

NHS England 10 year plan - AoMRC call for collective royal college input

Academy of Medical Royal Colleges (AoMRC) statement summary

AoMRC believes that NHS England's 10 year strategy should focus on:

- More prevention
- Better clinical outcomes
- Reduction in inappropriate care/variation
- Integration of services

AoMRC believes organisational and service priorities should be:

- Integration of services with development of primary and community based services and better social care funding
- Review of payment structures to incentivise change

NHS England clinical priorities have provisionally been identified as:

- Cancer
- Mental Health
- Children's services
- Cardiovascular disease
- Health inequalities

Colleges are invited to contribute to the Academy response in two specific ways:

1) *Clinical Targets/Standards*

Colleges are asked to consider what might be the appropriate clinical targets to help meet the clinical and service/organisational objectives.

At Council there was a general feeling that the term "Target" was unhelpful and we should be thinking about what the minimum clinical standards should be used for different clinical areas. Members are asked to indicate if this is an approach they would support? If so, would you be in a position to define what those standards should be now or in the future? If minimum acceptable clinical standards were agreed how does the system incentivise above minimal or stretching standards?

Colleges are asked to submit their suggestions either in relation to their specialty or possibly working across a group of Colleges across a clinical pathway.

2) *Doing it differently – better, more effective and more efficient*

Colleges are asked to submit a list of detailed examples of how equality of access and outcomes could be improved for patients by doing things better, more effectively and more efficiently both in specialty specific issues and in broad based themes i.e. applicable across all specialties or a range of specialties.

Royal College of Radiologists' response

Before following the AoMRC input brief for the 10 year plan, the RCR would like to underline the importance of adequate staffing levels across the NHS.

Workforce first

NHS staff is fundamental to the delivery of Health and Social care. When there are not enough fully trained consultants, nurses, or allied health professionals, the NHS will be rife with inefficiencies and poorer outcomes for patients. For any strategy to be achievable, sustainable, and effective, there must be an immediate focus on ensuring that the work force is in place.

With cancer being a named priority for the Long Term Plan, innovative and desirable initiatives for early diagnosis and more effective treatment will be difficult to implement unless the supporting workforce is in place. Measures to ensure that there are appropriate numbers of clinical radiologists and clinical oncologists must be implemented as a matter of urgency.

Application, analysis and interpretation of medical imaging are integral components of most clinical pathways. The vast majority of hospital episodes will include patient imaging of some kind. Sophisticated scanning technologies play an ever increasing part in patient management, especially in cancer care. Radiologists justify and interpret these examinations, evaluate current imaging, compare with any previous episodes, decipher the clinical presentation, and review relevant biochemical indicators before making a probability based assessment guided by experience. Reporting is rarely binary and requires medical knowledge and a balancing of clinical probabilities to offer conclusions that are valuable to a treating doctor. The current pressures and future improvements in NHS cancer, stroke and emergency care pathways make a clear case for an increase in the number of radiologists required to support diagnostic imaging.

However, over the last few years, the demand for imaging far outweighs the supply of clinical radiologists. Many more radiologists are expected to retire soon, and there are not enough doctors in training to cover the shortfall, currently estimated in the region of 1,000 WTEs ([Clinical Radiology Workforce Census 2017](#)), the radiology workforce is at crisis point.

Unfortunately, there is a similar situation within the clinical oncology workforce. The prevalence of cancer is increasing, with 1 in 2 people in the UK being diagnosed in their lifetime. The care of these patients is becoming more complex due to new technology developments and increasing comorbidities of patients with cancer as we help them live longer. The oncology workforce as a whole needs urgent recruitment and training to cope with this global change in cancer care. The [Clinical Oncology Workforce Census 2017](#) has shown that, if we continue as we are, there will be a 250 WTE consultant shortfall by 2022.

The focus on earlier cancer diagnosis will only exacerbate demand and increase waiting time pressures. Both the clinical radiology and clinical oncology services have insufficient capacity to meet current demand, so funding training places is paramount.

