

National Review of Radiology Academies

Summary report



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Introduction

Health Education England conducted the first formal evaluation of the Radiology Academy training model in 2017. The purpose of the review was to consider the academic performance, service impact and cost-effectiveness of the three Radiology Academies established jointly by the Royal College of Radiologists and, what was then, the Department of Health in 2005. The review was undertaken to establish if the original radiology Academy training model remained 'fit for purpose' and to inform Health Education England future decisions concerning, and investment in, Clinical Radiology training infrastructure.

Given the explicit multi-professional approach Health Education England takes to managing the quality of education and training for all healthcare learners, consideration was given in the review, to accessibility of Radiology Academy training infrastructure to wider multi-professional imaging and clinical teams.

The review generated a fair and balanced assessment and its findings were well received by stakeholders. This summary is being made available to a wider audience to share the main findings of the review. We hope it will be useful to the health professional community and will provide a springboard to develop support for education and training across the wider multi-professional healthcare workforce.

The findings should be of interest to local workforce planning and commissioning bodies and NHS provider Trusts considering development of further education and training academies to help ensure they are cost-effective and support development of the multi-professional clinical workforce at local, regional and national level.

This review, and the activity that follows from the recommendations, should ensure that imaging professionals and their patients continue to benefit from Health Education England investment in high quality training resources and educational infrastructure.

Patrick Mitchell,
Regional Director, HEE South
Chair, National Review of Radiology Academies

Review team members:

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Aims of the review

To:

- Compare the three academy-based radiology training programmes (Leeds & West Yorkshire, Norwich and Peninsula) with three traditional hospital based programmes from the same Health Education England regions (Sheffield; Cambridge; Severn).
- Audit training programme facilities and capacity, including how the current academies are using technology enhanced learning and utilising opportunities for multi-professional learning.
- Review process & outcome data for trainees exiting programmes 2010 to 2016:
 - audit training programme content & delivery;
 - audit trainee outcomes;
 - review trainee satisfaction;
 - review the impact of any multi-professional learning activities.
- Compare where possible, recruitment & retention, impact on local vacancies, local trainee retention after CCT (Certificate of Completion of Training).
- Compare relative costs of each scheme and proposed investment plans.
- Collect evidence of any 'added value' or 'return on investment', e.g. use of facilities and shared learning with other professional groups; 'conflict of interest', e.g. learning 'capacity restriction' - down time or income generation from clinical service provision.
- Make recommendations to inform Health Education England future support and investment decisions about radiology training academies.

Summary of findings

The review findings are grounded in, but also limited to, data supplied by local training scheme stakeholders, publicly available data and data provided on request from central Health Education England and Royal College of Radiologists sources from April - July 2017.

Training capacity

One of the original aims of the Radiology Academy model was to accommodate increases in local Clinical Radiology training numbers – the academy model was considered to have been successful in this respect as Clinical Radiology trainee numbers had increased between two and five-fold in the respective training schemes and regional geographies since the academies were established.

Training delivery and outcomes

Academy training was highly structured with the protected environment of a non-clinical (offsite) location offering trainees a calm and undisturbed educational space better suited to learning than a busy clinical radiology department. Academies used more simulation based teaching for active and experiential learning and more formal assessment opportunities than the three exclusively hospital based training schemes reviewed for comparison. This appeared to accelerate development and demonstration of early (year 1) core competencies and helped academy based trainees transition from full supervision to working independently more confidently and sooner than their contemporaries in traditional schemes.

The Radiology Academies had been producing trainees fit to practise as consultant radiologists since 2010. The academic outcomes (College Fellowship examination pass rates) of academy trainees were aligned closely to national average success rates. The review team acknowledged that direct comparisons of such data between training schemes was confounded by, and not limited to, the effects of individual trainees who move locations, or into and out of training, and on the baseline ability (ranking) of trainees on entry into training.

Across the six training schemes reviewed trainee satisfaction overall was high. Academy trainees appeared better satisfied with their training environment and experience (GMC survey scores) than the trainees in the adjacent hospital based training schemes reviewed for comparison.

Multi-professional education and training

The review team noted that non-medical imaging professionals (experienced senior sonographers and reporting radiographers) had established a valuable role in Clinical Radiology teaching at two of the academies and received excellent trainee feedback.

The Radiology Academies offered resources and the opportunity to report alongside radiology trainees and their supervising consultant radiologists, to reporting radiographers. Where these opportunities had been taken up, the expertise, scope of practice and volume of work undertaken by reporting radiographers had increased. The review team considered that increased inter-professional teaching and learning across the medical and non-medical imaging

workforce would better reflect current and evolving models of service provision and the Health Education England multi-professional strategy.

Cost of training

In addition to standard educational tariff (approx. £12,000 per trainee per annum) each academy trainee required, on average, additional 'premium' funding of £13,300 per annum. This covered additional estates, equipment and administration costs and secured more direct consultant teaching and supervision, for trainees based in academies. The relative contributions of standard educational tariff and 'premium' academy funding to the overall cost of Clinical Radiology training varied between the three academies and were not always clear.

The academy estate and teaching resources appeared to have spare capacity and thus the review team considered that return on academy investment might be improved. Areas that would benefit from closer financial scrutiny included allocation of educational tariff and academy funding against Clinical Radiology training costs, feasibility of increasing the number and type of trainees that academies support, (partial) recovery of costs of service provision and / or non-educational activities undertaken on academy premises.

Conclusions of the review

Clinical Radiology continues to face workforce challenges as the range and volume of service demand on the specialty increases. The review demonstrated the benefits of Radiology Academies - expanding local Clinical Radiology training numbers, boosting training in more rural areas, increasing output overall in terms of Clinical Radiology consultant numbers and offering a high standard of training alongside the more widespread traditional hospital-based training schemes.

