

Arani Nitkunan, MA (Cantab), MBBS, PhD, FRCP

studied at Newnham College, Cambridge and Guy's and St Thomas' Hospital, London. She is a council member of the Association of British Neurologists, Clinical Lead at Croydon where she has transformed acute neurology and Lead for the Southwest London Neurology Network. Her subspecialist interests are stroke and neuro-ophthalmology.

**Mrs Joanne Lawrence, BSc**

is Executive Director, Association of British Neurologists. She graduated in Chemistry with Management Science from Imperial College London in 1985. She held a range of industrial sales and marketing roles for Rio Tinto and Unilever until 2001. Before joining the ABN in 2013 she ran her own company providing multi-lingual B2B customer and employee surveys for multinational organisations.

**Prof Mary M Reilly MD, FRCP, FRCPI, FMedSci,**

graduated from University College Dublin in 1986, received her MD in 1996, FRCP in 2002 and FRCPI in 2003. She was appointed a Consultant Neurologist at the National Hospital for Neurology and Neurosurgery, Queen Square in 1998 and a Professor of Clinical Neurology at UCL in 2010. She leads the peripheral nerve clinical and research group and is Head of the Division of Clinical Neurology in UCL Queen Square Institute of Neurology. She runs a research programme in the inherited neuropathies encompassing gene identification, pathogenetic studies, natural history studies, development of outcome measures and conducting clinical trials. She is the immediate Past President of the Association of British Neurologist (ABN), a past President of the British Peripheral Nerve Society (BPNS), and a past President of the international Peripheral Nerve Society (PNS). She was elected a Fellow of the Academy of Medical Sciences in 2020.



Correspondence to: Dr A Nitkunan, Consultant Neurologist, Department of Neurology, Croydon University Hospital, London CR7 7YE. E. anitkunan@nhs.net

Conflict of interest statement: None to declare

Provenance and peer review: Submitted and internally reviewed

Date first submitted: 3/8/20

Acceptance date: 5/8/20

Published online: 17/9/20

To cite: Nitkunan A, Lawrence J, Reilly MM. Adv Clin Neurosci Rehabil 2020;20(1):28-32

Acknowledgements: We would like to thank all who contributed to this survey.

This is an open access article distributed under the terms & conditions of the Creative Commons Attribution license <http://creativecommons.org/licenses/by/4.0/>

<https://doi.org/10.47795/ONAT9784>

Association of British Neurologists: UK neurology workforce survey

Abstract

A neurology workforce survey was conducted by the Association of British Neurologists and compared with the annual Royal College of Physicians census in November 2018-March 2019. 46% of consultants and 35% of trainees responded. Based on the clinical work contracted (excluding academic and other work), the calculated number of Consultant Neurologists was 1 per 91,175 of the population. There is significant geographical variation in the number of consultants throughout the UK. There is a gradual shift when comparing the trainee and consultant data towards better gender and ethnic representation in the former. The data highlights potential future workforce planning issues including the potential impact of the increasing number of female trainees.

also to obtain more subspecialty specific information.

Methods

A link to an electronic survey was sent out to all ABN members on November 30th 2018 with reminders sent out until close of survey in March 2019. Non-members were also encouraged to complete it. The data from this was compared to the RCP survey published in October 2019.¹ Any duplicates were removed from the dataset. It was assumed that the sample was representative and therefore the results were extrapolated.

Results**Response rate**

There were 615 respondents in the ABN survey (Tables 1a, 1b). Of these, 400 were ordinary members and 445 stated their role as consultant neurologist (Tables 1a, 1b). The RCP survey determined the total number of consultant neurologists in the country as 958. This is a robust figure derived using data from the General Medical Council (GMC), as well as contacting each trust to determine the number at an individual trust level and incorporating data from new consultant appointments compiled by the RCP during the year. Using 958 as the total number of consultant neurologists,

Determining current neurology workforce is key to planning future care of patients with neurological conditions in the UK. The Royal College of Physicians (RCP London, Edinburgh and Glasgow) run an annual census with the help of the Medical Workforce Unit. The Association of British Neurologists (ABN) wanted to triangulate the figures obtained by conducting an independent survey during 2018-2019. The secondary aim was

Table 1a – The self-declared roles of each respondent.

