and a half of work hours. In practice, the consultants advised that non-urgent outpatient scans could wait up to three weeks to be reported. The department did not outsource any work but insourced approximately 25% of plain films to maintain turnaround of emergency department imaging. The review lead noted that the Care Quality Commission (CQC) had found that the service was not responsive, which suggested a larger backlog. The Clinical Director (CD) advised that improvements had been made since the CQC inspection and that this report was based on radiotherapy as well as imaging, which had impacted negatively on the result.

The GMC NTS results for St Mary's Hospital appeared worse than those for the other Trust sites. The Education Lead suggested that considering the results by site was not truly representative of the situation as the trainees and consultants worked across all three sites, so their answers were not necessarily site specific. It was acknowledged that supervision had been more of a challenge at St Mary's Hospital before the new consultant rotas were implemented, so the data probably reflected this.

The review lead asked whether the Trust had a robust plan for replacing radiology equipment. The CD reported that over the past two years the Trust had procured three new magnetic resonance imaging (MRI) scanners and replaced eight pieces of interventional radiology equipment. There were plans to submit a business case in 2019 to establish a Trust partnership with a vendor in order to secure an ongoing arrangement for the supply of equipment.

# Findings

## 1. Learning environment and culture

**HEE Quality Standards**

**1.1 The culture is caring, compassionate and provides safe and effective care for patients, service users, carers and citizens and provides a supportive learning environment for learners and educators.**

**1.2 The learning environment and organisational culture value and support education and training so that learners are able to demonstrate what is expected in order to achieve the learning outcomes required by their curriculum or required professional standards.**

**1.3 The learning environment provides opportunity to develop innovative practice, engage in research activity and promotes skills and behaviours that support such engagement.**

**1.4 The learning environment delivers care that is clinically or therapeutically effective, safe and responsive, and provides a positive experience for patients and service users.**

**1.5 The learning environment provides suitable facilities and infrastructure, including access to quality assured library and knowledge services.**

**1.6 The learning environment and culture reflect the ethos of patient empowerment, promoting wellbeing and independence, prevention and support for people to manage their own health.**

| Ref | Findings | Action required? Requirement Reference Number |
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| CR1.1 | **Patient safety**<br>The review team heard that there was no formal arrangement for consultants to check trainees' general radiology reports at weekends. Trainees were able to contact the on-call consultant to seek advice or escalate concerns, but otherwise reports were not checked until the following Monday morning. Some of the interventional radiology (IR) consultants reviewed trainees' reports during weekends on a voluntary basis but this was not regular.<br>The trainees reported that this was a patient safety issue as cases were not escalated to the consultant on-call unless the trainee identified a reason to do so. If the trainee made an error or missed a significant feature on a scan on a Friday night, this was not identified until Monday morning when work was reviewed by the consultant on the 'hot' reporting rota. Both the trainees and the supervisors felt this was a greater risk for trainees working out of hours at specialty training levels one to three (ST 1-3), who were more likely to be unaware of the gaps in their knowledge. The review team was informed that all scans from the weekend were checked by midday each Monday.<br>The department had audited the discrepancy rates between trainee and consultant reports and found that there was a 10% rate of minor discrepancies and a 1.2% rate of major discrepancies. The review team heard that these rates were below average.<br>The trainees reported that scans were usually reviewed by consultants in a timely way. The reporting software allowed trainees to see when the scans they reported on were checked by a consultant, so if there was a delay, the trainee could raise this with the consultant on the 'hot' rota for that day. | Yes, please see CR1.1 |
| CR1.2 | **Appropriate level of clinical supervision**<br>The trainees reported that it was Trust policy during on-call shifts to escalate to a consultant if four trauma scans were referred within one hour. The consultants were able to review scans online from home and would come in to the hospital when required. The trainees advised that the consultants encouraged them to call if they had questions or felt overwhelmed. None of the trainees reported receiving criticism for calling a consultant for help or advice. The department did not monitor calls to consultants so did not have a record of how often they were called or the reasons for calls. | |