Before any other strategic commitment, NHS England must collaborate with Health Education England, NHS Employers and the Department of Health to address workforce issues across the NHS, giving support for additional funded training numbers and the retention of staff the appropriate credence. Everything else is academic.

With these underpinning workforce issues in mind, our response to the Academy brief is below.

Firstly, the RCR are happy with the term “minimum clinical standards’ over “targets”. Although it is effectively only semantics, it should naturally promote a less pressured mind set.

From imaging, to cancer care, to interventional radiology (IR) services, to delivering cutting edge radiotherapy techniques for paediatrics, RCR specialties straddle all of NHS England’s stated priorities in some way. As a result, there are myriad possible areas involving RCR specialties where minimum clinical standards could be applied for maximum patient benefit. Recommended areas include: rapid access to imaging tests with a clinical opinion (radiology reporting) and appropriate onward referral; access to urgent IR services and all nonsurgical cancer therapies including radiotherapy; mechanical thrombectomy for stroke; providing radioisotope studies for early diagnosis of dementia/exclusion of Alzheimer’s; whole body MR; and cardiac CT services.

For general standards of excellence, the [Imaging Services Accreditation Scheme](#) (ISAS) is a patient-focused assessment and accreditation programme designed to help diagnostic imaging services ensure their patients receive high quality services that are consistent, and are delivered by competent staff working in safe environments. ISAS could be used as a “from the box” quality management system for all imaging departments in England. In addition, the NHS Improvement National Imaging Optimization Delivery Board, with RCR input, is working on minimum reporting turnaround standards for numerous imaging pathways.

Using AoMRC’s four stated areas of focus, the RCR suggest the following be prioritised in the NHSE 10 Year Plan:

Prevention/early diagnosis

The RCR recommend focussing on stratified cancer screening programmes that are population based with equity of access across the country. Screening programmes have well established targets and Key Performance Indicators (KPIs) with Quality Assurance programmes to ensure delivery.

The clinical areas and emerging techniques recommended for prioritisation are:

- Demographic screening for lung cancer – AI to identify high risk populations and to identify which nodules require follow up, biopsy or ablation using interventional oncology (IO) techniques, (see page 4)
- Breast screening using genomics to support stratification of high, moderate and population risk screening. AI support for screen reading. Image guided biopsies & vacuum excision reduce the requirement for open surgical biopsy/treatment for indeterminate lesions
- Bowel cancer screening – AI support for radiologists reading CT Colonography and genomics incorporated to stratify risk and chance of recurrence. NHS England need to continue enabling the smooth transition to the new faecal immunochemical test (FIT), effectively replacing the guaiac faecal occult blood test (gFOBt). NHS England should drive pick up rates of this screening test for this to be effective
- Rolling out mpMRI for prostate cancer screening with same day biopsy, discharge or follow up. This could allow patients to be rapidly reassured and discharged or receive targeted biopsy, decreasing the morbidity of the test and increasing the accuracy.

Better Clinical Outcomes

A huge step towards improved patient outcomes would be investment in more rapid access diagnostic services. A model similar to the [clinic being run at Guys and St Thomas hospital](#) could be replicated across England, particularly in areas of greatest unmet need. Reducing delays, this service allows direct referral to imaging with appropriate onward referral pathways or return to primary care. Rapid access to appropriate imaging and verified reports to support emergency and urgent care can more easily facilitate appropriate treatment/discharge, reducing in-patient burdens, improving patient experience and outcomes.

To support and streamline diagnostic pathways, we recommend roll out of [i-refer](#) subscriptions to facilitate appropriate referrals for appropriate tests. The package includes guidance on the use of best practice in evidence-based imaging – for example, whole body MRI for myeloma, fluorodeoxyglucose (FDG)-positron emission tomography (PET) CT scans, and amyloid tracers.

Ready access to image-guided interventions could have a major impact on clinical outcomes. Interventional radiology (IR) uses imaging to guide the clinician in specific surgical procedures safely. Minimally invasive, often life-saving with shorter recovery times, procedures already benefiting from IR techniques include: mechanical thrombectomy for acute stroke; acute haemorrhage; and certain oncology procedures. Indeed, facilitation of image guided biopsy vs open biopsy for the vast majority of patients, including paediatric cases, has the potential to improve recovery time (saving bed space) and increase cost-savings across the NHS.