What is your professional role?	Total
Consultant neurologist	445
Lecturer	5
SpR	93
Research Fellow	35
Retired	6
Other	3
Blank	27
Consultant neurophysiologist	1
Grand Total	615

Table 1b – The ABN membership categories for all respondents

ABN membership category	Total
Ordinary (consultant)	400
Associate (trainee/research fellow)	123
Senior (retired consultant)	41
Not a member	38
Affiliate (post trainee but not neurology consultant)	8
Overseas (overseas consultant)	3
Honorary Foreign	1
Blank	1
Grand Total	615

Table 2: The average number for each different type of Programmed Activity for all consultant neurologists and then for those whose primary contract is with the NHS and with a University. DCC (Direct Clinical Care), SPA (Supporting Programmed Activity). This is compared to the Royal College of Physicians survey with all consultant physicians.

	ABN survey N=445	ABN survey Primary contract NHS N=351	ABN survey Primary contract University N=76	RCP survey All Physicians
Total	9.3	9.6	9.5	10.5
DCC	6.3	7.1	3.0	7.4
SPA	1.6	1.8	1.1	1.9
Academic	1.2	0.2	5.9	0.6
Other	0.5	0.5	1.4	0.7

Table 3 Geographical spread of consultant neurologists across the country as a percentage of the total. *NHNN = National Hospital for Neurology and Neurosurgery

	ABN (%)	RCP (%)	Population (%)
England	84	86	85
London & Southeast (NHNN*,Thames)	35 (13,22)	39	28
East Anglia	4	8	9
Mersey & Northwest	9	8	10
Northern	3	4	4
Oxford	5	4	4
Southwest	6	7	7
Trent	2	4	7
Wessex	6	3	4
West Midlands	7	8	9
Yorkshire	4	8	9
Wales	4	3	4
Scotland	11	8	8
Northern Ireland	1	2	3

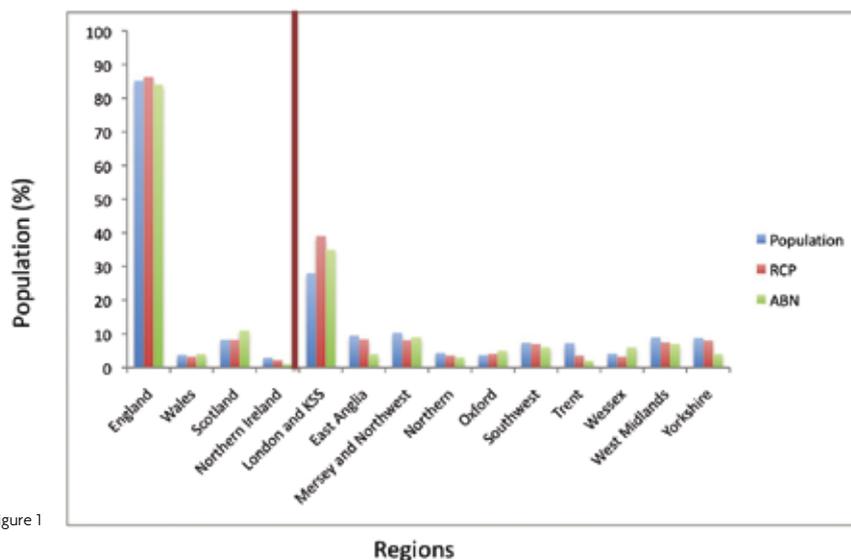


Figure 1

the respondent rate for the RCP survey was 31%. For the ABN survey, the respondent rate was 46% (445/958).

123 associate members responded to the survey (Table 1b). It is noted that 93 respondents determined their role as specialist registrars and 35 as research fellows (Table 1a). The RCP had information from the Joint Royal College of Physicians Training Board (JRCPTB) that determined the total number of neurology trainees as 362. Using this, the

respondent rate for the RCP survey was 37%. For the ABN survey, using both registrars and research fellows as a surrogate for trainees, the equivalent respondent rate would be 35%.

The role of the respondent / Membership of the ABN

Table 1a lists the self-declared role of each respondent and 1b summarises the membership category of the ABN held by the respondents.