Radiology Academies provided high quality training and enhanced trainee learning experience by offering greater access to protected learning spaces, educational resources, including more technology enhanced and simulation based learning, and direct consultant supervision. Structured and supervised simulation activity, alongside more formal assessment opportunities than traditional hospital-based schemes, enabled academy based trainees to develop core competence earlier than they would be able to do in real life clinical practice. Accelerated learning helped academy based trainees progress to independent practice more confidently and sooner than their contemporaries in traditional schemes.

An efficient and adequately resourced administrative infrastructure was essential for managing academy teaching estate and resources and large numbers of trainees at multiple clinical placement sites across a large geographical footprint. In academy and traditional training schemes, the Single Lead Employer model provided trainees with administrative stability and continuity throughout their training and reduced the administrative burden on trainees and smaller District General Hospital placement sites.

Training in Radiology Academies was more expensive, on average more than twice the cost of training in traditional hospital-based training schemes. Financial attribution and reporting of academy and tariff funded activity and re-charging for non-training activity, was inconsistent across the three academies. There is scope to increase utilisation of existing Radiology Academy estate and resources and to recover some costs to improve return on Health Education England investment.

Overhead costs could be recovered by making spare building, resource and staff capacity available to other groups for educational activity, income might be generated by cross-charging for activity such as clinical meetings and service provision sessions held on academy premises, and by using and cross charging for combined learning and service provision activities such as networked reporting or reduction in outsourced activity.

Existing education and training in Radiology Academies does not reflect current and evolving models of imaging service provision. Return on Health Education England investment could be improved further by expanding access to academies to support education and training across the wider healthcare workforce (post-graduate reporting radiographer and sonography education) and to better support required increases in sonographer and reporting radiographer training and placement capacity.

The review does not support the creation of additional stand-alone Radiology Academies as configured currently. Continued investment needs to build on the success of the model to date, but requires further work with Health Education England National programmes and Local Offices, in conjunction with the professional imaging community, to extend the training and development benefits provided by academies across the wider multi-professional imaging workforce, and to deliver better value for money.

Recommendations arising from the review

The review team proposed the following recommendations to support continued provision of high quality training to increased numbers of Clinical Radiology trainees, to minimise financial risk to Health Education England and to promote safe and sustainable medical / non-medical skills mix in future imaging service provision:

Health Education England should:

- support Radiology Academies to continue to provide high quality education and training for Clinical Radiology trainees by continuing to invest in the estate and resource infrastructure of the three existing academies;
- support Clinical Radiology training schemes to maximise trainee numbers and training capacity using the resources of the existing three Radiology Academies to support national, as well as local, demand for increased training; working closely with Trusts and commissioning bodies (CCG, STP, CA), where feasible across traditional and geographic organisational boundaries, with consideration of the Single Lead Employer model to support training and practice across multiple Trusts;
- clarify the financial expectations and work closely with academies and their host Trusts to improve financial record keeping and reporting processes; to include establishing the true cost of radiology training, clarifying, standardising and agreeing the relative contributions of educational tariff and academy premium funding, identifying where overhead / running costs might be reduced or recovered and developing cost-effective proposals for continued investment;
- maximise its return on Radiology Academy investment by supporting the existing three academies to expand their scope of activity to encompass support for education and training across the multi-professional workforce that contributes to clinical imaging service provision, e.g. developing formal relationships with Higher Education Institutions, and other education providers to facilitate cross-professional teaching and learning, increase clinical placement capacity and expand training, supervision and life-long learning opportunities for non-medical imaging professionals, e.g. sonographers, midwives, reporting radiographers.

In addition, the review team recommended that Health Education England should:

- share good organisational practices identified in the Radiology Academies to better support Training Programme Directors and trainees working more closely with them and their Trusts to improve the educational experience of hospital-based trainees by identifying tariff funded operational support (educational and operational support roles, e.g. clinical supervision and administration, recognised in job plans) & securing improved access to Clinical Radiology specific educational resources and protected learning spaces (simulation equipment, Picture Archiving & Communications System workstation access, radiographer / sonographer / radiologist supervision);

- share good educational practice identified in the review regionally and nationally – e.g. simulation, formal roles for sonographers and (reporting) radiographers in the training, supervision and assessment of CR trainees; pre on call assessment of competence, OSIRIX & cloud based digital image libraries;
- encourage academies to develop support for training a wider range of stakeholders in clinical imaging, e.g. to raise awareness and understanding that could improve referral and access to imaging (demand management);
- support the development and implementation of additional regional and national clinical imaging academies / academy-style learning environments / academy-style arrangements, working with Trusts, Higher Education Institutions, local workforce planning and commissioning bodies (e.g. CCG, STP, CA) and the national radiology and radiography professional bodies to ensure these are cost-effective, multi-professional and support regional and national clinical imaging workforce development plans;
- encourages local / regional / national networked reporting / on call services to offer academy-style learning environments and supervised clinical training placements for Clinical Radiology trainees and reporting radiographers.

Next steps

Higher Education England Executive Team approved the National Review of Radiology Academies report and recommendations on 3rd October 2017.

A Review Implementation Steering Group established in in December 2017 oversaw development of academy Business Plans for 2018-19.

The Steering Group reported to Health Education England Executive Team in April 2018 recommending:

- continued funding for the three existing Radiology Academies in 2018–19;
- oversight of the Leeds and West Yorkshire academy be devolved to the HEE Local Office;
- continued oversight of Norwich and Peninsula academies during 2018-2019 by HEE Regional Directors to support development of stronger cost-effective plans for continued investment in 2019-20 and beyond;
- alignment of academies' multi-professional educational activity with HEE National Cancer & Diagnostics Programmes.

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