Additionally, interventional oncology (IO) is a subspecialty of interventional radiology harnessed for diagnosis and treatment of cancer. Using targeted, minimally invasive procedures performed under image guidance, it employs X-ray, ultrasound, CT or MRI to help guide miniaturized instruments (e.g. biopsy needles, ablation electrodes, intravascular catheters) to allow precise treatment of solid tumours.

The number of interventional radiologists available to treat cancer patients and other acute conditions is currently inadequate to deliver a timely, lifesaving and cost effective service. Increasing the numbers of these should be a priority. Additionally, as cancer is to be a pillar of the 10 year plan, we would urge that RCRs radiotherapy guidelines are implemented. As an example, the [Radiotherapy target volume definition and peer review – RCR guidance](#) will be an essential tool for achieving better clinical outcomes as radiotherapy services expand.

Reduction in inappropriate care/variation

We recommend that there are appropriate staffing and equipment levels across all geographies to provide rapid access to imaging, rapid report/intervention turnaround, and radiotherapy services. To support this, we need fully funded networks that provide support for specialty areas such as paediatrics, cardiac, radionuclide radiology, IR and interventional neuroradiology, as well as for radiology out of hours cover and reporting backlogs. We would urge that NHS England continue involving the RCR as a stakeholder in radiotherapy service provision, working toward equity of access to advanced radiotherapy techniques across the UK and underpinned by fully networked IT solutions.

The [Getting It Right First Time](#) programme, delivered in partnership with NHS Improvement, is dedicated to identifying, and striving to eradicate, unwarranted variation in care. The methodology is clinician led and based on replication of best practice. The Radiology workstream is in progress and resultant suggested improvements should be supported into practice.

The work streams include many surgical, medical and clinical service specialities, with a series of cross-cutting streams that include litigation and coding practices for Payment by Results (PbR). We urge the continuation of this programme, collaboration between workstreams where appropriate (e.g. vascular surgery and interventional radiology) and that NHS England incorporate the recommendations into the 10 year plan.

Integration of services

A person's care can often be provided by several different health and social care professionals, across more than one provider. As a result, people can experience services that are fragmented, and sometimes problematic to access. Underpinning all integration needs to be full IT connectivity across primary, community and secondary care. This will foster the flow of patient data for continuity of care and encourage synergy and better communication among different providers. Radiology networks should be nurtured as a priority, as they will reduce variation in the delivery of imaging reporting, support delivery of expert second opinions and better enable early diagnosis.

For cancer services, we recommend fully-funded and networked Cancer Alliances, which are fully integrated with all other health care providers. The current situation where STPs, Cancer Alliances and Vanguard are not coterminous in terms of population or commissioning encourages a piecemeal approach to complex services covering many financial boundaries. The likelihood of complex cancer services falling through the commissioning "cracks" is facilitated by this approach. Full integration between commissioning groups over large populations should be an essential requirement for those shaping delivery of complex services. We fully support the adoption of the skills mix principles set out in the Cancer Research UK document [Full Team Ahead](#) recognising that achieving this is reliant on a sustainable workforce pipeline in all specialities.

The radiotherapy network structure as envisioned in the NHS England service reorganisation could support integration of service delivery, reducing waste and releasing efficiencies, if the IT infrastructure were fully in place. These networks would provide a platform for rapid, supported and safe roll out of new radiotherapy technologies. Ensuring equity of access to advanced radiotherapy technology would improve patient outcomes. The most rapid adoption of new techniques comes within a supportive trials infrastructure. Supporting a national radiotherapy trials infrastructure will not only widen trial participation but it will facilitate adoption of new techniques, improving outcomes and reducing burdensome late radiation side effects.

Effective integration of oncology services with rapid access to those with symptoms can reduce number and duration of emergency admissions in patients undergoing active anticancer treatment. There, ambulatory services need to be supported by commissioning structures and tariff reimbursement.