Consultant Neurologists

This section of the report is based on consultants alone ie those who responded as their role being a consultant neurologist.

Consultant workforce

The RCP survey calculated the number of consultant neurology Full time equivalents (FTEs) for the population of 65,737,181 as 873 ie 1 per 75,292. The total number of Direct Clinical Care (DCC) and Supporting Programmed Activity (SPA) for the 445 consultant neurologists surveyed in the ABN survey was 3419. If this is extrapolated to the 958 consultants, that would equate to 721 FTEs ie 1 per 91,175 (1.1 per 100,000). If all the PAs in the ABN survey were considered together ie including university and others then this would equate to 875 FTEs, which is equivalent to the RCP estimate of 873. The similarity between the two surveys adds validity to the data but as one of the aims of the ABN survey was to identify FTEs involved in patient care (ie DCC and SPA), the figure of 1 per 91,175 (1.1 per 100,000) is the most accurate reflection of consultant neurology numbers involved in patient care and thus for workforce planning future needs.

To put this in context, in 2004, according to WHO² high, high middle, low middle, low income countries, the number of neurologists per 100,000 population was 2.96, 3.10, 0.74 and 0.03 respectively. This is despite the UK having a relatively good density of medical doctors per 10,000 of the population at 28 (WHO 2019³) where the equivalent numbers for high, high middle, low middle, low income countries are >30, 10-30, 2-10, <2 respectively. A recent survey in 2019 by the European Academy of Neurology⁵ (EAN) estimated the number of neurologists per population in the UK to be 1 per 39,059 (mean across Europe 1 per 15,799). The discrepancy in results is due to the European study including trainees and not including the impact of less than full time working. The similarity of the RCP and the ABN data suggests the ABN figure of 1 per 91,175 for FTEs is more accurate but even using the EAN number the UK was ranked 44 out of 45 European countries for number of neurologists per population with only Ireland being worse.

The number and type of Programmed Activities (PAs) for consultants was analysed and showed that neurologists were similar to physicians as a whole when considering those whose primary contract was with the NHS (79%). However, unsurprisingly those with their primary contract with a university (17%) had different job plans (Table 2).

Geographical spread of workforce

The geographical spread across the country compared to the spread of the population is outlined in Table 3 / Figure 1. Although the proportion of consultants currently based in London and the South East was greatest, the number of consultant neurologists in this region remains well below the numbers in other high income countries.

Table 4: The percentage of male and female consultant neurologists as per the ABN and RCP survey compared to the consultant physicians as a whole.

	ABN survey (%)	RCP survey neurologists (%)	RCP survey All physicians (%)
Men	61	77	63
Women	29	23	37

Gender

The RCP survey calculated the percentage ratio of men to women as 77:23 ie less gender balanced compared to the physicians as a whole (Table 4). The ABN survey found that the balance was better (10% did not answer the question) but still not on par with physicians as a whole.

Table 5: The percentage of consultant neurologists in each ethnic group compared to the consultant physicians as a whole.

	ABN survey (%)	RCP survey All physicians (%)
Data available on	91	82
White	76	65
Asian	11	28
Mixed	2	2
Black	0.9	2
Other	0.7	3

Ethnicity

The ethnic profile of consultant neurologists is currently different to that of the consultants as a whole with fewer from ethnic minorities (Table 5).

Table 6: The percentage of consultant neurologists who have graduated from either UK, Europe or otherwise compared to the physicians as a whole.

	ABN survey (%)	RCP survey
UK	71	72
Europe	14	8
Outside Europe	10	20

Country of Graduation

The proportion of neurologists from Europe and outside Europe is reversed compared to physicians as a whole (Table 6). Most consultant neurologists who trained outside the UK trained in Europe rather than outside Europe.

Less than full time working

27% of consultant neurologists reported that they worked less than full time (LTFT). 56 (47%) were women; 49 (42%) were men and 13 (11%) did not specify their sex. 8/118 consultants stated that they were part time but their PAs totalled greater than 10 and 33/327 consultants stated that they were full time but their PAs totalled less than 10. As per the RCP census, this was not taken into account and the data were analysed based on self-reporting. The equivalent for RCP census was 23% of all physicians reported that they worked LTFT.

