

Academy of Medical Sciences submission to the 2023 Spring Budget – February 2023

The UK medical sciences sector is a key driver of growth, productivity, resilience and security amidst a challenging economic environment, 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

We therefore welcomed Government's ongoing commitment to boosting public R&D spending to £20 billion a year by 2024/25 in the Autumn Statement.

However, many factors must be addressed to maintain the UK's position as a health research leader, including: ongoing NHS pressures that limit vital clinical research; delays to Horizon Europe association; ensuring that research excellence is supported across the whole of the UK, and creating a tax environment that supports innovation. Here we suggest immediate steps Government can take to address these so UK R&D continues to drive growth and deliver health benefits for patients and the public.

R&D Investment targets and Horizon Europe

Topic: Policy to support business growth and investment

Topic: Education, skills and supporting employment

The Academy supports Government's commitment to raising public investment in UK R&D and welcomes plans to ensure that long-term investment targets as a percentage of GDP are internationally competitive and consistent with science superpower ambitions. This will help attract and retain top talent, foster research and innovation throughout public services, universities and businesses, and support the sector to continue fuelling jobs and productivity.

Government should maintain its R&D investment targets and pursue them with urgency as a way to fuel economic and social development and improve the nation's health.

International collaboration is core to scientific success. The Academy strongly supports UK association to Horizon Europe and Government's efforts to pursue this.

We welcome existing commitments to guarantee in-flight applications until 31 March as well as the £484 million package announced in November 2022. In this Budget, we highlight that:

- The Government must ensure that funding set aside for association until 2025 must only be used for this purpose, or for UK R&D domestic alternatives in the event of continued delays to association or non-association.
- Funds set aside for association in the 2023/24 financial year should continue to be available to support the UK R&D system whilst ensuring the UK is able to meet legal commitments to association. This should be through:
 - Extending the Horizon Europe Guarantee beyond March 2023 to provide certainty for research activity.
 - A flexible approach to enacting elements of the transitional and long-term package announced in July 2022, releasing funds when necessary to support the sector during association delays.

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

To ensure patients, the public and the economy benefit as much and as quickly as possible from UK R&D activity and international collaboration, it is crucial Government reiterates its commitment to covering the costs of association as well as providing the stability for UK research in the event of ongoing delay or failure to associate.

Global science collaboration

Topics: International Affairs

We welcome Government's ambition to return to a target of spending 0.7% of Gross National Income (GNI) on ODA Official Development Assistance (ODA). Failure to do so and ongoing reduction of the ODA budget from 0.7% to 0.5% of GDP, risks compromising the UK's ability to lead efforts to tackle global challenges and build capacity in research talent.²

As Government has set out, using ODA to increase UK partnerships in R&D is a powerful tool, from promoting trade and investment, to alleviating humanitarian crises and building the UK's reputation as a trusted partner.³ This investment and resulting partnerships would also help tackle Government priorities including climate change and international health security, and is an opportunity to enhance the UK's global influence by honouring international research partnerships, demonstrating the UK's credibility and trustworthiness on the international stage.

Government must announce how and when there will be a return to the previous ODA investment targets. ODA must be used to fund R&D to improve global scientific discovery and global health.

Supporting research in the NHS and investment in NIHR

Topic: Public services (including the NHS, schools and education, police)

Topic: Supporting local areas, devolution and levelling up

Clinical research is a cornerstone for health and wealth. The UK has a major competitive advantage in this field, with the NHS uniquely placed to be a hub for groundbreaking research to improve patient outcomes and NHS performance. Challenges in trial recruitment and NHS capacity are therefore a major concern, for example, patient access to industry research via the National Institute for Health and Care Research Clinical Research Network (NIHR CRN) fell by 44% between 2017/18 and 2021/22.⁴ It is vital that Government enables the UK to continue to be world-leading in this field through appropriate regulation and investment.

The House of Lords Science and Technology Committee inquiry into clinical academics in the NHS recently concluded that, rather than an additional pressure on NHS resource, engagement with research can help mitigate workforce challenges and improve patient outcomes.⁵ The Academy's 2020 report on enhancing the NHS-Academia interface supports this⁶:

- The NHS-delivered RECOVERY trial identified dexamethasone as a COVID treatment, estimated as of March 2021 to have saved 1 million lives worldwide, as well as many millions of pounds in avoided costs of alternative treatments.^{7,8}

² Academy of Medical Sciences (2020), [Representation to Spending Review 2021](#)

³ [Official Development Assistance: Foreign Secretary's statement, November 2020](#)

⁴ Association of the British Pharmaceutical Industry (2022), [Rescuing patient access to industry clinical trials in the UK](#)

⁵ House of Lords Science and Technology Committee (2022), [Letter to Minister of State for Health and Social Care](#)

⁶ Academy of Medical Sciences (2020), [Transforming health through innovation: Integrating the NHS and academia](#)

⁷ NHS England (2021), [COVID treatment developed in the NHS saves a million lives](#)

⁸ Health Data Research UK (2020), [RECOVERY trial: The potential health and economic impact of dexamethasone treatment for patients with COVID-19](#)

- Research active hospitals have better patient outcomes, including lower mortality rates, with the benefits of research extending beyond those directly participating in research.^{9,10,11}
- Engaging in research can improve clinicians' job satisfaction, boost morale and reduce burnout.^{12,13,14,15,16}

Government strategies rightly reflect the importance of clinical research:

- The R&D Roadmap highlights the role of applied research to address healthy ageing; the resilience and effectiveness of public services; and advancing healthcare outcomes.
- The Government's 2021 Life Sciences Vision includes an ambition to embed research across the NHS as a "core part of effective patient care", bolstering capacity and creating a "research-positive culture in which all staff are supported and expected to participate".