Closer integration of palliative anticancer therapies and community palliative care will improve patient experience, facilitate more patients dying in their preferred place of care and, possibly, reduce demand for poorly performing end stage active anticancer interventions. Early exposure to palliative care improves quality of life and can prolong it as much as some active anticancer interventions. Supporting those living with cancer not in an oncology treatment setting, for example by referring patients to a "symptom management" clinic, can reduce demand for poorly performing, costly end of life interventions.

Doing it differently – better, more effective and more efficient

Investing in imaging, extra clinical and interventional radiology training places, image guided biopsy and image guided intervention has the potential to:

- Support rapid diagnosis
- Prevent hospital admissions through supporting diagnosis
- Reduce hospital stays
- Improve patient outcomes
- Prevent unnecessary treatment
- Enable image guided intervention vs surgery at lower cost and reduced length of stay
- Triage patients to appropriate pathways
- Referral to imaging as 1st line reduces time to diagnosis
- Additional screening programmes have potential to downstage cancers that then may be treated via interventional oncology/clinical oncology
- Appropriately staffed interventional neuroradiology provision can treat thrombotic stroke with mechanical thrombectomy with potential for full recovery vs lifetime costs of rehabilitation and support
- Appropriately staffed diagnostic radiology departments will reduce the inexorable increase in spending on locums and outsourcing and support systemic efficiencies and individual clinical efficacy.

To be better, more effective and more efficient, the RCR further recommend:

- Investment in **IT infrastructure** to support development of regional radiology networks, provision of radiotherapy, multidisciplinary team meetings (MDTMs) and joined up working
- Urgent investment in enough PACS terminals to accommodate getting the work done
- Commissioning systems that allow for easy implementation of artificial intelligence and machine learning to augment cutting edge radiotherapy techniques and radiology reporting capabilities (e.g. recognising “normal” plain radiographs and thereby prioritising the wordlists to put suspected “normals” at the end; for optimising image acquisition to reduce scanning times and dose; for contouring in radiotherapy; for booking follow up appointments especially after screening)
- In partnership with NHS Digital and Public Health England, NHS England should focus on methods for obtaining the crucial data, circumventing obstacles to patient consent and GDPR issues
- NHS England’s 2018 Annual Plan mentioned plans to re-structure cancer waiting times. We would assert that the blanket 62 day timeframe is sometimes not appropriate. Referral to diagnosis over referral to treatment is applicable for certain cancer types and should be standardised (and this should be determined through consultation with appropriate clinicians)
- The aforementioned iRefer and Clinical Decision Support System from RCR should be funded for every hospital and GP practice to enable appropriate referral and thereby foster efficiency and reduce waste in imaging services, (the backbone of the NHS)
- A review of the PbR system is also urgently needed to allow for the most appropriate treatment to be given to a patient determined solely on medical circumstance, and not by which treatment attracts a higher tariff for the trust. A review of the tariff system will also encourage integration among departments as competition for funding will be removed. As a broad way forward, we would encourage a capitated, whole population budget, with an improvement payment scheme that includes a gain/loss share arrangement
- More established adequately staffed networks to get patients who need urgent IR services to the appropriate centre: this will ensure potentially life saving treatments for all patients with post partum haemorrhage, or other acute/traumatic haemorrhage, mechanical thrombectomy, and better outcomes for cancer patients across the discipline.

Lastly, the RCR urge **additional exposure to diagnostic and interventional radiology at medical school** which will enable future doctors to:

- Request the appropriate test
- Be more confident in providing initial interpretation
- Recognise the value of interventional radiological and interventional neuroradiological procedures as an alternative to surgery in providing non-surgical diagnostic biopsies and treatment options in a wide range of clinical scenarios
- Achieve competences in IR(ME)R, for requesting examinations using ionising radiation, and limited competences in interpretation, e.g. position of NGT or pneumothorax on CXR, which are required for entry into Foundation Training.

Without these competences at qualification, FY1s will require senior sign off for requests and significant support/guidance, eating into valuable consultant time.