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Brexit and the NHS: challenges, uncertainties and opportunities

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Introduction

The Royal College of Physician's report *'Underfunded, Underdoctored and Overstretched'* gives a bleak picture of the current state of the National Health Service (NHS)(1). Currently healthcare and the NHS accounts for the second largest spend area for government, reaching £116.4 billion in 2015/16. Despite this, however, in 2015, prior to the Brexit referendum, hospitals recorded a deficit of £2.45 billion(2).

This deficit is on a background of rising clinical demand with a growing ageing population, social care funding being cut and medicines and health technologies increasing in cost. The gap between clinical need and available resources is widening. One key aspect of the Vote Leave campaign's argument was that £350 million a week could be saved, from UK contributions to the EU, which could be spent on the NHS(3). This promise, however, was disowned immediately after the referendum.

Any change in the UK's economy could lead to NHS funding being affected or in the words of Simon Stevens, NHS CEO *'When the economy sneezes, the NHS catches a cold'*(4). While the latest figures show that the economy grew by 0.6% between July and September 2016(5) there is significant uncertainty in the longer-term. The Bank of England has recently revised its forecast for economic growth to 2 percent for 2017, a significant increase from its previous forecast of 1.4 percent(6).

Despite the White Paper on the UK's exit from, and new partnership with, the EU published on 2nd February(7), there is still a large degree of uncertainty on what Great Britain's future out of the EU will look like. Several of the principles that the Prime Minister set out are likely to have a significant impact on the UK's health and social care system if they come to pass.

We discuss the potential impact, both positive and negative, that these principles may have on the NHS in four key areas of workforce, regulations, cross-border cooperation and research and innovation.

Workforce

There is already a shortage of healthcare staff in the NHS. The UK has 278 doctors per 100,000 compared with an EU average of 347 per 100,000(8). Seven out of ten doctors-in-training in the UK report working on a rota with a permanent gap and hospitals are failing to fill two out of every five consultant posts that they advertise(1, 9). Four out of five doctors-in-training report that their job causes them excessive stress and 95% report that poor staff morale has a negative impact on patient safety in their hospital(1). This has contributed to 'home-grown' doctors leaving the NHS, in part due to lack of motivation. Furthermore statistics from the Nursing and Midwifery Council (NMC) showed that there are 24,000 nursing vacancies across the NHS(10). Fewer nurses are being trained at UK universities following the government's announcement that new nursing, midwifery and allied health professional students would no longer have their fees paid for by Health Education England or be eligible for bursaries to support their living costs(11). Bursaries will be replaced by loans.

The NHS Confederation reports that there are approximately 144,000 EU health and care workers in England(12). The GMC currently has over 30,000 doctors registered who gained their primary medical qualification from another country in the European Economic Area (EEA) – this is about 11% of 280,000 doctors currently on the register(13).

The above evidence suggests that the current levels of staffing in the NHS are inadequate. If a 'hard' Brexit is to be followed with no access to the single market and limits to immigration, as recommended by the Prime Minister, this may negatively impact the numbers of staff. While the recent White Paper does aim to '*protect and enhance the rights people have at work'*, there is no guarantee as to whether the EU workers currently resident will be allowed to stay(7).

The Free Movement Directive sets out the rights of EU citizens and their family members to move and reside freely within the territory of the EU and in the UK this will cease to apply following Brexit(14). In the short-term EU staff may be deterred from coming to, and/or staying in, the UK due to the uncertainty over employment rights. The number of EU nurses coming to the UK has reportedly fallen by 90% since the vote and the statistics also show a rise in the number of EU nurses who have decided to stop working in the UK. In December, 318 decided to leave the NMC's register – almost twice the 177 who did so the month before the referendum, although it is perhaps too early to say whether a trend will emerge(10).

In the longer-term an immigration system will be designed to control the numbers of people coming from the EU(7). This immigration system must be capable of attracting both highly skilled and less skilled workers for the health and social care sector. After the Referendum the Cavendish Coalition was created, a coalition of 33 health and social care organisations aiming to ensure sustainable workforce supply and maintaining standards of care as Britain withdraws from the EU(15). The group acts as a shared voice aiming to influence and lobby

on post-EU referendum issues that affect the health and social care workforce as well as ensuring a robust evidence base to support workforce policy.