The Academy welcomed the recent £1.5bn uplift to the National Institute for Health and Care Research (NIHR), rising to £2bn in 2024/25. Sustained increases in the NIHR budget will help to deliver both health and economic benefits.

- Increasing NIHR investment aligns with Government's plans for growth. Between 2016/17 and 2018/19, research supported by the NIHR CRN generated an estimated £8bn of gross value added and 47,467 full time equivalent jobs for the UK.¹⁷
- The joint Health and Social Care Committee and Science and Technology Committee inquiry recently heard that the NIHR CRN was instrumental to the UK's rapid response to COVID-19.¹⁸

It is imperative that Government reiterates its commitment to maximising the research potential of the NHS, including through ongoing commitment to increasing investment in NIHR.

Investing in public health and prevention

Topic: Public services (including the NHS, schools and education, police)

Non-communicable diseases (NCDs), such as cardiovascular diseases and cancers, cause an estimated 89% of deaths in the UK.¹⁹ Many cases of NCDs can be prevented or mitigated by public health interventions, making associated health, social and economic costs largely avoidable.

- 40% of health service burden in England may be preventable through action on the determinants of avoidable chronic conditions.²⁰

⁹ Ozdemir BA, et al. (2015). [Research Activity and the Association with Mortality](#). PLoS One 10, e0118253.

¹⁰ 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

¹¹ McManus RJ, et al. (2008). [How representative of primary care are research active practices? Cross-sectional survey](#). Family Practice 25, 56–62.

¹² Lambert TW, Smith F, Goldacre MJ. [Making clinical academic careers more attractive: views from questionnaire surveys of senior UK doctors](#). JRSM Open. 6(8): 2054270415602644, 2015.

¹³ Dale J, Potter R, Owen K, Parsons N, Realpe A, Leach J. [Retaining the general practitioner workforce in England: what matters to GPs? A cross-sectional study](#). BMC Family Practice. 16:140, 2015.

¹⁴ Watson C, King A, Mitra S, Shaaban AF, Goldstein AM, Morowitz MJ, Warner BW, Crombleholme TM, Keswani SG. [What does it take to be a successful pediatric surgeon-scientist?](#) Journal of Pediatric Surgery. 50(6): 1049-52, 2015.

¹⁵ Community Research (2018). [Adapting, Coping, Compromising research](#).

¹⁶ Shanafelt TD, et al. (2009). [Career Fit and Burnout Among Academic Faculty](#). Archives of Internal Medicine 169(10), 990–995.

¹⁷ KPMG (2019), [Impact and value of the NIHR Clinical Research Network](#)

¹⁸ Science and Technology Committee and Health and Social Care Committee (2020), [Oral evidence: Coronavirus: lessons learnt](#), HC 877

¹⁹ World Health Organization (2014), [Non-communicable Diseases \(NCD\) Country Profiles](#)

²⁰ Health Foundation (2017), [Written evidence \(NHS0172\), Select Committee on The Long-term Sustainability of the NHS and Adult Social Care](#)

- Delivering a world-class public health system, including through the UK Health Security Agency (UKHSA) and Office for Health Improvement and Disparities (OHID) will require a sound evidence-base informed by investment in high-quality research.²¹
- The Strategic Coordination of Health of the Public Research committee's (SCHOPR) principles provide a guide to improving investment in health of the public research.²²

Government must invest in R&D that underpins an effective, evidence-based public health system that benefits the health of people and the economy.

The R&D Tax Environment

Topic: A supportive tax environment for R&D

Regarding the recent increase to the rate of the R&D expenditure credit announced at the 2022 Autumn Statement and other recent changes to the system, the Academy encourages ongoing consultation between Government and industry to ensure R&D tax incentives encourage growth and are allied with sufficient public investment. The UK's R&D tax environment must:

- Remain internationally competitive.
- Incentivise research investment and support R&D-intensive industries, such as life sciences and biotech, where more than 77% of all UK life sciences sites are part of SMEs.²³
- Recognise the unique differences between large and small R&D-intensive organisations and ensure that support delivered through R&D tax relief schemes reflects these.

The Government must continue to support public investment with internationally competitive R&D tax incentives, leveraging further private investment from innovative and research-intensive life sciences companies.

Supporting R&D across regions and nations

Topics: Supporting local areas, devolution and levelling up

Research and Innovation investment is key to economic growth across the UK. The Academy welcomes the Government's commitment to greater investment and R&D activity outside of the South East, and boosting productivity in underserved regions in the Levelling Up White Paper and UK Shared Prosperity Fund (UKSPF). We support investing in research excellence wherever it is found and that benefits of investment should accrue to all regions and nations of the UK. Investment must be informed and driven by local expertise - organisations such as the life sciences clusters will be critical to directing these funds to existing and emerging excellence.

As well as ensuring that R&D funders invest a greater proportion outside SE, funds focused on levelling up, such as UKSPF should support regional investment in R&D activities, enabling collaboration within and between regions.

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²¹ Academy of Medical Sciences (2022), [Embedding evidence in public health](#)

²² UK Strategic Coordination of Health of the Public Research (2018), [Research principles](#)

²³ Office for Life Sciences (2021), [Bioscience and health technology sector statistics 2020](#)