The Academy of Medical Sciences

Response to the Migration Advisory Committee (MAC) call for evidence
October 2017

Summary

- The continued success of medical research in the UK's higher education institutions relies on being able to recruit the best teaching and research talent, as well as the technical staff which support them, from around the world.
- Movement of researchers to and from the UK is an integral component of scientific research and collaboration.
- A significant proportion of staff in higher education institutions from non-UK EU countries. For medicine, dentistry and health, individuals from EU countries outside the UK make up 38% of research staff, 7% of teaching staff and 12% of those who do both research and teaching. For the biological, mathematical and physical sciences, individuals from EU countries outside the UK make up 32% of research staff, 11% of teaching staff and 19% of those who do both research and teaching.
- Although a large proportion of these staff members will be classified as high-skilled, some research technicians may not fall into this category. Currently, non-EEA technicians do not meet the requirements for a Tier 2 visa. If this requirement is applied to EEA technicians outside the UK, higher education institutions would face difficulties in filling these roles with appropriately skilled staff.
- It is likely that a reduction in EEA staff from outside the UK at higher education institutes would negatively affect the UK's global standing in research and higher education.

Introduction

1. The Academy of Medical Sciences promotes advances in medical science and supports efforts to ensure that these are translated into healthcare benefits for society. Our elected Fellowship comprises some of the UK's foremost experts in medical science, drawn from a diverse range of research areas, from basic research through clinical application to commercialisation and healthcare delivery.
2. We welcome the opportunity to respond to this call for evidence on the economic and social impact of the UK's exit from the EU.
3. The Academy notes that the success of medical and biological sciences within the UK relies on the ability to attract talent from a global pool. Scientific research is an international endeavour and any reduction in the ability for researchers to travel and collaborate internationally will negatively affect research output in the UK.[1]
4. When scientists collaborate internationally the impact of their work is higher. Collaborations between the EU and UK boost the impact of work for both parties above what it would be if either the UK or EU published alone.[2]

[1] The Academy of Medical Sciences, The British Academy, The Royal Academy of Engineering, The Royal Society, the Royal Society of Edinburgh, the Royal Irish Academy and the Learned Society of Wales. (2016). *Research and Innovation: After the EU Referendum*. https://www.britac.ac.uk/sites/default/files/2016-07-19%20EU%20referendum%20statement.pdf

[2] Cancer Research UK (2017*). The impact of collaboration: the value of UK medical research to EU science and health*. http://www.cancerresearchuk.org/about-us/we-develop-policy/we-work-with-government/exiting-the-eu/uk-and-eu-research

5. In the following response we outline the contribution that both EEA staff and non-EEA staff make to teaching and research in higher education institutes, as well as trends in migration for these groups over the last ten years. In some cases, where data for EEA staff is not available, we present data for non-UK EU staff (termed EU staff). This may be an under-representation as it does not include research staff from countries within the EEA, but outside the EU, such as Norway.
6. Unless otherwise stated, the data presented throughout our response is for full-time staff within higher education institutions.

EU migration trends in the medical sciences

Current contribution of EU and non-EU staff to research and teaching in higher education institutes

