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COMMENTARY

Post Brexit: challenges and opportunities for radiology beyond the European Union

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ABSTRACT

We aimed to review the challenges and opportunities that radiology may face once the UK leaves the European Union (EU). Even before the exit negotiations commence, uncertainty over future policies and funding within the UK may influence the National Health Service (NHS). We discuss the potential impact that financial, regulatory and social changes may have on healthcare, and radiology in particular. Current difficulties in recruitment and retention of radiologists and the challenges that Brexit present are considered. Uncertainty over the new immigration regulations and their impact on the NHS workforce is addressed. Challenges also apply to UK research, which has greatly benefited from EU funding and the free movement of staff. Appreciating the problems as well as the opportunities that Brexit presents will help prepare radiology in the UK for the next decade.

Seemingly nothing has changed in the National Health Service (NHS) several months after the European Union (EU) referendum result. However, since the EU has directly and indirectly shaped the UK healthcare over the years, the likely consequences of being outside the EU need to be highlighted. In this commentary, we consider the potential effects of Brexit on UK healthcare and more specifically on radiology.

There has been major concern over the repercussions of Brexit on the UK economy. This would likely impact on the funding available to the NHS and universities. Early predictions of the financial implications of Brexit were unfavourable. Analysis from Her Majesty's Treasury suggested a potential reduction in tax revenue by up to £36 billion in 1 year,¹ translating into a £135 reduction in healthcare spending per person.² With 65% of NHS trusts already in deficit and with a growing demand on the NHS services,³ any further reduction in funding is likely to affect the level of service the NHS can provide to patients, the infrastructure and technology it can provide, the competitiveness of salaries it can offer, the working conditions it can create and also the research it can support. However, a few months following the Brexit vote, the UK economy has remained strong, which has led to a revision of the earlier gloomy predictions by the Organisation for

Economic Cooperation and Development. Nonetheless, it is still expected that 2017 will see a drop in gross domestic product (GDP) to 1%, which is disproportionate when compared with previous years.⁴

There are other implications of Brexit beyond a financial one. Over the past few decades, most of the UK healthcare has been affected by EU legislation and policies.⁵ Many of the health and safety regulations protecting doctors and governing working conditions were guided by the EU. Within radiology, radiation protection regulations as well as the European Working Time Directive (EWTD) have influenced practice. Some believe that these are now likely to be reviewed. Outside the EU, the UK government will not be obliged to adhere to these, especially if the UK is not part of the European internal market.⁶ Since the EWTD was incorporated into the UK law in 1998, there has been an ongoing debate on the implications and effects that the EWTD has on medical training and professionalism. Concerns were raised over the resultant reduction in trainee clinical experience and exposure to learning opportunities, as well as the fragmentation of patient care and its potential impact on patient safety.⁷ Brexit can be seen as an opportunity to introduce a change in working policies more suited to the NHS.⁸ The remaining question is whether a return of pre-EWTD working conditions would

be welcomed or accepted, especially amongst the new generation of doctors.⁹

Debate over the free movement of people between EU states was a major influence on the EU referendum result. There were concerns regarding the burden that immigration has on the NHS as well as its effect on the employment of UK citizens. Whilst pro-Brexiteers argued the need to relieve the NHS from the EU immigrant burden, this was never supported by strong evidence.¹⁰ Indeed, there is a Cost Recovery Programme in place which recovers the costs of the treatment of European Economic Area (EEA) nationals from the native country, and EU migrants tend to be young, seeking employment and contributing tax revenue.¹⁰ Therefore, a post-Brexit reduction in EU immigration is unlikely to benefit the NHS directly because the pre-existing healthcare burden from EU migrants is relatively small and purportedly cost neutral.¹¹

UK Radiology has witnessed significant staff shortages for some years now in the face of ever-increasing service demands and limited resources. Recruitment and retention of radiologists is an important issue if UK Radiology is to continue to provide the world-leading standard of service and training commensurate with the NHS.¹² The number of UK radiologists per 100,000 population is one of the lowest in Western Europe with only 7 radiologists per 100,000 population, compared with 17 radiologists per 100,000 population in Austria and a mean of 12 radiologists per 100,000 population for Western Europe. Around 12% of substantive NHS radiology consultant posts were vacant in 2014; in some regions, up to 17% of posts remain unfilled. At the same time, there has been a steady 10–12% yearly increase in all radiological examinations performed. Currently, most departments across the country are struggling to meet their reporting targets and are becoming heavily dependent on outsourcing as well as using non-UK doctors to manage their workload. Over 8% of all senior radiologists working in the UK gained their medical qualification from the EU,¹³ which is representative of the overall figure that 9% of NHS doctors are EU nationals.² There is now concern that difficulties in recruitment and retention of staff may be exacerbated after Brexit by additional immigration bureaucracy. Furthermore, there are forecasts suggesting that up to 20% of current radiology consultants will retire by 2019 and 53% by 2029.¹³ Aware of these challenges, a statement from the Royal College of Radiologists (RCR) was released within days of the referendum result to counter any perception that the migration of EU radiologists was unwelcome.¹⁴ Professional standards set within the EU, including shared training requirements, allow EU doctors to relocate easily to the UK and British doctors to work across EU member states.¹⁵ The free movement of workers, work permits and recognition of qualifications may all need to be renegotiated as part of the UK exit deal. In the meantime, despite the embracing rhetoric of the RCR, the uncertainty and speculation surrounding Brexit is unlikely to be beneficial to the recruitment and retention of EU doctors, including radiologists and potential radiologists.