The reason for this varied depending on gender – 84% of women worked LTFT for family commitments and 65% of men worked LTFT due to partial retirement. The percentage of male consultants increased with age (Figure 2) so most male consultants working LTFT were older.

Clinical work performed

84% of the consultants reported that they practiced general neurology. There was a spread in the number of general neurology clinics run per week with an average of 2.3 (standard deviation 1) – see Figure 3.

The top three sub-speciality clinics run by consultant neurologists were epilepsy, multiple sclerosis (MS) and movement disorders with 15%, 14% and 13% of consultants reporting these three as their main subspecialist interest (Figure 4). The prevalence of these three conditions is epilepsy 4 per 1000 and both MS and Parkinson’s are 2 per 1000. Taking prevalence into account, there should be double the number of consultants for epilepsy compared to MS and Parkinson’s. The prevalence of stroke is 14 per 1000 but the finding that stroke is not within the top three is probably explained by other medical specialities being involved in stroke care. However Shape of Training changes with consultant neurologists being more involved in acute neurology and stroke may impact on this in the future. Figure 4 illustrates the spread of sub-specialities covered by neurologists.

Table 7: The average number for each different type of Programmed Activity for consultant neurologists who have “retired and returned” compared to consultant neurologists as a whole. DCC (Direct Clinical Care), SPA (Supporting Programmed Activity).

ABN survey		
	Retire and Return N=28	Consultants N=445
Total	7.2	9.3
DCC	5.0	6.3
SPA	1.4	1.6
Academic	0.8	1.2
Other	0.2	0.5

Retire and Return

6.3% of consultant neurologists reported that they were in a “retire and return” post. This is in comparison to the 4.9% of all consultant physicians reported in the RCP survey. The distribution of work performed by this group of consultants is shown in Table 7 as compared to the consultant neurologist group as a whole.

Neurology Trainees

This section presents the trainee data. As mentioned above, for this analysis, those respondents who self reported themselves as either a specialist registrar (93) or a research fellow (35) are considered as a trainee.

Table 8: The percentage of male and female trainees compared to consultant neurologists as per the ABN survey and also compared to the RCP survey of the trainees as a whole and for neurology trainees alone.

	ABN Survey Consultants (%)	ABN Survey Trainees (%)	RCP Trainees (%)	
			Neuro	All
Male	61	56	57	49
Female	29	40	43	51
Did not say	10	4	Not available	

Gender

Although the trend is shifting towards gender equality, this has not reached the level of medical trainees as a whole with a higher proportion of neurology trainees being male (Table 8).

Table 9: The percentage of trainees in each ethnic group compared to consultant neurologists and to the RCP survey of trainees (neurology and as a whole).

	ABN Survey Consultants (%)	ABN Survey Trainees (%)	RCP Survey All trainees (%)	
			Neuro	All
Data available on	91	94	41	
White	76	61	57	55
Asian	11	23	26	28
Mixed	2	4	3	3
Black	0.9	5	2	3
Other	0.7	1	6	5

Ethnicity

As with gender, the shift in the ethnicity of the neurology trainees is moving towards the ethnic distribution seen for trainees as a whole (Table 9).

