Experts have started to prepare for a turbulent future for scientific research and the National Health Service following the UK’s decision to leave the European Union. Nayah Siva reports.

The president of the UK’s Academy of Medical Sciences professor Sir Robert Lechler was candid when it came to his view on the research implications of the UK referendum result: “I think this represents the biggest challenge to the UK’s research sector in living memory.”

The referendum on June 23, in which voters took the momentous decision to leave the European Union (EU), was the most divisive to date, with 52% of people voting to leave versus 48% voting to remain. The mood of those who wanted to remain is now shifting back and forth between deep disappointment (and visions of the potential bleak future for the UK) and attempts at optimism. Some remain voters think it is important to start seeing the result as a challenge that needs to be quickly engaged with.

As more days pass since the vote, the list of issues posed for the UK is getting longer and longer. Experts think that both the National Health Service (NHS) and UK science could be hit hard. As the remain camp considers its next steps, with some desperately looking for ways to reverse an exit from the EU, others think the most constructive thing to do is to take a deep breath, put heads together, and focus on protecting the UK’s much-celebrated NHS and scientific research environment. The biggest problem is that until negotiations take place about exiting the EU, everyone is still in the dark about what it could mean for the UK.

Collaboration concerns
“We feel dismay and it has been very dark”, said professor Sir Paul Nurse, director of the Francis Crick Institute, as he described the mood among his colleagues at a press briefing at the Science Media Centre in London on June 29. Nurse’s first concern was the impression that the UK has given the rest of the world. “Some European colleagues have told me themselves they feel like we have turned our back on them. And there is also a risk we are giving the image of turning our back on the world, as well as Europe.”

Nurse pointed out that 20% of science worldwide is done in Europe: “We have just separated ourselves from this, and, as an island, we have always collaborated really well.”

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Scientific research and innovation has always had a culture of collaboration, and Elisabetta Zanon, director of the NHS European Office (part of the NHS Confederation), says that our European alliance has also been important for the NHS. Zanon explains that the European Commission is in the process of establishing European reference networks with the best clinical providers in particular specialties, and with EU funding, some NHS organisations have been leading a few of these networks. “We value very much that collaboration with the best possible providers across Europe, to conduct clinical trials, to progress medical science, and ultimately, to provide better care for our patients.”

Zanon hopes that an agreement will be made that will allow the UK to continue to take part in these initiatives in an active role, not just as a passive observer as a full exit from the EU could entail.

Funding shortfall
Another major concern has been about funding. Those on the leave side say that the UK will save the money it contributes to be a part of the EU, which could be put back into the NHS and scientific sectors. 

A report from the Royal Society stated that the UK’s contribution to EU research and development was €5.4 billion during 2007–13 but during this time, the UK received €8.8 billion for scientific research, development, and innovation.

Andrew Street, professor of health economics at the University of York,
thinks that leaving the EU will have serious adverse consequences for the research community, whether based in the NHS or university sector. In response to arguments about the UK covering the funding gap for science that Brexit is likely to entail, Street said that “economic growth is likely to be slow, so less public money will be available for anything, let alone research”. He pointed out that the current government is committed to a programme of austerity and wants to reduce public spending even further. “Research funding has been somewhat protected, recognising that it helps drive growth. It remains to be seen whether such protection will be afforded in the future”, explained Street.

Loss of influence

UK experts are also concerned about not being party to bigger discussions about the future of science. “Historically, we have, of course, played our part in influencing how EU research funding is spent. We have been there arguing for whatever we believe the priorities should be”, said Lechler.

Norway is not a member of the EU, but they have an agreement that allows full access to the EU internal market. Through this arrangement, Norway still has access to the biggest EU research and innovation programme—Horizon 2020—which has nearly €80 billion of funding available until 2020. If we follow the Norwegian model, which is one of the proposals for the UK in the future, we would still have to contribute to the EU budget. “And [with this model] we will no longer of course ever sit at the negotiating table when European policy and legislation is being shaped in Brussels”, said Zanon.

Having to adhere to EU regulations while being a member of the EU has been a big sticking point for those wanting to leave the EU. But Lechler points out that if we want to do clinical trials or scientific studies across borders, we will have to comply with some of these regulations anyway. Examples of these regulations include those relating to the use of animals in research and the clinical trials directive. “But if we are not in the EU, we will not be able to influence EU regulations like we have in recent years”, said Lechler.

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Health workforce

Another key concern is the free movement within the EU, and what effect the removal of this rule could have on the NHS. Today, 130 000 of 1·5 million NHS staff are citizens of other EU countries. With 10% of doctors and 4% of nurses coming from the EU, and the UK being the developed country that relies the most on importing doctors trained abroad, experts are concerned. “Immigrants have always played a vital role within the NHS, whether it be doctors from the Indian subcontinent or health-care professionals from Europe; the NHS could not function without immigration”, said Dagan Lonsdale, specialty registrar in clinical pharmacology and intensive care medicine, St George’s Hospital, London.

Lonsdale explained that the day-to-day environment has changed dramatically for his colleagues in the NHS since the vote came in, with some of his colleagues experiencing racist abuse that they had not witnessed or experienced before. “I do not believe for 1 minute that the government will stop granting the right for health-care workers to move to the UK; what I fear is that they will not want to come because they do not feel welcome. That would be a disaster for the NHS and for society in the UK.”

Elias Mossialos, director of LSE Health and professor of health policy at Imperial College London, and colleagues address the argument that leaving the EU will open up the health sector for UK workers in a brief: “Will the NHS be affected by leaving or remaining in the EU? In it, they state: “There is no doubt that Britain does not have the medical workforce that it requires to serve its ageing population...While Eurosceptics may argue that this deficit is a workforce planning issue, which the UK government can address by training more UK health workers—this takes time and money, and with the ageing population a growing workforce is needed, not a diminishing one.”

Lechler reports: “The thing is, none of us quite knows how this is going to play out. But our scientific societies and agencies will have to make sure that the risks are outlined and mitigated as well as is possible.” But he is optimistic that agreements can be made to save our scientific and medical sectors, as well as our relations with the European scientific community. “I’m sure many European countries would say that they derive benefit from collaborations with the UK in the same way we benefit [from them]. I think there will be an interest from our European partners in sustaining mechanisms of exchange of talent and fostering collaboration.”

“We are fantastically good at science and we have put it in jeopardy”, said Paul Nurse as he contemplated the steps that need to be taken to ensure any negative effect on the UK’s scientific reputation and output is minimised. “We have to be active, energetic, and political”, he concluded.

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