Academy of Medical Sciences submission to the 2024 Spring Budget

January 2024

The Academy of Medical Sciences is the independent, expert voice of biomedical and health research in the UK. Our Fellowship comprises the most influential scientists in the UK and worldwide, drawn from the NHS, academia, industry, and the public service. Our mission is to improve the health of people everywhere by creating an open and progressive research sector. We do this by working with patients and the public to influence policy and biomedical practice, strengthening UK biomedical and health research, supporting the next generation of researchers through funding and career development opportunities, and working with partners globally.

Key points

Government should:

- Set a target to lead the G7 on research and development (R&D) investment and be among the top science nations globally.
- Reverse the real terms decline in quality-related (QR) funding to ensure the UK university sector can sustainably drive advances in research.
- Partner with charities to improve the financial sustainability of research.
- Incentivise private investment with internationally competitive R&D tax incentives.
- Maintain a strong and proportionate regulatory and governance environment for clinical research including through sufficient resourcing for the Medicines and Healthcare products Regulatory Agency (MHRA) and other relevant bodies.
- Commit to ongoing increased investment for the National Institute for Health and Care Research (NIHR) in line with other parts of the R&D budget. This should be reflected by increased funding for research taking place in the NHS in all four nations.
- Fund an NHS research pilot where a proportion of NHS healthcare workers are offered a contract that includes dedicated time for research. Income generated through research activity in NHS and public health organisations should be ring-fenced and reinvested in research, including backfilling time dedicated to research.
- Ensure the UK is attractive and accessible for international researchers including through a competitive visa and immigration system.
- Ringfence any remaining Horizon Europe underspend for R&D.

A strong UK medical sciences sector is vital for a healthier population and improved public services, both long-term and in crises. UK health research is a key driver of economic growth, whether underpinning the response to the COVID-19 pandemic or directly stimulating the country's economy through new jobs, investments, and long-term health benefits. **Every £1 invested in medical research delivers a return equivalent to around 25p every year, forever.**[1]

This financial year, we have strongly welcomed the UK's association to Horizon Europe and Government's increasing investment in, and emphasis on, UK R&D.

However, crucial steps must be taken to maintain the UK's position as a health research leader, including future-proofing UK health research through internationally competitive and sustainable funding models; supporting UK life science sector competitiveness; unlocking the power of research in the NHS and opening doors for international collaboration and talent.

[1] Wellcome Trust (2017), National Institute for Health Research, Academy of Medical Sciences, Medical Research Council, Arthritis UK Medical research: What's it worth?

Here we suggest steps government can take to address these so UK R&D continues to drive growth and deliver health benefits for patients and the public.

1. Future-proofing UK health research

UK R&D investment is not internationally competitive. The UK spends less on R&D than many G7 and other competitor countries, including China, Germany, Israel, Japan, and the United States. This means the UK risks losing a historic competitive advantage and decreasing attractiveness for investment and talent.[2]

- **Government should set a target to lead the G7 on R&D investment and be among the top science nations globally**

The current funding model for UK health research is unsustainable. It fails to cover the full cost of health research and relies on cross-subsidy, mainly from international student fees. Research in universities continues to show a substantial deficit, with the deficit increasing to £4,482 million for 2021-22 after a lower deficit of £3,828 million in 2020-21.[3]

- **Government should increase investment in the underpinnings of health research including through:**
  - **reversing the real terms decline in QR funding to ensure the UK university sector can sustainably drive advances in research.**
  - **partnering with charities to improve the financial sustainability of research.**

2. Supporting UK life science sector competitiveness

The UK life sciences sector is a major driver of employment and growth, employing over 304,200 people and generating a turnover of £108.1 billion in 2021/2022.[4] However, inward foreign direct investment in UK life sciences fell by 47% between 2021 and 2022.[5]

- **Government should incentivise private investment with internationally competitive R&D tax incentives.**

- **Government should maintain a strong and proportionate regulatory and governance environment for clinical research including through sufficient resourcing for the MHRA and other relevant bodies.**

3. Unlocking the power of research in the NHS

Research in the NHS is vital to improving healthcare – the NHS, including its rich health datasets, is an enviable clinical research hub for improving patient outcomes and performance. For example, the NHS-delivered RECOVERY trial identified dexamethasone as a COVID-19 treatment which saved one million lives worldwide in the nine months following its discovery.

