IPEM's Contribution to the Migratory Advisory Committee's Call for Evidence on EEA-workers in the UK labour market

Executive Summary

The UK's withdrawal from the EU and the ending of free movement of EEA nationals into and out of the UK will critically threaten the medical physics and clinical engineering (MPCE) workforce. These professions already suffer from a shortage of staff, with some specialisms on the Government's national shortage occupation list (NSOL). Science crosses borders and, in order for the UK to remain at the forefront of science and scientific practice in medicine as well as to maintain critical healthcare services, it is essential that the profession can continue to recruit from the EU. Data presented in this evidence report are drawn from an IPEM survey in 2017, which had a 55% response rate covering 70% of the medical physics and clinical engineering workforce in healthcare settings. Data from workforce surveys in 2014 and 2015 are also included. These data sources show that:

- Radiotherapy physics has a vacancy rate of 9%;
- Clinical engineering has a vacancy rate of 5 % and rehabilitation engineering a vacancy rate of 10%;
- EEA free movement and qualification recognition are critical to UK workforce provision;
- The Tier 2 visa process is protracted and difficult to navigate;
- Cross-fertilisation of ideas and diversity of both thought and training are key to maintaining scientific excellence; and
- Recruitment and retention of the best scientists including from the EAA is essential to maintain the UK's position at the forefront of scientific research and development in medical physics and clinical engineering.

Background

Medical physicists and clinical engineers (MPCE) work in direct healthcare (hospitals and other healthcare settings), in research and higher education and in industry.

In hospitals and other healthcare settings, the MPCE workforce comprises Clinical Scientists and clinical technologists.

Clinical Scientists, broadly, specialise in one of eight physics and engineering modalities which often include key safety roles such as radiation protection:

> Physics: radiotherapy physics, nuclear medicine, radiology physics, non-ionising radiation physics.

Engineering: clinical engineering, rehabilitation engineering, physiological measurement, bioinformatics.

'Clinical Scientist' is a protected title and Clinical Scientists are required by law to register with the Health and Care Professions Council (HCPC) in order to practice. This registration requires training to a minimum of Masters level and often beyond.

Clinical technologists (also known as practitioners) similarly specialise in one of seven scopes of practice:

Physics: radiotherapy physics, nuclear medicine, radiation physics.

Engineering: rehabilitation engineering, radiation engineering, clinical engineering and renal technologists.

Technologists are educated to degree level, and are voluntarily registered with either the Register of Clinical Technologists, or the AHCS Accredited Register. Both registers are accredited by the Professional Standards Authority (PSA)

Medical physicists and clinical engineers are also involved in academic research and innovation that leads to new technologies and methods that improve on existing medical treatments. They provide new solutions that enable people with injuries or long-term conditions to complete everyday tasks. There are also medical physicists and clinical engineers employed in industry, particularly by medical equipment and medical device manufacturers.

The Institute of Physics and Engineering in Medicine (IPEM) is a professional association and Learned Society with 4,670 members working in hospitals, academia and industry, who are physicists, engineers and technologists working with applications of physics and engineering applied to medicine and biology.

As a charity, IPEM's aim is to advance the application of physics and engineering to medicine for the public benefit and to advance public education in this field. We do so by supporting and publishing research; supporting the dissemination of knowledge and innovation through project funding and scientific meetings; and by setting standards for education, training and continuing professional development for healthcare scientists, technologists and clinical engineers.

EEA Migration Trends

EEA workers form a significant portion of the UK medical physics workforce in healthcare settings. Some 17.8% of the medical physics work force in the UK are workers from overseas, and nearly 10%[i] of these are from the EEA.

IPEM members report that recruiting from the EEA is facilitated not only by the current freedom of movement with no visa requirement but also by the EU Recognition of qualifications directive and amendment (2005/36/EC, 2013/55/EC), which allow qualified Clinical Scientists to register directly with the HCPC rather than register through the more lengthy International Equivalence route.

As well as filling vacancies in shortage occupations[ii] several heads of medical physics departments report that workers from the EEA have a different, complementary skill set, and that the technologists take a highly scientific approach.

In this workforce, the EEA workers are permanent employees, recruited on the same basis as UK workers. While we have no data regarding part time working amongst EEA workers, workforce surveys show the majority of posts to be 0.8 whole time equivalent (WTE) or

higher for the MPCE workforce in general; there is no reason to believe this is higher or lower amongst EEA workers.