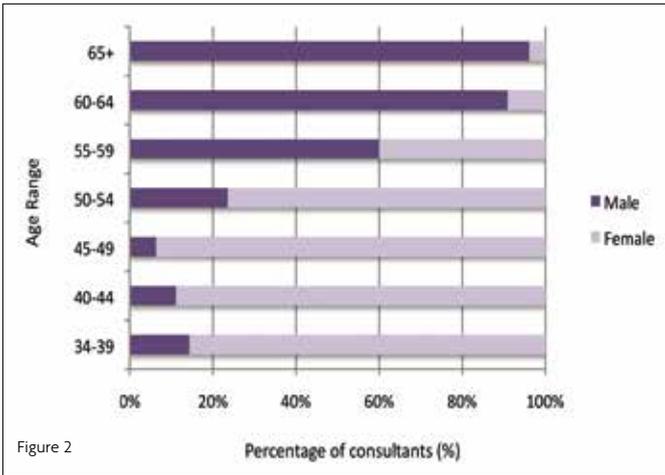


Figure 2

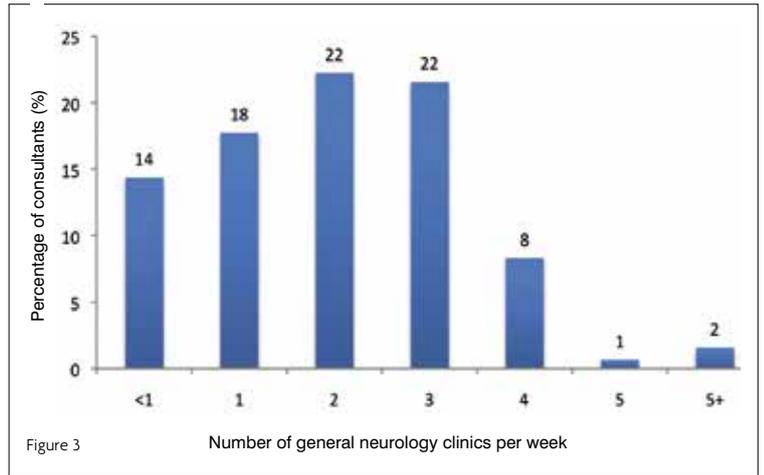


Figure 3

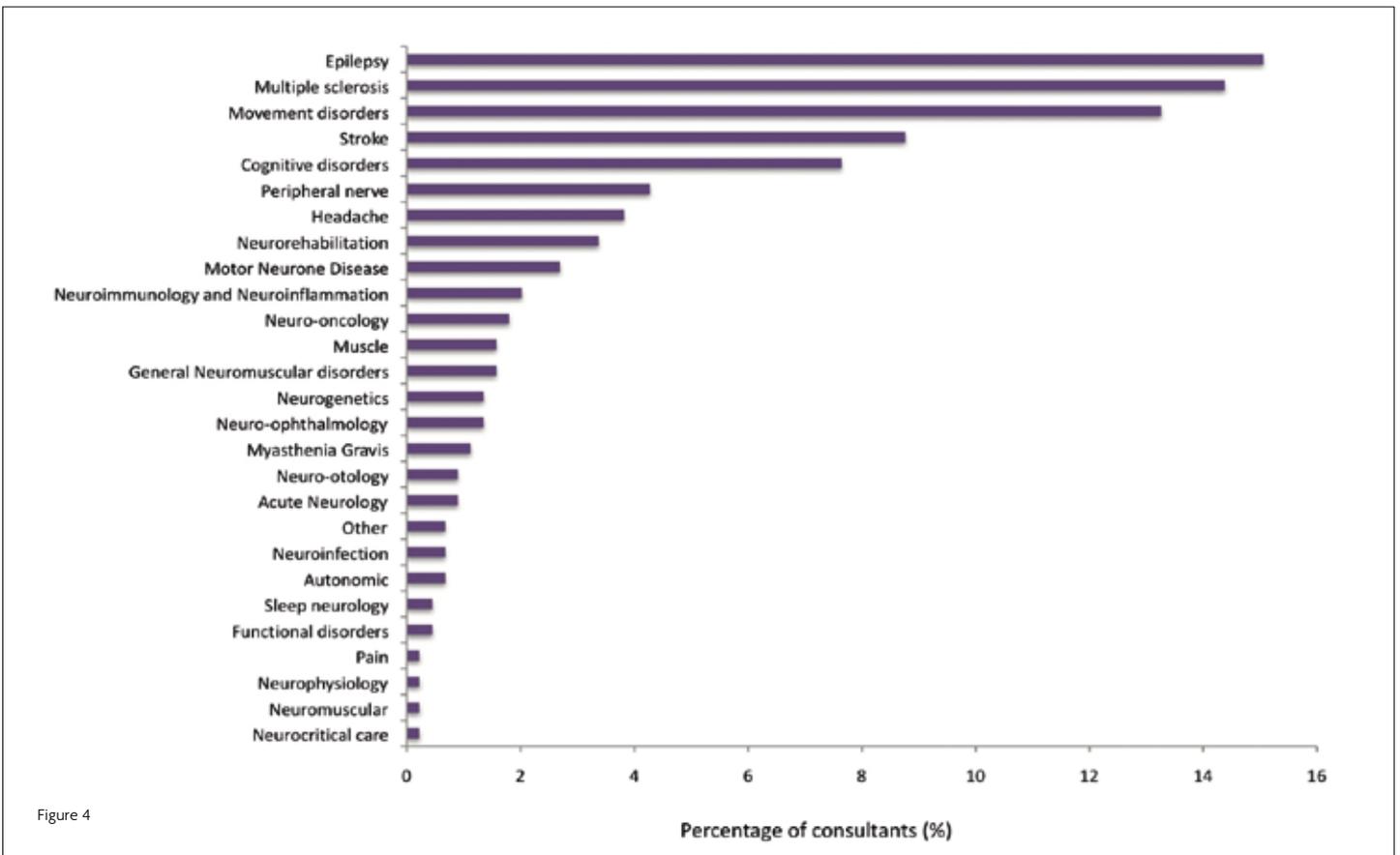


Figure 4

Table 10: The percentage of neurology trainees who have graduated from either UK, Europe or outside Europe compared to the ABN survey data of neurology consultants and RCP survey data of trainees as a whole.

	ABN Survey Consultants (%)	ABN Survey Trainees (%)	RCP survey (%)
UK	71	79	78
Europe	17	9	6
Outside Europe	10	11	16

Country of Graduation

This is similar to RCP trainees as a whole (Table 10).

Less than full time working

Fewer trainees work less than full time compared to consultants. This needs to be taken into account in workforce planning as the number of consultants who work LTFT is over double (27%) the number of trainees (12%) who do so (Table 11). Compared to trainees as a whole, more male neurology trainees work LTFT. 75% of female LTFT trainees cited family commitments as the reason for working LTFT whilst 17% of male LTFT trainees gave that reason with 83% of the men stating “other – not specified”.

Table 11: The percentage of trainees who reported Less Than Full Time (LTFT) working compared to the consultant cohort and to the RCP survey of trainees as a whole and for neurology trainees alone.

	ABN Survey Consultants (%)	ABN Survey Trainees (%)	RCP Survey All trainees (%)	
			Neuro	All
LTFT	27	12	14	14
LTFT who are women	47	53	78	88
% of total consultants / trainees working LTFT				
women	43	16	25	26
men	18	8	4	3

Discussion

The key findings of this survey conducted by the ABN are:

1. For consultant neurologists involved in patient care (DCC and SPA PAs), the number of FTEs is 1 per 91,175 (1.1 per 100,000) and not 1 per 75,292 as calculated by the Royal College of Physicians. This is much less than expected for similar high income European countries⁵ (eg. France and Germany both have 1 per less than 25,000). This inevitably has an impact on quality of care provided for patients with a neurological condition especially with regards to equitable and timely access to a consultant neurology opinion throughout the UK.
