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The UK anaesthesia workforce is in deepening crisis

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Editor—The Royal College of Anaesthetists (RCoA) has released its Medical Workforce Census Report 2020.¹ The principal issues recorded are that 90% of anaesthesia departments have one or more posts unfilled, and that current consultant vacancies have doubled since 2015 to 680. These data pre-date the coronavirus disease 2019 (COVID-19) pandemic; thus, the stress of individuals and crisis management in the departments means these gaps will unlikely have been plugged. The RCoA, General Medical Council (GMC), British Medical Association (BMA), universities, and government bodies urgently need a coordinated plan to be able to tackle this shortfall and stem the worsening trend. As an Australian-trained anaesthetist working in the NHS for more than 5 yr, some of my experiences and recommended solutions are discussed as follows.

Supply and demand

At 2.8 doctors per 1000 people, the UK is well below the EU average of 3.4 doctors per 1000 people. The government recognised this shortfall in 2016 with a plan for the NHS to be 'self-sufficient' with local doctors by 2025. An extra 500 medical student places for 2018 and 1000 for 2019 were proposed. The impact of this will not be felt in the short term, especially because medical student graduate numbers have been static for 10 yr, at around 8500 each year.^{2,3} The position of the

government to tie junior doctors working for the NHS for a minimum number of years or be forced to repay the cost of their education would further 'impact morale and potentially discourage students from entering medicine', warned the BMA.⁴

Before COVID-19, 2016 was seen as the worst year in NHS history, reflecting a disconnect from the realities of the attitude of the government towards the NHS, to the staff, and the patients they look after.⁵ We saw the first strike action by junior doctors in 40 yr as failure of leadership between the government and the BMA led to the breakdown of negotiations and subsequently a drop in morale of junior doctors and trainees. It was adversarial on all sides. In the end, the public lost trust in their doctors, and the doctors lost trust in their employers.

The most recent GMC national training survey (the largest annual survey of doctors in the UK) includes the period of those working during the first COVID-19 pandemic wave.⁶ It reports that 59% and 68% of anaesthetic trainees and trainers, respectively, stated that their workload had increased because of COVID-19. Around a quarter of trainees said that their work was emotionally exhausting to a high or very high degree, with the majority of respondents stating that opportunities and chances to gain required competencies had been reduced. Whilst it was pleasing to note that during this difficult time most doctors stated the support they received from their

organisation (in personal health, safety, and well-being) as good or very good, since this report the UK has experienced a second wave of COVID-19 patients. The impacts on an already fragile workforce just recovering from the first wave have increased symptoms of burnout, depression, depersonalisation, and anxiety. These should not be viewed as failings on the part of the doctor, but rather the consequences of social, cultural, and technological pressures affecting the entire profession.⁷

Building a resilient workforce starts from the top.

Various other impacts are exacerbating these shortfalls specifically for anaesthesia. The number of newly qualified anaesthesia specialists has decreased 34% in the past 5 yr (to 373 in 2019 from 569 in 2013). To add to this gap, the number of anaesthetic consultants retiring in the previous 12 months has increased to 4.2% of those surveyed in 2020 (from 2.7% in the 2015 report), with a further 14% of consultants reducing programmed activities because of changes in pension allowances. To avoid a workforce crisis, the RCoA estimates that, to meet demand, the anaesthetic consultant certificate of completion of training output must increase by as much as 497 per annum by 2023–7 in England.⁸

Pressure on anaesthetists within the NHS comes from many angles, and some of these are not easily amenable to change. An ageing population, new surgical procedures, additional roles in perioperative medicine, restricted working hours, increased weekend and evening work, the current COVID-19 crisis,⁹ and the tide of backlogged elective cases exemplify this dilemma. As the annual number of surgical procedures continues to increase, there will be a need to better prioritise surgical cases; drastically improve service efficiency; reduce unwarranted variation; and embrace less invasive, non-surgical, or newer treatment technologies.¹⁰

Overseas-trained doctors

Overseas recruitment will continue to be a vital component to continuing safe anaesthetic services in the UK. Another readily available source for internationally trained consultants is via the Certificate of Eligibility for Specialist Registration (CESR) pathway. The yield to providing trained and dedicated anaesthetists is surprisingly low; however, in 2018, there were just 14 accepted by the RCoA. Meeting high standards needs to be maintained, although some hurdles could be simplified. Some changes have already been made to make the CESR application process easier, but these do not go far enough to fix a lengthy, expensive, and bureaucratic exercise.