7. Migrants from EU countries outside the UK contribute substantially to the research and teaching workforce and, thereby, the scientific research output of the UK.
8. Higher education institutions rely on both non-EU and EU employees from outside the UK to make up a large percentage of their teaching and research staff. This reflects the international nature of scientific research.
9. Analysis of HESA data (unpublished) provides information on "UK", "EU" and "non-EU" staff employed in in UK HEIs.[3] This data is also broken down according to disciplines, with the two cost centre groups of most relevance for the Academy of Medical Sciences being the 'biological, mathematical and physical sciences' and 'medicine, dentistry and health'; the following statistics relate to these two categories.
10. The following figures illustrate the significant contribution that migrants from EU countries outside the UK make to the medical and biological research workforce of higher education institutions in the UK, both in teaching and research roles:
    - Approximately 11% of medical teaching staff are recruited from outside the UK; 7% are recruited from the EU and 4% from non-EU countries. For biological, mathematical and physical sciences, 19% are recruited from outside the UK, 11% from the EU and 8% non-EU countries.[4]
    - For full-time medical research staff 38% are from outside the UK, with 24% from EU countries and 15% from outside the EU. For biological, mathematical and physical sciences, 53% are from outside the UK, 32% from the EU and 21% non-EU countries.[5]
    - For staff whose role includes both teaching and research, for medical staff 18% are from outside the UK with 12% from EU countries compared to 6% from outside the EU. For biological, mathematical and physical sciences, 30% are from outside the UK, 19% from the EU and 11% non-EU countries.[6]
11. Being able to access talent from outside the UK is particularly important for clinical medicine and the biosciences. As the HESA data shows, these two disciplines recruit the most staff from the EU in absolute numbers. In 2015/16, clinical medicine recruited 4,430 EU staff from outside the UK and 2,545 non-EU staff and the biosciences recruited 2,950 EU staff from outside the UK and 1,675 non-EU staff.
12. Migrants from EU countries currently make a significant contribution to the research in the UK and it is important that they can continue to do so.

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[3] Unpublished analysis of Higher Education Statistics Agency (HESA) data https://www.hesa.ac.uk/
[4] *ibid*
[5] *ibid*
[6] *ibid*

EEA migration over the last 10 years in the healthcare and science sectors

13. The movement of citizens of EEA countries to the UK for scientific research must be viewed within the wider picture of movement of scientific researchers globally.
14. According to a report by the Department for Business, Energy and Industrial Strategy (BEIS), approximately half of UK researchers with UK nationality move abroad for a period of time, with career development being the most cited reason for doing so.[7]
15. The top three most common destinations for UK researchers were the United States, Germany and France.[8] The UK researcher population was reported to be more mobile internationally than most comparator countries (China, Canada, France, Germany, Italy, Japan, US, South Korea), but with the greatest net outflow. From 1996 to 2015 the net outflow of researcher from the UK was positive at 3.8%.[9]
16. A similar picture of UK researcher mobility is painted in a report that we commissioned with the British Academy, Royal Academy of Engineering and Royal Society in which 1,286 of the UK's leading researchers were surveyed. Of the total respondents, 58% said that they had spent more than a year working abroad. Europe was the most likely continent to which respondents travelled (95%) and collaborated (87%).[10]
17. In terms of movement from the EU to the UK, the percentage of full time staff, within higher education institutions, originating from EU countries has increased from 7% to 12%; an absolute increase of 19,110 staff. The percentage of the workforce from outside the EU has increased slightly from 7.6% to 8.1%.
18. Although a large proportion of the staff included in these statistics will be classified as high-skilled, it is important to note that some research technicians may not fall into this category as not all roles require a bachelor's degree. In this case, they might be classified as medium-skilled.
19. Current immigration rules do not support the recruitment of non-EEA technicians. This is because neither the salary or job requirements makes them eligible under the Tier 2 visa. This is in contrast to the fact that 90% of technicians are qualified to NQF6 and above and 25% have a PhD. There are approximately 9000 technicians at Russell Group Universities with a large fraction of these in the areas of clinical medicine, biosciences and engineering. Of that 9000, approximately 9% are from EEA countries.[11]
20. If the current immigration rules for non-EEA technicians were applied to EEA technicians, higher education institutes would likely face difficulties when attempting to fill these roles with appropriately skilled staff.[12]
21. Although it is too early to have official statistics, there is anecdotal evidence within the scientific community, including many of our Fellows, that it has been more difficult to recruit

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[7] Department for Business, Energy and Industrial Strategy (2017). *International comparative performance of the UK research base 2016.* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651174/uk-research-base-international-comparison-2016.pdf

[8] Guthrie, *et al* (2017) *International mobility of researchers. A survey of researchers in the UK.* https://www.rand.org/content/dam/rand/pubs/research_reports/RR1900/RR1991/RAND_RR1991.pdf

