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How often do we see the current shortage of NHS staff, including doctors, brandished across newspaper headlines and television screens? Where are all the doctors? Are we accounting for why there is a shortage of doctors? Are we considering what we could do to improve those numbers? Are we truly supporting those that choose to remain in the profession? Do we understand the impact of the career pathway on them as individuals, both the physical and psychological?

Medical workforce expansion has been a vision of the Conservative government over recent years. Matt Hancock, Secretary of State for Health and Social Care between 2018 and 2021, stated the NHS had 5600 more doctors in 2021 compared to the same point in 2020 [1]. The UK government's aim to train more doctors, and its heavy subsidisation of medical school places, has led to an increase in the number of admissions each year since 2017 [2]. Four new UK medical schools (Lincoln, Sunderland, Edge Hill, and Kent and Medway) were founded between 2019 and 2020 to create spaces to train the increasing number of students [3]. The rise in the number of places lead to a total of 10,400 UK medical students in the 2020-21 academic year, an increase of almost 1000 from the previous year [2, 4], an important stage in accruing more doctors.

The increase in medical students is a start in expanding the workforce, but from this stage onwards it has become more difficult to progress towards becoming a medical consultant. In 2021 there were 1560 internal medicine training posts, a decrease from 1610 in the previous year [5, 6]. In 2021, almost 3600 applications for internal medicine training were received compared to 2798 in 2020 [5, 6]. Despite a lower numbers of internal medicine training posts, the number of internal medicine trainees continues to outnumber higher specialty training posts [5, 6].

In 2020, 1500 registrar-level national training posts for specialty medicine and intensive care medicine were available, with 4680 applications for these posts [5, 6]. Many applicants applied to multiple specialties [7], but these numbers show a significant lack of national training numbers compared to trainees, not including applicants from overseas or those not in a current training post [4]. With the number of applicants exceeding posts, do we have enough specialty medical registrars? The total number of specialty medical registrars in a national training programme, across all training grades (ST3-ST7/8), has increased from 7300 in 2018 [8], to over 8000 in February 2022 [9]. This would appear to be a significant number of higher medical trainees, but is it really enough to provide a safe service and support the wellbeing of doctors?

Underfunded, underdoctored, overstretched: The NHS in 2016 [10], published in 2016 by The Royal College of Physicians, found that there was increased pressure placed upon existing registrars, subsequently discouraging junior medical trainees from applying to become registrars. Permanent rota gaps were reported by 70% of doctors, and over half of doctors reported gaps in the rota that had a serious, and sometimes extremely serious, impact on patient care. The report stated that this was due to only 75% of medical registrar

posts being filled, creating increasing workloads and a lack of time for training. This report shed light on the reality of the situation for medical doctors, prior to the Covid-19 pandemic. The higher specialty trainee and consultant physician census was an annual publication prior to the pandemic; however, subsequent publications have focussed solely on consultants [11]. With increasing issues within the medical workforce secondary to the global pandemic, an updated report exploring higher specialty medical trainees would help explore the current climate.

Despite the far-reaching negative impacts revealed by these reports the situation remains unchanged and looks set to continue. The 2018-2019 physician census [8] reported the negative effect of medical training on trainees. Over half of trainees reported that the relationship they had with their partner and/or children had been negatively affected [8]. Being pressured to cover rota gaps was conveyed by 55% of registrars [8], and 15% reported that they had covered vacant senior house officer gaps [8]. Trainee rota gaps occurring weekly was reported in greater occurrence by trainees compared to consultants, 47% and 30% respectively [8]. Although an improvement in comparison to previous years, in 34% of cases where trainees had covered rota gaps, no compensation was given, such as time off in lieu and extra pay [8].

Medicine trainees have the second highest risk of burnout after emergency medicine trainees at 17% and 21% respectively [4]. Allocated working hours are being ignored, with 59% of doctors working beyond rostered hours in 2021 [4]. Even more troubling is the knowledge that 65% of doctors say they were unable to provide a sufficient level of care [4]. Over 25% of medicine trainees feel they do not have enough opportunities to prepare for exams [4], further slowing career progression. Combine these with the increasing numbers of doctors [1], the static number of medical registrar training posts [5, 6], and thus the increasing competition for a national training number [5, 6], it is unsurprising that rota gaps persist, and consultant posts remain unfilled. The number of medical registrars required to safely run a hospital is not met by the number of national training posts available.

The issues around staff shortages and workforce availability continue to extend into the most senior positions with a lack of consultant physicians. In 2018, 43% of consultant physician posts remained unfilled with over half of these due to a lack of applicants [8]. It is estimated that 36% of consultants will reach retirement age by 2028 [8], leading to a further reduction in the senior physician workforce should consultant posts remain unfilled. Of the consultants that responded to the 2018-19 physician census, 4.9% had retired and returned to work. Of those who returned to work, 80% of this was outpatient-based, with only 15% of consultants involved in the care of general internal medicine patients [8]. Following the reports of challenges to career progression and negative impacts on home life, is the pathway for medical trainees appealing enough to continue to consultant level and fill these posts? Do we need to change how doctors are recruited throughout their training to ensure that we have a sufficient number of, well supported, consultants?

To meet their target of training more doctors, the UK government has increased the number of places available for medical students; but if they want the number of senior doctors and consultants working in the NHS to improve, the number of senior national training posts need to increase. A systematic bottleneck created by the challenging and enduring career pathway in the UK means that following medical school doctors face a barrage of hurdles, posing challenges beyond their careers and into their mental health and wellbeing. Is it not time we started to explore and understand the career pathways to becoming physicians, the triumphs, and pitfalls? We need to start to remove the unnecessary levels of competition that

means that our NHS is short staffed and we, as patients, carers, academics, and healthcare staff, are left asking 'where are the doctors?'

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