The Secretary of State for Health has pledged £100 million to fund an extra 1,500 medical student places from 2018 in an effort to make the NHS 'self-sufficient' in doctors by the end of next parliament(16, 17). Despite this promise, it is likely that, at least in the short term, the UK will still be reliant on foreign-trained doctors given the long training times of medical students. Furthermore, at the amount the government says that it costs the taxpayer to train a doctor (over £200,000) this promise would cost at least £330 million rather than £100 million(18).

Regulations

One of the Prime Minister's principles set out in the White Paper includes ending the jurisdiction of the Court of Justice of the European Union in the UK, meaning that UK's laws will be made in London, Edinburgh, Cardiff and Belfast. Many national health activities are currently subject to EU law and policy(19) and a number of different regulations are likely to be impacted, some of which are set out below. The Great Repeal Bill, announced to the UK Parliament on 10 October 2016, will preserve EU law where it currently stands, enabling Parliament to decide which elements of the law to keep, amend or repeal once the UK has left the EU(7).

The EU's Working Time Directive (EWTD) aims to protect workers' health and safety by ensuring that working hours meet minimum standards applicable throughout the EU. The Working Time Directive was applied to the majority of workers in the UK in 1998, and by August 2011 all junior doctors' working hours had to comply with the 48-hour requirement averaged over 6 months.

There are differing views within the healthcare system, and the wider workplace, as to the utility of this directive. The British Medical Association (BMA) has reported satisfaction with the EWTD and the reduction in maximum hours worked. In 2014 the EWTD Taskforce concluded that the Working Time Directive has had an adverse impact in the NHS on training in certain medical specialties including surgeons and doctors working in acute medicine specialties(20). This is because it introduced an inflexibility into working patterns, with a move towards shift work and away from the firm structure, which has impacted on the quality of training and continuity of care. Exiting the EU may allow the UK greater flexibility to set its own employment regulations.

The UK currently has to abide by the EU's Directive on the Recognition of Professional Qualifications and the GMC has argued that Brexit presents the opportunity for regulators to test the competence of European health professionals, like they do for non-EU international professionals, with rigorous assessments of their knowledge and clinical skills(13). This would provide the UK with an opportunity to review and agree minimum training requirements for medicine that most suit UK healthcare needs while continuing to meet GMC standards.

Another critical implication of leaving the EU single market is that the UK will no longer be part of the European Medicines Agency (EMA). The EMA is responsible for the scientific evaluation, supervision and safety monitoring of human and veterinary medicines developed

by pharmaceutical companies for use in the EU and is currently based in London. A number of EU states have already expressed interest in hosting the EMA. Member countries have access to a single marketing authorization, meaning that pharmaceutical companies only have to go through one approval process before launching their drugs throughout Europe(21). Loss of access to the single authorization may lead to extra regulatory hurdles for drug companies and ultimately a delay in access to new medicines, although alternative solutions may be devised which limit this delay. The UK's Medicines and Healthcare Products Regulatory Agency (MRHA) and the EMA may be able to develop mutual recognition agreements and the government should seek to maintain the best possible form of cooperation. Given the likely change in the US regulatory system with the Trump presidency, it is currently uncertain how the FDA, EMA and the MRHA will align.

It is likely that Brexit will have a limited impact on NHS procurement and competition regulation. Newly negotiated trade agreements with other countries, including in Europe, is likely to result in public sector procurement rules for the UK broadly similar to what is currently in place(22). NHS competition rules have three main components: the prohibition on anticompetitive behaviour, merger control and the prohibition on illegal state aid. With regards to competition rules, exiting the EU may make it easier to lift the current prohibition on anticompetitive behaviour by NHS providers and commissioners, if this was desired(22).

The EU plays a significant role in public health. One of many areas of importance includes the early warning and response system for the prevention and control of communicable diseases of which the European Centre for Disease Control and Prevention (ECDC) is at the centre(23, 24). This system allows for information sharing and coordination of response at the EU level to cross-border health threats and there is uncertainty over the UK's role in this, and other European agencies such as the Directorate General for Health and Food Safety, after exiting the EU.