Changing patterns over time

We do not have any data regarding EEA migration in the past. Heads of department report that they have regularly received applications from the EEA over the past five years, and a small number report that by comparison, none have been received in the 17 months since the EU referendum.

Assessment of possible impact

A reduction of either EEA or rest of world migrants would result in a critical shortage in the medical physics workforce, unless balanced by an equivalent increase in the number of migrants from the other source. The MPCE profession already struggles to fill vacancies, and an IPEM study in 2015 demonstrated that, for radiotherapy physics, the current UK training schemes have insufficient capacity for predicted workforce replacement requirements let alone to address the current shortfall in this profession[iii]. Furthermore it is unlikely that the current training capacity will expand sufficiently, in the short term, to meet workforce requirements. There have been workforce shortages in all medical physics specialities for many years with the most recent surveys showing vacancy rates of 9.0% in radiotherapy physics[iii] and 5.3% in radiology physics[iv] and there is sufficient anecdotal evidence to suggest that the situation in nuclear medicine physics is comparable to that in radiotherapy physics. Consequently the roles of both scientist and technologist in both specialities are listed on the NSOL.

A reduction in workers from the EEA would impact significantly on the UK's ability to deliver a safe, world class medical service in the areas of imaging, radiotherapy and nuclear medicine. A reduction or restriction in immigration from the rest of the world would have a similarly detrimental effect. With a carefully planned and adequately funded training programme it may be possible to make up the shortfall in workforce numbers. However, IPEM's projections for radiotherapy physics predict a gap of at least 10-15 years before the training capacity has expanded sufficiently to meet demand. Leaving numbers aside, the UK science community benefits significantly from experience of best practice, and talent obtained from across the whole world and this cannot be compensated for by increased training provision in the UK.

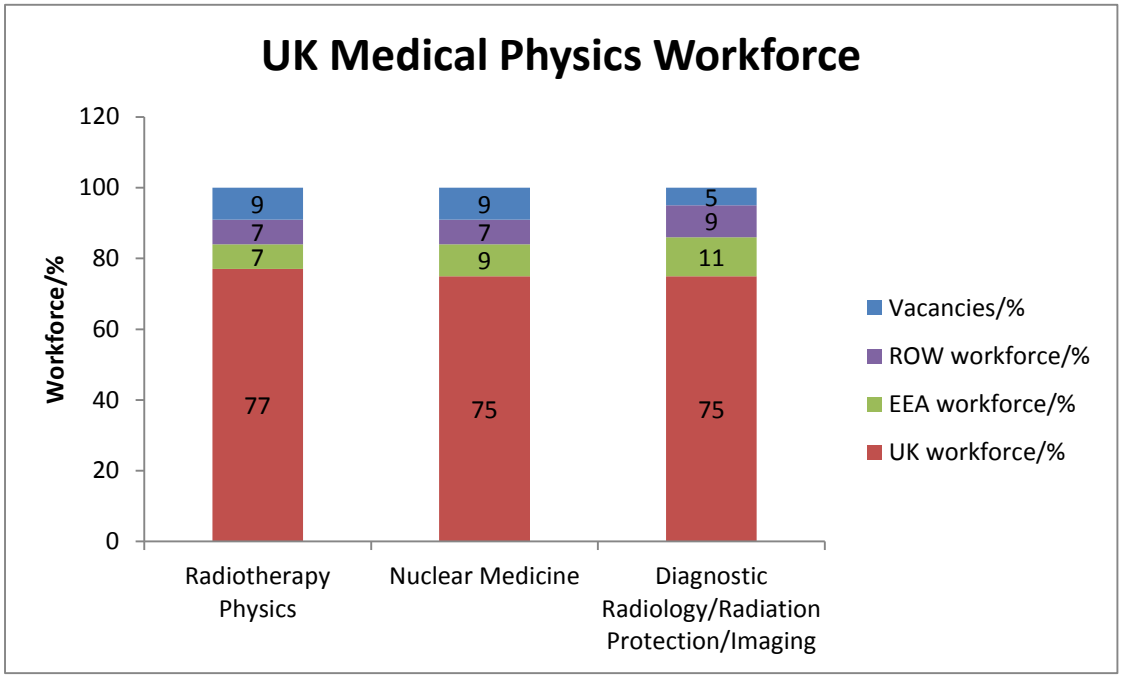
> ***"The EEA currently provides an appropriate framework to staff our radiotherapy services in safe manner; I'm concerned that the UK's withdrawal from the EU will impact the ability to attract, recruit and retain experienced candidates."***

The clinical engineering community has similar concerns (5% vacancy rate in clinical engineering and 10% in rehabilitation engineering), and so recruitment from both the EEA and the rest of the world, is a critical route to filling vacancies. High vacancy rates, combined with a high number of posts filled by EEA and other overseas workers place this workforce and delivery of services, essential to the health service, in a precarious position. In addition there is a higher percentage than average of this workforce approaching retirement.

