

House of Lords Select Committee on Science and Technology

Response to the call for evidence on 'Life Sciences and the Industrial Strategy'

About the Royal College of Physicians (RCP)

1. The RCP plays a leading role in the delivery of high quality patient care by setting standards of medical practice and promoting clinical excellence. We provide physicians in the United Kingdom and overseas with education, training and support throughout their careers. As an independent body representing almost 34,000 fellows and members worldwide, we advise and work with government, the public, patients and other professions to improve health and healthcare. Our primary interest is in building a health system that delivers high quality care for patients.

Summary

- The RCP is delighted to see that the NHS sits at the heart of the life sciences strategy and that the strategy encourages greater collaboration with charities, academia, industry and the NHS.
- Doctors working in the NHS have a wealth of skills and enthusiasm to contribute to progress in medical research but despite 64% of doctors wanting to be more involved in research they face barriers to doing so such as time and funding.
- Protected time is crucially important to allow clinicians in the NHS to contribute and collaborate more in research.
- NHS workforce shortages places significant pressures on the NHS and reduces time available for staff to contribute to research. The RCP has found that 45% of consultant posts that were not appointed to in 2016/17
- The life sciences strategy is a good step towards ensuring that the UK remains a world leader in medical research once the UK leaves the EU but the NHS must ensure that patient care remain at the heart of the Brexit negotiations to ensure that UK patients can continue to access the latest treatments.

Does the research base have the necessary infrastructure to be world leading?

2. The UK is recognised for being successful in research¹. The NHS hugely contributes to this reputation and provides a unique base to UK's research infrastructure. However, there is still work to be done to unlock this potential in the workforce and ensure that NHS staff are research active. In order to achieve this, doctors must be given greater flexibility to begin research at various stages of their career. This can be difficult without formal research experience through an Academic Clinical Fellowship. Additional seed funding is needed to help those of all career stages with an interest in research to have protected time and organisational support to expand their career through research.

3. Support such as protected time and funding is also needed to ensure that those who wish to return to research after a career break are able to do so, particularly increasing the number of schemes such as the [Daphne Jackson Programme](#). There is a risk that even those with experience of conducting research will gradually stop doing so due to other demands. With rota gapsⁱⁱ causing increasing pressure on time, a small amount of funding to protect enough time to write grants or develop projects could make all of the difference. One protected time model that could be used for research is the Royal College of Physicians [Chief Registrar scheme](#), which provides protected time to junior doctors to develop leadership skills in addition to progressing through clinical training programmes.
4. Big data is going to be increasingly important for life sciences. The interoperability of systems and increased use of data in research is a welcome move but as stated in the strategy, this must be in line with guidance from the National Data Guardian and data governance regulation. Improving the use of big data will improve the quality of patient care and is fundamental to new innovative treatments. In order to do this the UK must ensure that it develops the necessary skills to make use of big data within the workforce.

What can be done to ensure the UK has the necessary skills and manpower to build a world class life sciences sector, both within the research base and the NHS?

5. The NHS is core part of the UK's research base, which has been recognised by the life sciences strategy, and should be considered in conjunction with industry, charities and academia. There is the desire in the NHS to build on the success of medical research that already exists in the UK; through protected time and support for skill development, the NHS can achieve more through research than ever before. Patients have better outcomes in research active organisationsⁱⁱⁱ therefore all hospitals should be research active to not only benefit patients but challenge and support doctors in their career.
6. The RCP's report [Research for all: building a research-active medical workforce](#) shows that doctors find research to be an intellectually stimulating and rewarding part of their job. This in turn can help to support and improve team morale. [Research for all](#) surveyed almost 2000 doctors across specialties and career levels, found that 64% of doctors would like to be more involved in research but faced barriers such as time and funding to becoming more engaged; only 8% of respondents were not interested in research at all^{iv}.
7. Around 26% of research hours undertaken by those not formally employed in a research role and frequently in their own time, which can put those who have caring commitments at disadvantage when pursuing their career in research^v. As a result there is an unfulfilled desire and expertise for conducting research within the NHS that can significantly contribute to the development of life sciences in the UK. There must also be increased support for clinicians to develop their research skills throughout their career and ensure that skills are not lost after training.
8. Doctors are ideally placed, through regular patient contact, to contribute to research whilst also being able to advise on what may be realistically translatable to care. However, workforce shortages are a significant risk to research in the NHS, time for research can get pushed out if there are rota gaps that need filling^{vi}. In the 2016/17 RCP census, 45% of consultant posts were not

appointed to and 24% of consultants reported trainee rota gaps occurring frequently or often^{vii}. This puts pressure on the amount of time doctors have available to contribute to research.