Benefits of clinical research include:

- Research-active hospitals have better patient outcomes and lower mortality rates.[6] [7] [8]
- Giving time for research to interested NHS staff enhances recruitment and retention, and reduces burnout.[9] [10] [11] [12]
- In 2016/17 to 2018/19, NIHR Clinical Research Network supported clinical research activity that generated £8 billion in GVA.[13]

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[2] Cambridge Industrial Innovation Policy (2022). The UK Innovation Report 2022. https://www.ciip.group.cam.ac.uk/uk-innovation-report-2022/

[3] Office for Students (2023). Annual TRAC 2021-22. https://www.officeforstudents.org.uk/media/38ff3e23-b29b-4b43-a9e1-8f58fc0fb492/annual-trac-2021-22-sector-summary-and-analysis.pdf

[4] Department for Science, Innovation & Technology, Department of Health and Social Care (2024). Bioscience and health technology sector statistics 2021 to 2022. https://www.gov.uk/government/statistics/bioscience-and-health-technology-sector-statistics-2021-to-2022/bioscience-and-health-technology-sector-statistics-2021-to-2022

[5] Department for Science, Innovation & Technology, Department of Health and Social Care (2023). Life sciences competitiveness indicators 2023. https://www.gov.uk/government/publications/life-sciences-sector-data-2023/life-sciences-competitiveness-indicators-2023#section-1-research-environment

[6] Ozdemir BA, et al. (2015). Research Activity and the Association with Mortality. PLoS One 10, e0118253

[7] Boaz A, et al. (2015). Does the engagement of clinicians and organisations in research improve healthcare performance: a three-stage review. BMJ Open 5, e009415.

[8] McManus RJ, et al. (2008). How representative of primary care are research active practices? Cross-sectional survey. Family Practice 25, 56–62.

[9] Lambert TW, et al. (2015). Making clinical academic careers more attractive: views from questionnaire surveys of senior UK doctors. JRSM Open. 6(8): 2054270415602644.

[10] Dale J, et al. (2015). Retaining the general practitioner workforce in England: what matters to GPs? A cross-sectional study. BMC Family Practice. 16:140

[11] Community Research (2018). Adapting, Coping, Compromising research. https://www.gmc-uk.org/-/media/documents/adapting-coping-compromising-research-report-79702793.pdf

[12] Shanafelt TD, et al. (2009). Career Fit and Burnout Among Academic Faculty. Archives of Internal Medicine. 169(10), 990–995

[13] National Institute for Health and Care Research (2019). New report highlights how NIHR support for clinical research benefits the UK economy and NHS. https://www.nihr.ac.uk/news/new-report-highlights-how-nihr-support-for-clinical-research-benefits-the-uk-economy-and-nhs/22489

Despite this, NHS pressures, a failure to value the contribution of research, slow adoption of innovation and unfulfilled potential of patient data as a research resource are stalling clinical research and healthcare innovation.

- **Government should commit to ongoing increased investment for the National Institute for Health and Care Research (NIHR) in line with other parts of the R&D budget. This should be reflected by increased funding for research taking place in the NHS in all four nations.**

- **Government should fund an NHS research pilot where a proportion of NHS healthcare workers are offered a contract that includes dedicated time for research. Income generated through research activity in NHS and public health organisations should be ring-fenced and reinvested in research, including backfilling time dedicated to research.**

4. Opening doors for international collaboration and talent

UK R&D needs both domestic and international talent. Government estimates 150,000 more researchers are needed to sustain the UK's research targets, and the public strongly supports international researchers coming to work in the UK.[14] [15]

We are concerned about Government plans to introduce higher salary thresholds for skilled worker visas and other restrictions impacting the pipeline of global talent entering the UK for work and study.

The UK's visa costs are among the most expensive of any leading scientific nation and are due to rise – this is blocking talented international researchers from UK careers. The proposed increase in fees means that the Global Talent Visa (GTV) will have an upfront applicant cost of £5,891. Currently, a researcher with a partner and two children applying for a GTV incurs £13,400 in upfront visa and immigration costs, which is set to rise to £21,000.

- **Government must ensure the UK is attractive and accessible to international researchers including through a competitive visa and immigration system.**

We strongly welcome the UK's association to the European research programmes, Horizon Europe and Copernicus. This will be vital for the UK's ability to take part in global scientific collaboration, which will bring benefits for people and the economy alike. To build on this success, it is important unspent money which was allocated to Horizon association should be invested in R&D.

- **Government should ringfence any remaining Horizon Europe underspend for R&D.**

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[14] Department for Business, Energy & Industrial Strategy (2021). R&D People and Culture Strategy. https://www.gov.uk/government/publications/research-and-development-rd-people-and-culture-strategy

[15] Campaign for Science and Engineering (2023). Public Attitudes to R&D. https://www.sciencecampaign.org.uk/what-we-do/public-opinion/public-attitudes-to-r-d/