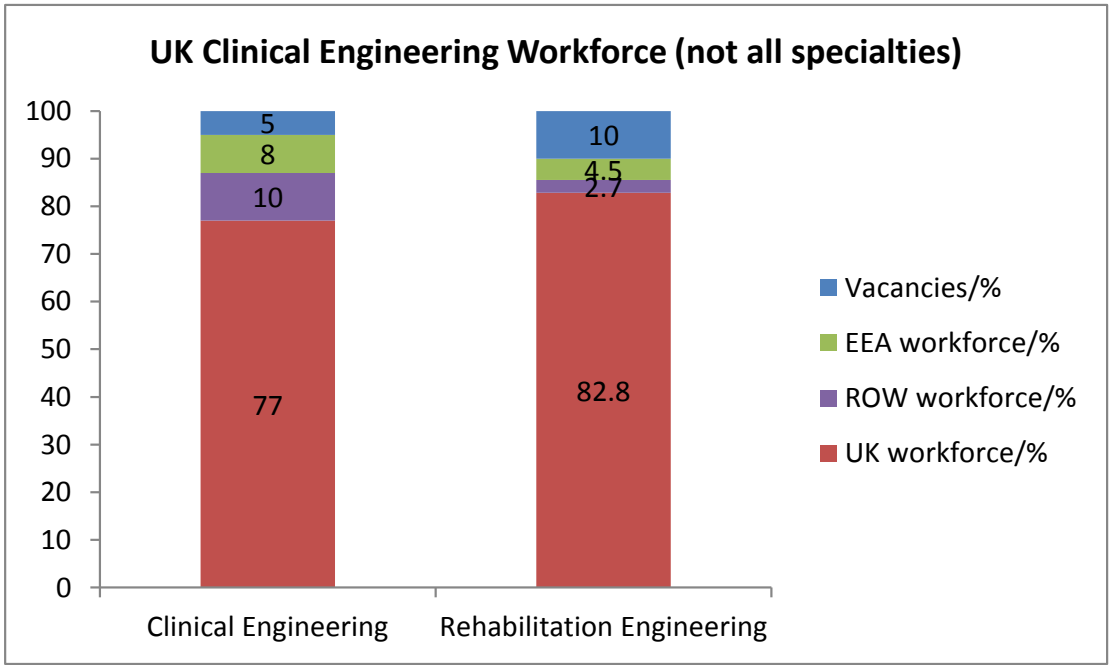
> ***"We need as many options available to us as possible to recruit trained staff in the field of rehabilitation engineering. The majority of the workforce is close to retirement and many departments carry a significant number of vacancies for long periods due to the lack of employable candidates. This will only make an already difficult situation worse."***

While clinical engineering, rehabilitation engineering and radiation engineering are not listed on the NSOL, there is a clear case for them to be included as shortage occupations, with comparable vacancy rates and difficulties in training.

The data presented in the figures overleaf illustrate the potential impact on the medical physics and clinical engineering profession involved in direct healthcare should these workers be lost.



Clinical Engineering



Recruitment Practices, Training and Skills

No respondents who have been involved in recruitment from overseas reported using different methods of shortlisting for UK or overseas workers from either the EEA or the rest of the world. Once shortlisted, some employers utilise video links for interviews, while other employers do not allow this. Sometimes this prevents overseas candidates from taking part in an interview as they are unable to travel. Video link interviews can present other difficulties, and one respondent stated that recruitment from overseas increased the burden on recruiters to ensure qualification content and level is appropriate. At present, within the EU there is mutual recognition of qualifications which for Clinical Scientists both facilitates

state registration with the HCPC and ensures that candidates are of the required educational standard.

As there is no mutual recognition of qualifications for countries outside the EEA, recruiting from the rest of the world to a Clinical Scientist role, where registration with the HCPC is a legal and role requirement, increases the length of time taken for recruitment significantly. Several recruiters reported finding that the overall recruitment process takes over six months for non-EEA candidates whereas recruiting from the EEA is a quicker process at present, with recruits taking up their posts within six months.