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| | The review team heard that the trainees were confident of the process for escalating concerns. If there was no consultant covering the acute work at one of the hospital sites during the day, trainees were made aware of which consultants were working at the other sites and how to contact them.<br><br>The trainees advised that levels of direct supervision had improved since the introduction of the 'hot' consultant rota for acute cross section and reduction in consultant rota gaps. However, the clinical supervisors (CSs) and educational supervisors (ESs) noted that this impacted on the time available for consultants' specialty work. | |
| CR1.3 | **Responsibilities for patient care appropriate for stage of education and training**<br><br>The review team was informed that ST1 trainees had specific teaching and tests to prepare them for working on-call, as well as a significant period of shadowing prior to working independently out of hours. Part of the teaching included how to prioritise tasks and assess which cases were more urgent. Trainees were given guidelines for escalation and encouraged to contact the on-call consultant if they needed to.<br><br>Trainees were involved in specialist cases when working out of hours, for example discussions of requested interventional radiology work, but were not expected to be involved with the procedures. In these cases, trainees advised that they would gather information and to discuss if an out of hours procedure was justified.<br><br>After completing the Fellow of the Royal College of Radiologists exams, trainees were able to sign off their own acute general reports but were not expected to do so if they wanted a review. | |
| CR1.4 | **Rotas**<br><br>In addition to the on-call consultant, trainees had support from their counterparts at the other hospital sites when working out of hours. The Trust had also introduced a neuroradiology fellow on-call rota, with cover until 23:00 on weekdays and 17:00 on weekends which included reporting urgent spine magnetic resonance imaging (MRIs). The trainees advised that there were some gaps in this rota, but that when there was a fellow on-call this had a significant positive impact on the trainees' workloads. This particularly applied for trainees at ST1-3 who found the MRI reports more difficult and time consuming which put pressure on the other general work. The ST1-3 trainees felt that there was variable engagement with them from the fellow and it would help to have some clarification over their role. The trainees were keen to use it as a learning experience whenever possible, but not all fellows felt this was appropriate.<br><br>It was reported that trainees' workloads were often high but not usually unmanageable and that trainees did not need to work excessive hours. The department had received no exception reports from trainees in the two years prior to the review. | Yes, please see CR1.4 |
| CR1.5 | **Induction**<br><br>Trainees at all levels reported that they had received inductions at the beginning of their rotations. | |
| CR1.6 | **Work undertaken should provide learning opportunities, feedback on performance, and appropriate breadth of clinical experience**<br><br>Trainees at ST4-6 had the opportunity to work in management roles, such as shadowing clinical and divisional leads and assisting with local projects, typically | |

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| | relating to the trainees' sub-specialty interests. Trainees could also be involved in developing protocols and referral pathways.<br><br>The review team heard that multi-disciplinary team meetings were consultant-led and that trainees had the opportunity to present but were never expected to cover for consultants at short notice or present outside their sub-specialty.<br><br>Both the supervisors and trainees highlighted the number and variety of training opportunities available at the Trust. | |
| CR1.7 | **Protected time for learning and organised educational sessions**<br><br>The department had developed a comprehensive teaching programme including sessions at all three Trust sites. Trainees based at the other sites were able to remotely access the teaching sessions via WebEx. However, the trainees and supervisors reported that the sound quality was poor when remotely viewing teaching sessions. The department planned to start using Skype instead and was working to address the technical issues. The trainees felt that the published teaching programme was aspirational and not always achieved, but noted that there had been significant improvements over the past six months and reported that the consultants were enthusiastic about teaching. Sub-specialty teaching for ST5-6 trainees was particularly well regarded. Teaching sessions took place at the beginning of the day shift within the trainees' contracted hours.<br><br>Teaching of non-clinical skills such as communication was not formalised at a local level. Trainees were able to attend pan-London communication and leadership training. The ESs and CSs advised that they aimed to help trainees develop these skills through role-modelling in practice. | |

## 2. Educational governance and leadership

**HEE Quality Standards**

**2.1 The educational governance arrangements continuously improve the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability, and responding when standards are not being met.**

**2.2 The educational, clinical and corporate governance arrangements are integrated, allowing organisations to address concerns about patient and service user safety, standards of care, and the standard of education and training.**

**2.3 The educational governance arrangements ensure that education and training is fair and is based on principles of equality and diversity.**

**2.4 The educational leadership ensures that the learning environment supports the development of a workforce that is flexible and adaptable and is receptive to research and innovation.**

**2.5 The educational governance processes embrace a multi-professional approach, supported through appropriate multi-professional educational leadership.**

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| CR2.1 | **Effective, transparent and clearly understood educational governance systems and processes**<br><br>The supervisors advised that the local faculty group met four times per year. The meeting location rotated between the three Trust sites to encourage attendance. Following the meetings, minutes were distributed by email. | |
| CR2.2 | **Impact of service design on learners** | |