UK medical research is in a strong global position and attracts highly qualified health workers from around the world, with EU nationals making up 20% of the UK academic community.⁵

Scientists in the UK were strongly in favour of remaining in the EU¹⁶ with research funding being one of the most commonly quoted considerations, since the UK is a net beneficiary of the EU research budget. It has been estimated that in 2012, medical research alone contributed £7.6 billion of the UK economy,¹⁷ with 20% of the UK medical research funding coming from the EU.¹⁸ Overall, the UK is often seen as a European research hub with a third of all EU-funded collaborations being led from the UK.¹⁹ This gives the UK an advantageous position for establishing international relationships following the formal separation from the EU.

Within radiology, and interventional radiology in particular, medical devices and technology play a pivotal role. The Medical Devices Directive governs how new devices are approved within the EU and how the *conformité européenne* (CE) mark is authorized. Under these regulations, manufacturers only need to obtain a licence in one member state to gain access to the EU-wide market. However, as there is some inconsistency in standards applied within different countries, there is the potential for manufacturers to choose licence authorization in countries with more lenient regulations.²⁰ The UK will now have a chance to review this legislation and establish its own national procedures, giving the UK an opportunity to enforce tougher standards potentially benefitting patient safety. At present, the Medicine and Healthcare Products Regulatory Agency (MHRA), which is the UK national regulatory agency, holds a highly influential international position. The MHRA post-referendum briefing shows a readiness to develop policies allowing for this position to be maintained. Amongst other considerations, potential closer co-operation between the MHRA and the National Institute for Health and Care Excellence, offering internationally unique integrated pathways, has recently been discussed.²¹ Indeed, international companies may still seek MHRA approval in the hope that it will facilitate obtaining authorization in other countries.²⁰ On the other hand, the current EU policy has been praised as efficient and prompt thereby supporting innovation,⁶ whereas new national procedures could prove lengthy and expensive. A separate UK authorization process may be unappealing for the industry owing to additional costs precluding companies from accessing the British market. This, in turn, could delay the availability of the newest technologies in the UK. However, in 2014, the British medical technology market was the third biggest in the EU, with an estimated worth of around €12 billion,²² and UK authorization of devices is likely to continue despite these potential barriers. For example, it is possible that the relatively low number of CT and MRI scanners per population in the UK compared with the EU (8 CT scanners per 1 million in the UK vs 21.4 EU average and 6.1 MRI scanners per 1 million in the UK vs 15.4 EU average)²³ may mean that the UK remains an attractive market.

Particular uncertainty surrounds potential new regulations and policies regarding certification of radiology and information technology hardware and software. Suppliers may need to obtain new UK-specific certifications or even rebuild the software to adhere to new regulations. Some market analysts believe that this uncertainty may defer new investments and the implementation of new imaging projects. The implications of such

deferment could be felt beyond the borders of the UK, as currently the UK is one of the biggest European markets for medical imaging and information technology.²⁴

Recommendations derived from this commentary are for the UK government to enact healthcare and scientific workforce policy quickly to allow those in the EU to plan careers in the UK; to guarantee European collaboration in matters associated with the MHRA as soon as possible, and to fund and facilitate MHRA and National Institute for Health and Care Excellence integration; and to guarantee European collaboration in matters associated with UK medical research vocally (similar to the UK government recent funding guarantee for projects currently financed under the Horizon 2020 scheme—which is the EU

research fund with a budget of €74.8 billion for 2014–2020).²⁵ In turn, the General Medical Council, the Royal Colleges (particularly the RCR) and patient groups, as well as universities, research councils and research charities need to lobby government unceasingly to enable such recommendations.

In conclusion, it is impossible to predict the extent to which the NHS as an institution, the patients served by the NHS and NHS staff will be affected by leaving the EU. However, by discussing the potential consequences of Brexit on healthcare finance, working conditions, policies and regulations, research opportunities and health innovation, contingency plans can be put in place. Brexit is now a reality, and we should look for opportunities to pursue healthcare improvement for our patients.

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