Recruitment from outside the EEA is complicated and time consuming. In small departments, one vacant post represents a significant proportion of the workforce. If free movement from the EEA, with the associated advantages of ease of recruitment, is to end, the process would need to be significantly streamlined with time taken for the visa application and issuing process much reduced, if the stability of the workforce and scientific excellence is to be maintained.

Advantages and disadvantages of employing EEA workers.

Some 92% of respondents to IPEM's survey, all of whom recruit, value the ability to recruit from overseas, and find it an advantage to be able to do so with ease.

For both the medical physics and the clinical engineering workforces the major benefit is to fill vacancies with high quality staff that are not being trained in the UK. There are however a wealth of other benefits to recruiting EEA and other overseas migrants in the form of the scientific advantages that exposure to different experience and practices brings. A workforce recruited from a wide range of backgrounds and experience benefits from varying scientific input, alternative experience and practice, and consequently cross-fertilisation of ideas. This leads to enhancement of practice, higher overall scientific standards and a greater quality of science (41% of physics respondents). In addition, several senior IPEM members reported that they value cultural diversity in a workforce which serves a diverse population; this is particularly important for the public-facing roles in nuclear medicine.

It is likely that the ease of EEA migration has masked the shortage of Clinical Scientists and technologists in the UK, by providing a source from which to make up the shortfall in workforce. An example of this in nuclear medicine, where for some years the UK has been unable to train enough technologists, and the Practitioner Training Programme has yet to develop sufficiently to train significant numbers of professionals at this level. There is a very good nuclear medicine technologist training program in Portugal, and many nuclear medicine departments in the UK have benefitted from this. In radiotherapy, despite training Clinical Scientists at close to the capacity of training departments under the current training scheme, there is still a significant shortfall in the workforce. The situation in nuclear medicine and radiation physics is similar and, given the vacancy rates it is unlikely that recruitment from overseas has impacted negatively on training programs since more trained workers are still needed.

In small departments one vacant post represents a significant proportion of the workforce and so the bureaucratic difficulties, and timescales involved in recruiting from the rest of the world via Tier 2 visa make this route in its current form an unattractive option for meeting the workforce shortfall. This is especially true for technologist posts given that many do not meet the salary requirements for a Tier 2 visa in the absence of an NSOL exemption. Several recruiters have found that the process for procuring a visa for their selected worker takes so long that the worker finds work elsewhere.

Scientific Excellence

The majority of respondents agree that the ability to recruit the brightest and best from the whole world, together with a reputation for pursuing scientific excellence, is a huge benefit for driving quality in services. Collaboration, research and trials will all suffer detriment as a direct consequence if immigration is to be curtailed amongst this workforce, or if the UK is perceived as an undesirable location to work. This perception includes social attitudes; if these individuals do not feel welcome, then talented scientists will be lost to other countries.

"I agree that a diverse workforce is essential to providing quality services because innovation flows out of diversity."

"We have also had [UK} staff able to go and work [temporarily] at other overseas departments which is also very valuable."

Economic, social and fiscal costs and benefits of EEA migration to the UK economy.

The predominant economic benefit of EEA migration of the MPCE workforce is a reduction in training costs as approximately 5% of workers have been trained in the EEA. In this respect there is no difference to that of non-EEA migrants who also comprise approximately 5% of the workforce. This does vary by region, with a higher proportion in Greater London, and fewer in the North East, but no figures are available yet.

The social benefits arise from delivering a world class health service to the UK population, drawing best practice from the entire world, including the EEA, with the UK continuing to be at the forefront of scientific development and research. The benefits of medical physics and clinical engineering migrants cannot be measured by the salary paid to them; indeed that of many technologists does not meet the minimum required for a Tier 2 visa. It has been suggested that the nuclear medicine workforce in particular has benefitted from an overall rise in standards as staff from the EEA are trained with a complementary focus to that in the UK.

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[i] IPEM survey 2017, 55% response rate, capturing approximately 70% of the workforce.
[ii] Radiotherapy Physics, Scientist and Practitioner and Nuclear Medicine Physics, Scientist and Practitioner are both listed on the Nation Shortage Occupations List.
[iii] IPEM Position Statement on the Radiotherapy Physics Workforce, 2015.
[iv] IPEM Workforce Survey 2014. 25% response rate.