9. The RCP in partnership with the NHS R&D Forum has brought together a collection of case studies from across the country on managing research within NHS trusts^{viii}. Case study examples include ensuring that CEOs and senior managers within the NHS understand the important role that research can have in their organisation. Not only does research improve patient outcomes and experience of care but can enhance workforce morale, staff retention and income to trusts through commercial studies where the treatment replaces existing treatments. A report by KPMG found that for commercial studies 'NHS Trusts receive an average of £6,658 in revenue, and a pharmaceutical cost saving of between £4,700 and £5,780 per patient' on a clinical trial^{ix}.

Case studies – Research for all: sharing good practice in research management^x

Further case studies available at <https://www.rcplondon.ac.uk/projects/outputs/research-all-sharing-good-practice-research-management>

The [AUKUH paper](#) Allocation of programmed activities for research in NHS trusts, endorsed by AUKUH chief executives, sets out helpful guidance on how trusts may manage protected time for research.

Guy's and St Thomas' distributes the CRN and research capability funding to clinical directorates based on the national formula, incentivising those that recruit and bring in research funds. These are used for research PAs, nurses, technicians and data managers to promote research. Guy's and St Thomas' also funds PhD studentships in experimental medicine with Biomedical Research Centre funding.

Solent NHS Trust has invested in an internship programme to allow all healthcare and medical professionals to either learn about research or dedicate time to grant applications. The aim is to grow PIs within community and mental health trusts who can contribute to a much-needed evidence base around out-of-hospital care. The trust has funded 15 interns between 2014 and 2016 and, to date, 10 have gone on to win their own research grants or fellowships.

(If published) does the strategy contain the right recommendations? What should it contain/ what is missing?

10. The RCP welcomes the strategy, in particular the recognition of how important the NHS is to medical research in the UK. Greater collaboration between the NHS, academia, charities and industry will enhance translation from the lab to patients and enable the sharing of skills to bring new treatments to patients faster than ever before.
11. The need to invest in and support the development of research skills is essential to the strategy however support for non-academic clinicians working in the NHS to develop their research skills must be an essential part of this as well. Increased participation by the NHS in research will require the time to do so effectively and the support to get into research at any stage of a career in medicine. We recommend that Medical Royal Colleges and other stakeholders with expertise in this area should be given the opportunity to contribute to a skills gap analysis if this takes place.

12. The RCP agrees that the NHS workforce should be equipped with the skills to make use of big data. The public must also be provided with more information on big data to ensure that the benefits of big data can be balanced with individual confidentiality.
13. The RCP agrees with the importance placed on the MHRA and the need to have a fast, effective and safe regulatory environment post Brexit, which nonetheless can work in harmony with Europe to facilitate collaboration and pan-European research. The strategy is timely in light of the UK's exit from the European Union to ensure that the UK remains a world leader in medical research.

How do the devolved administrations and city regions fit into the strategy?

14. The vision for life sciences must work for the whole of the UK and the infrastructure should support strategies across devolved administrations and city regions to be cohesive and complementary. The UK will increasingly need to increase collaboration and cohesiveness not only between academia, industry and the NHS but across the UK and internationally. The [Life Science Research Network](#) Wales will provide an opportunity to build up capacity and capability within Wales for life sciences following the '[Science for Wales](#)' strategy in 2012.

How can collaboration between researchers and the NHS be improved, particularly in light of increased fiscal pressures in the NHS?

15. Collaboration across the research team within the NHS, industry and academia is vital, as each person brings expertise to the table and enhances progress in research. It is important to recognise the important contribution of each member of the team, whether it is support from R&D departments, patient involvement, research nurse support or an academic conducting basic science. Recognition between academics and clinicians in the NHS for the valuable contribution that each can make is important as each have the same goal; to bring better care and experience of care to patients. Protected time for clinical staff means more research time for collaboration with industry and academia, thereby benefitting the life sciences sector. Collaboration needs to be considered team wide and at an institutional level, from research nurses to research managers, patients, academics and principle investigators.

[Case study: Research for all: sharing good practice in research management](#)^{xi}

The Avon Primary Care Research Collaborative (APCRC), working across three CCGs and building partnerships with a wide range of other organisations, including public health teams, the West of England Academic Health Science Network (AHSN), the Collaboration for Leadership in Applied Health Research and Care (CLAHRC) West and Bristol Health Partners, as well as two universities, is a thriving example of how R&D departments can work across organisations and how nurturing talent and encouraging interest will build momentum and relationships, and boost morale. The R&D team, working on behalf of Bristol, North Somerset and South Gloucestershire CCGs, offers an R&D service that supports research, evaluation and the use of evidence, all under the umbrella of knowledge mobilisation between the disparate worlds of the NHS and academia.