I came to the UK from Australia in 2015 as a senior clinical anaesthesia fellow. To meet the GMC requirements for full registration, I had to undertake the International English Language Testing System and Professional and Linguistic Assessments Board 1 and 2 tests, requiring extra study and travel to the UK for examinations, and a GMC identification check. Outsourcing recruitment resulted in various errors delaying my start, leaving the anaesthetic department at a last-minute shortfall. The full CESR accreditation is also a mammoth task, with a hugely onerous application document over 900 pages long, requiring 2 yr of preparation, and up to a year for approval.

The 2020 RCoA report states that 'attracting overseas doctors for a period of time in the UK is key, but this should be done ethically, trading experience and training for service'.¹ Where an avenue exists for a trainee to come to the UK for a 'period of time' ethically and ideally, there should be a

reciprocal relationship with other countries. Although this reciprocal flow of anaesthetists may not be net positive to workforce numbers, having overseas-trained doctors come for a short period of time continues a connection with overseas institutions, and can be important for future research collaborations and can provide a steady stream of enthusiastic talent.

The percentage of doctors who gained their primary qualification in the UK is only 62%, with 9.1% of doctors in the UK being EU nationals.¹¹ The processes for EU nationals to work in Britain are now more rigorous after Brexit, and some may be deterred from coming or staying because of negative perceptions. Furthermore, most EU countries no longer automatically recognise qualifications from the UK now that the transition period has ended. Guidance and pathways for trained anaesthetists to come and work in the UK need to be streamlined whilst also maintaining high standards of care.

During this past decade, doctors' real rate of pay has decreased, especially when taking into account other financial considerations, such as increasing tax on pensions, training, and courses. For overseas doctors, there are added visa costs and immigration healthcare surcharges (IHS) to take into account each year. These costs have dramatically increased; visa costs have increased 40–60% in the past 5 yr and the IHS doubled in 2019. Protecting the income of doctors in line with their value on a global level, whilst being fair for the taxpayer, is vital to retaining and recruiting medical staff.

We are in a deepening workforce crisis of anaesthetists in the UK. Year on year, results from workforce surveys show that this problem is getting worse. Solutions to this crisis are complex and require urgent and productive collaboration between all stakeholders to move forward, including professional colleges, the GMC, the BMA, and government bodies.

The promise to become self-sufficient of doctors needs to be revised; there are many benefits to be gained from shared-learning systems and a transfer of knowledge and skills between countries. With an NHS under such strain, it needs to be as receptive and retentive as ever to its current and future workforce.

Declaration of interest

The author declares that they have no conflict of interest.

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Nociception monitor-guided opioid administration in radical retropubic prostatectomy. Manufacturer's response to *Br J Anaesth* 2020; 126: 516–24

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Editor—We are delighted to see more investigations into the clinical utility of nociception monitoring come forward.¹ However, we want to caution the reader of the article by Funcke and colleagues¹ of a nuance in their protocol. For nociception level index (NOL) values below the lower threshold value (10) for more than 30 s, Funcke and colleagues¹ decreased the remifentanyl infusion rate by 0.03 $\mu\text{g kg}^{-1} \text{min}^{-1}$ every 5 min until finally stopped, which occurred in almost half of the NOL-guided patients. Because of the extremely short duration of action of remifentanyl, this likely resulted in periods during which there was no therapeutic analgesic level, resulting in elevated stress hormone levels and perhaps patient movement during noxious stimuli from this major surgery. Although the User Manual and the Pocket Guide recommend a target range for NOL between 10 and 25, the manual states that 'NOL cannot predict or anticipate painful stimuli and NOL should be used as an adjunct to clinical judgement during surgery'.^{2,3} Consistent with this guidance and the pharmacokinetics of remifentanyl, Meijer and colleagues⁴ purposely did not reduce their target remifentanyl concentration below

1 ng ml^{-1} , regardless of the NOL lower threshold, ensuring adequate analgesia during transitions in levels of stimulation.

Furthermore, we believe the differences in outcomes between nociception monitors is explained by the fact that not all nociception monitors measure the same axes of the nociception–antinociception balance (NANB), and thus require separate validation of clinical benefit. The clinical implementation protocol is of paramount importance when evaluating the impact of a patient monitoring device on patient outcomes.

Declarations of interest

FJO has received payments from Medasense Biometrics Ltd and serves as Medical Director to the company. RW serves as VP Clinical, Regulatory and Quality for Medasense Biometrics Ltd.

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