Cross-border cooperation

Approximately 1 million UK citizens reside in the EU and are currently entitled to healthcare as local residents under the S1 scheme(25). Reciprocal rules means that EU nationals have the same rights to receive healthcare in the UK. Currently many more expat UK pensioners rely on European healthcare than UK-based European pensioners rely on the NHS. Across the EEA there are about 145,000 UK expat pensioners registered compared with 4,000 EEA pensioners registered to use the NHS(26). The Department of Health (DH) figures show that the UK and Spain have the biggest disparity in numbers of pensioners covered by the reciprocal healthcare agreement as of December 2016. While '*Securing the status of, and providing certainty to, EU nationals already in the UK and to UK nationals in the EU is one of this Government's early priorities for the forthcoming negotiations*', it is not clear if this will be possible.

European Health Insurance Cards (EHIC) give British citizens the right to state-provided healthcare during a temporary stay in another EU or EEA country. By removing the EHIC, the costs will shift directly to the patients. It is estimated that UK travellers to the EU have saved around £1.2 billion since the EHIC scheme began in 2006(27). Without this it is feared that the cost of travel insurance will rise as insurers find themselves liable for medical treatment that is currently free of charge. The Secretary of State for Health gave no guarantee in his talk to the Health Committee that these would remain on withdrawal from the EU(28).

After exiting the EU it is unlikely the UK will be able to keep either the S1 or EHIC schemes as they form part of the EU's Social Security Coordination programme and leaving the single market is likely to keep the UK outside these rules. While in theory there is nothing to prevent the UK developing 30 new deals to replicate these schemes, in practice this would be challenging.

Research and Innovation

The UK has been a net beneficiary of EU health research funds, mostly from the Horizon 2020 programme, and there is a concern that with a hard Brexit the UK will lose access to the funding, but also the talented scientists and researchers from the EU. On a positive note, the UK government has guaranteed to underwrite funding of approved Horizon 2020 grants applied for before the UK leaves the EU, even when projects continue beyond the UK's departure from the EU(29). The aim of the guarantee was to help reassure partner institutions in other EU countries that have raised concerns about whether to continue to collaborate with UK institutions on EU funding bids. There remains uncertainty in the longer term, however, as to whether UK scientists may lose the ability to apply for EU funding once Brexit occurs.

Alongside research funding, access to EU infrastructures and networks, such as CERN and clinical trials networks, encourages innovation and also enhances the UK's global influence(3). Investing in science, research and innovation has been made a priority in the recent Industrial Strategy Green Paper and the Prime Minister has made a point in her 12 principles that they will try to ensure that Great Britain remains the best place for science and innovation(7, 30). It is crucial that there is continuing UK participation in mutually beneficial European collaborations in medical research and innovation.

What can be done?

During the negotiations, all rights and obligations from EU membership will continue as normal, but after this it is in the interests of both the UK and the EU to come to mutually beneficial agreements. While the implications of Brexit are far broader than the scope of this paper, this has analysed the possible impacts in the areas of the health and social care workforce, regulations, cross-border cooperation and research and innovation.

It is clear that the health and social care workforce is in crisis with significant deficits across the board. The priority must be on safeguarding those EU citizens currently working here but also designing an immigration system which will attract both highly skilled and less skilled workers to the NHS.

With the announcement of the Great Repeal Bill, the UK government is in a position to continue to follow EU law and maintain existing regulatory frameworks and standards where these work well or enable significant changes to a number of regulations which could work to the advantage of the NHS.

For the benefit of UK citizens and citizens of EU and EEA countries, it is essential that a mutually beneficial agreement is made in regards to the S1 and EHIC schemes. It is the pensioners and travellers that will suffer in the face of changes on both sides of the Channel.

International collaboration is key to furthering scientific research and rightly this has been made a priority in the recent White Paper(7). Continued access to collaboration with talented scientists in the UK and EU, access to clinical trials networks and coordinated responses to

cross-border health threats is again mutually beneficial to staying at the cutting edge of science and fighting global battles such as antimicrobial resistance.

There is no doubt that the world is in a time of great uncertainty but it is important to work towards the most positive impact of Brexit for both the UK, the EU, and the rest of the world.

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