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| | The trainees reported that some other Trusts outsourced their out of hours work so trainees in equivalent posts to theirs did not work night shifts. However, the trainees felt that while working night shifts impacted on their daytime experience, it was very educational.<br><br>All of the trainees reported that there were usually sufficient computers and the picture archiving and communications system (PACS) workstations. Consultants had remote access to PACS to allow them to review scans from home when on-call. A remote access reporting tool was being piloted but the Trust did not have a formal technical support package for this. The trainees advised that this could lead to delays in bringing the system back online in the event of a malfunction. The Trust also had a web-based system for reviewing scans which acted as a backup if PACS was not working.<br><br>The ESs and CSs discussed the need to monitor increasing service demands and plan around these. It was reported that the number of consultants in the department was sufficient to meet the current workload, but that some sub-specialties were expanding more rapidly than others and so were more vulnerable to becoming understaffed in future. The interventional radiology consultants worked one night in five on-call and the department aimed to change this to one in seven by 2021.<br><br>The trainees expressed concern that the department did not always have input when standard operating procedures and guidelines were developed by other imaging specialities in the Trust. Trainees felt that some guidelines were not realistic or did not consider the needs or capacity of the clinical radiology service. | Yes, please see CR2.2 |
| CR2.3 | **Appropriate system for raising concerns about education and training within the organisation**<br><br>The department held training meetings every three months which were attended by trainee representatives who gave feedback on trainees' experiences and any concerns. The trainees reported that they were in frequent contact with the Training Programme Directors (TPDs) and felt comfortable approaching them to raise issues or ask questions. The trainees felt satisfied that their feedback was taken seriously by the Trust and resulted in positive changes. | |
| CR2.4 | **Organisation to ensure access to a named educational supervisor**<br><br>Trainees at all levels reported that they had educational supervisors and were able to access supervision. | |
| **3. Supporting and empowering learners** | | |
| **HEE Quality Standards**<br><br>**3.1 Learners receive educational and pastoral support to be able to demonstrate what is expected in their curriculum or professional standards and to achieve the learning outcomes required.**<br><br>**3.2 Learners are encouraged to be practitioners who are collaborative in their approach and who will work in partnership with patients and service users in order to deliver effective patient and service user-centred care.** | | |
| CR3.1 | **Behaviour that undermines professional confidence, performance or self-esteem**<br><br>All of the trainees reported that there was a supportive culture in the department and that the supervisors actively sought trainee feedback. No trainees reported bullying or undermining behaviour within the department. | |

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| | The trainees described tensions between the clinical radiology and renal transplant services which had led to trainees being poorly treated by renal consultants and the renal transplant team. The trainees felt that this was partly caused by a lack of robust guidelines around the requirements for post-operative ultrasound scans in renal transplant cases and the expectations of an extremely short response time when these scans were requested. The clinical radiology team was not informed in advance when renal transplant cases were occurring, so it was not possible to plan in advance for the trainee on-call to attend. The trainees advised that from 17:00 to 20:00 one trainee provided cover for both Hammersmith and Charing Cross Hospitals and might have to travel between sites to attend a renal transplant case. The review team heard that when trainees were delayed in attending these cases or when they questioned the clinical necessity or urgency of the scans, they had been shouted at or accused of avoiding work by members of the renal transplant team.<br><br>When asked about possible solutions to these issues, the trainees suggested that the department could review other Trust's policies around renal transplant and scans. The trainees felt that these scans were performed more often than was necessary and that the Trust should set guidelines stating which cases required a scan and reasonable timeframes for referral and response. It was also suggested that if the renal team alerted the on-call trainee prior to the transplant procedure, this would allow time to plan other work and travel between sites, reducing delays and stress for both teams.<br><br>The review lead enquired whether there were tensions between the interventional radiology and vascular surgery teams. The trainees advised that these teams worked together often with a high volume of endovascular work done at the Trust and that there was a good working relationship between the teams. | Yes, please see CR3.1a<br><br>Yes, please see CR3.1b |
| CR3.2 | **Regular, constructive and meaningful feedback**<br><br>If errors or discrepancies were noted by consultants when reviewing trainees' work, the consultants advised that they gave initial feedback by sending feedback through the PACS. Trainees saw the comments when they next logged into the system. The consultants reported that they usually offered to discuss errors in person as well, to help the trainees learn from mistakes. Serious discrepancies were discussed at the discrepancy meeting and Datix reports were submitted where appropriate. The review team heard that very few of these cases constituted serious incidents. The department held a meeting three or four times per year where discrepancies were discussed and teaching was planned to cover any identified gaps in learning. | |

## 4. Supporting and empowering educators

**HEE Quality Standards**

**4.1 Appropriately qualified educators are recruited, developed and appraised to reflect their education, training and scholarship responsibilities.**

**4.2 Educators receive the support, resources and time to meet their education, training and research responsibilities.**

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| CR4.1 | **Access to appropriately funded professional development, training and an appraisal for educators**<br><br>The ESs reported that they had all completed their supervision training. | |
| CR4.2 | **Sufficient time in educators' job plans to meet educational responsibilities** | |