What impact will Brexit have on the Life Sciences sector? Will the strategy help the sector to mitigate the risks and take advantage of the opportunities of Brexit?

16. The UK benefits from access to EU wide funding such as Horizon 2020 and the Innovative Medicines Initiative 2 (IMI2). Between 2014/15 the UK received £120m for clinical medicine alone through Horizon 2020 and the estimated budget for IMI2 is €3.3bn until 2024^{xii}. This provides valuable support for medical research and it is vital that the UK is able to continue to participate in these programmes.
17. Collaboration opportunities through the data sharing, safety reporting and clinical trials enable the advancement of knowledge that is sometimes not possible at a national level, particularly for rare diseases that require large populations. Collaboration and harmonisation should continue once the UK has left the EU which will be hugely beneficial for the life sciences sector. With around 16% of researchers in the UK coming from the EU^{xiii}, it is important for the future of life sciences that researchers from across the world continue to be welcome in the UK.

To what extent should the UK remain involved with and contribute to agencies such as the EMA post Brexit?

18. The UK provides significant expertise to the EMA and in turn benefits from the expertise of others across Europe to ensure a safe regulatory environment for patients. The MHRA should continue to provide advice and act as a leader globally; working collaboratively with the EMA wherever possible to ensure that the UK is an attractive place to invest and that there isn't a delay for patients accessing new treatments. The UK would require a substantial amount of additional capacity and expertise should there be a complete divide with Europe in terms of regulation and safety monitoring^{xiv}.

ⁱ *The impact of collaboration: the value of UK medical research to EU science and health*, Technopolis, 2017
http://www.cancerresearchuk.org/sites/default/files/uk_and_eu_research_exec_summary_v9.pdf

ⁱⁱ 2016-17 RCP Census of Consultant Physicians and Higher Specialty Trainees in the UK, 2017

<https://www.rcplondon.ac.uk/projects/outputs/2016-17-census-uk-consultants-and-higher-specialty-trainees>

ⁱⁱⁱ Downing A, Morris EJ, Corrigan N, *et al*

High hospital research participation and improved colorectal cancer survival outcomes: a population-based study, Gut 2017;66:89-96.

^{iv} *Research for all: building a research active medical workforce*, Royal College of Physicians, 2016

<https://www.rcplondon.ac.uk/projects/outputs/research-all>

^v *Research for all: building a research active medical workforce*, Royal College of Physicians, 2016

^{vi} *Underfunded, underdoctored, overstretched: The NHS in 2016*

<https://www.rcplondon.ac.uk/guidelines-policy/underfunded-underdoctored-overstretched-nhs-2016>

^{vii} 2016-17 RCP Census of Consultant Physicians and Higher Specialty Trainees in the UK, 2017

<https://www.rcplondon.ac.uk/projects/outputs/2016-17-census-uk-consultants-and-higher-specialty-trainees>

^{viii} *Research for all: sharing good practice in research management*, Royal College of Physicians, NHS Research and Development Forum, 2017

<https://www.rcplondon.ac.uk/projects/outputs/research-all-sharing-good-practice-research-management>

^{ix} KPMG, *NIHR Clinical Research Network: Impact and Value Assessment, 2016, p30*

https://www.nihr.ac.uk/life-sciences-industry/documents/NIHR%20CRN%20Impact%20and%20Value%20FINAL%20REPORT_vSTC_160908_FOR%20EXTERNAL%20USE.pdf

^x *Research for all: sharing good practice in research management*, Royal College of Physicians, NHS Research and Development Forum, 2017

^{xi} *Research for all: sharing good practice in research management*, Royal College of Physicians, NHS Research and Development Forum, 2017

^{xii} Technopolis, *The role of EU funding in UK research and innovation*, 2017

<https://acmedsci.ac.uk/file-download/70343877>

^{xiii} Royal Society, Snapshot of the UK research workforce, 2015/16

<https://royalsociety.org/topics-policy/projects/uk-research-and-european-union/role-of-eu-researcher-collaboration-and-mobility/snapshot-of-the-UK-research-workforce/>

^{xiv} ABPI letter to Mr Michel Barnier and Rt. Hon. David Davis, 13 July 2017

http://www.abpi.org.uk/media-centre/Documents/BARNIER_DAVIS_Joint_Association_Pharma_Letter_12_July_2017.pdf