[9] Department for Business, Energy and Industrial Strategy (2017). *International comparative performance of the UK research base 2016.* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651174/uk-research-base-international-comparison-2016.pdf

[10] The Academy of Medical Sciences (2017). *Working across borders fundamental to UK's top researchers.* https://acmedsci.ac.uk/more/news/working-across-borders-fundamental-to-uks-top-researchers

[11] Russell Group (2017). *Impact of Brexit on the technical workforce at Russell Group universities.* http://www.russellgroup.ac.uk/media/5571/impact-of-brexit-on-the-technical-workforce-september-2017-final.pdf

[12] Russell Group (2017). *Impact of Brexit on the technical workforce at Russell Group universities.* http://www.russellgroup.ac.uk/media/5571/impact-of-brexit-on-the-technical-workforce-september-2017-final.pdf

staff from EEA countries following the decision to leave the European Union. This is of concern given the benefit that EEA workers bring to the scientific research in the UK.

Economic, social and fiscal impacts of EEA migration for medical sciences

EEA staff in the UK attract European Research Council funding

22. The UK has been reported to be the most popular destination for researchers who move to another country upon receipt of an European Research Council (ERC) grant. While the majority (~90%) of awardees do not move country to take up ERC grants, it is notable that of those who do, 20% come to the UK.[13]
23. It is likely that migration from the EEA has therefore played a positive role in attracting EU funding for research into the UK

Ensuring a strong research base and talented staff will support the UK economy

24. Medical research has been shown to be hugely beneficial to the UK economy.[14]
25. A report that we commissioned with Cancer Research UK, the Department of Health and the Wellcome Trust found that every pound invested in cancer research generates a continuous stream of earning equal to 40 pence per year thereafter.[15]
26. Government spending in medical research also attracts other investors, every pound spent can stimulate up to 5 pounds of investment by the pharmaceutical industry.[16]
27. As the UK withdraws from the EU, it is important to ensure that profitable sectors continue to be supported and that the ability to recruit global talent is not constricted. Investing in and supporting medical research not only improves public health but it also aids the health of the economy now and in the future.

Conclusions

28. The continued success of medical research within UK' higher education institutions relies on being able to recruit the best teaching, research, and technical talent from around the world.
29. EEA nationals from outside the UK make up a substantial proportion of the UK workforce in both teaching and research roles, and bring ERC funding to the UK.
30. Scientific collaboration between the EU and UK is of mutual benefit, boosting the impact of joint scientific publications and strengthening the UK's standing in the international research landscape.
31. The movement of researcher to and from the UK is an integral part of the way scientific research functions.
32. Migration restrictions that would prevent UK higher education institutions from recruiting the best talent would adversely affect the impact and value of medical research performed within in the UK.

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[13] Cancer Research UK (2017*). The impact of collaboration: The value of UK medical research to EU science and health*).http://www.cancerresearchuk.org/about-us/we-develop-policy/we-work-with-government/exiting-the-eu/uk-and-eu-research

[14] The Academy of Medical Sciences (2010). *Biomedical research - a platform for increasing health and wealth in the UK. https://acmedsci.ac.uk/file-download/35216-129620771468.pdf* .
HYPERLINK "https://acmedsci.ac.uk/more/news/inv*d wealth in the UK*. https://acmedsci.ac.uk/file-download/35216-129620771468.pdf

[15] The Academy of Medical Sciences (2014). *Investing in cancer research boosts economy as well as health*. https://acmedsci.ac.uk/more/news/investing-in-cancer-research-boosts-economy-as-well-as-health

[16] The Academy of Medical Sciences (2013). *More Government support for research and innovation needed*. https://acmedsci.ac.uk/more/news/more-government-support-for-research-and-innovation-needed

33. Any changes to current migration rules should be carefully considered in the context of the UK's world standing in scientific research, the effect on research quality in Europe as a whole, the health of the public and, the benefit that the research sector bring to the UK economy.

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