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| | The ESs and CSs advised that there was time allocated in their job plans for supervision and that their workloads allowed sufficient time to work with trainees and perform their supervision roles. | |

## 5. Developing and implementing curricula and assessments

**HEE Quality Standards**

**5.1 Curricula assessments and programmes are developed and implemented so that learners are enabled to achieve the learning outcomes required for course completion.**

**5.2 Curricula assessments and programmes are implemented so that all learners are enabled to demonstrate what is expected to meet the learning outcomes required by their curriculum or required professional standards.**

**5.3 Curricula, assessments and programme content are responsive to changes in treatments, technologies and care delivery models and are reflective of strategic transformation plans across health and care systems.**

**5.4 Providers proactively engage with patients, service users, carers, citizens and learners to shape curricula, assessments and course content to support an ethos of patient partnership within the learning environment.**

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| | **N/A** | |

## 6. Developing a sustainable workforce

**HEE Quality Standards**

**6.1 Recruitment processes to healthcare programmes fully comply with national regulatory and HEE standards.**

**6.2 Learner retention rates are monitored, reasons for withdrawal by learners are well understood and actions are taken to mitigate attrition of future learners.**

**6.3 Progression of learners is measured from commencement to completion for all healthcare learning programmes.**

**6.4 First destination employment is recorded and retention within first year of employment monitored, including the recording of reasons for leaving during the first year of employment.**

**6.5 Transition from a healthcare education programme to employment is underpinned by a clear process of support developed and delivered in partnership with the learner.**

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| | **N/A** | |

# Good Practice and Requirements

| Good Practice |
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| HEE commended the Trust for engaging fully with the review team and for the large number of trainees and consultants who attended. |
| The department offered a good range of learning opportunities for trainees, including a range of subspecialty experience and exposure to research. |

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| Trainees commended the level of consultant support available during on-call shifts and all felt comfortable escalating concerns and asking questions. The review team noted an excellent collegiate culture. |
| Both trainees and consultants felt that the introduction of the consultant 'hot' rota for acute CT across all three Trust sites had improved supervision. |
| There had been significant improvements to teaching and consultant supervision in the six months prior to the review. |
| The review team noted the positive impact that the introduction of the neuroradiology fellow out of hours had on trainee workloads. HEE will continue to monitor this as seven-day cover is implemented. |

| Immediate Mandatory Requirements | | | |
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| **Req. Ref No.** | **Requirement** | **Required Actions / Evidence** | **GMC Req. No.** |
| CR1.1 | Arrangements should be put in place for a consultant to formally review trainees' out of hours work within 24 hours, including at weekends. | Please provide evidence of a weekend consultant rota showing which consultant is responsible for reviewing trainees' work. | R1.12 |

| Mandatory Requirements | | | |
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| **Req. Ref No.** | **Requirement** | **Required Actions / Evidence** | **GMC Req. No.** |
| CR2.2 | The Trust should ensure that the department is represented when Trust guidelines and standard operating procedures are developed by services which require the cooperation of the clinical radiology service. | Please escalate this issue to the committee responsible for guideline development. Please provide written confirmation from the committee that representatives from the clinical radiology department will be consulted in future when relevant guidelines are written or reviewed. | R2.3 |
| CR3.1a | The Trust should conduct a review of the service demands from the renal transplant team and produce a series of agreed protocols for renal scans including appropriate notification, timing, location and urgency. | Please provide a copy of these protocols by 31 January 2019. | R2.3 |
| CR3.1b | The Trust should address the inappropriate treatment of clinical radiology trainees by the renal team. | Please provide evidence that this issue has been communicated to the renal team and that the team has been made aware that this treatment is not acceptable. Please also provide trainee feedback around their interactions with the renal team, this could include copies of the next LFG or trainee meeting minutes. | R3.3 |

| Recommendations | | | |
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| **Rec. Ref No.** | **Recommendation** | **Recommended Actions** | **GMC Req. No.** |
| CR1.4 | Please clarify the responsibilities of the neuroradiology fellow out of hours including | Please communicate the role of the neuroradiology fellow out of hours to the general radiology trainees. | R1.10 |

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| | how they engage with the general radiology trainees OOH. | | |

| Other Actions (including actions to be taken by Health Education England) | |
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| **Requirement** | **Responsibility** |
| None | |

| Signed | |
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| **By the HEE Review Lead on behalf of the Quality Review Team:** | Jane Young |
| **Date:** | 3 December 2018 |

**What happens next?**

We will add any requirements or recommendations generated during this review to your LEP master action plan. These actions will be monitored via our usual action planning process. An initial response will be due within two weeks of receipt of this summary report.