2. As per the RCP data, there is significant geographical variation in the number of consultants throughout the UK.
3. There is a gradual shift when comparing the trainee and consultant data towards better gender and ethnic representation in the former.
4. There is concern for future workforce planning in that the number of female trainees is increasing but of the 27% of consultants that work part time 47% are female and work part time mainly due to family commitments. In contrast the 42% of male consultants that work part time generally do so at the latter stage of their careers due to partial retirement. If the increasing number of female trainees continue to work part time at the same rate as the current female consultants do then this will have an impact on consultant neurologist numbers in the immediate future.
5. The type and number of sub-specialist clinics offered by consultant neurologists is appropriately centred around the three most prevalent neurological conditions (epilepsy, multiple sclerosis and Parkinsons disease) with the exception of stroke which may be explained by stroke care being traditionally shared by multiple medical specialities.

The ABN survey has provided valuable and accurate data on the number of consultant neurologists involved in patient care, the gender and ethnic breakdown of the consultant body and for the first time the breakdown of general neurology and sub speciality practise. Similar data is provided for neurology trainees.

The key limitation of this survey is the assumption that the respondents to the survey are representative of the consultant neurologist / trainee population.

Whilst it is reassuring to see the shift among neurology trainees towards a more representative gender and ethnic mix, there are worrying findings highlighted by this survey. The fact that the number of neurologists involved in patient care is

much less than comparative to European countries⁵ is particularly worrying at a time when there is a marked and welcome increase in therapies for neurological conditions which often need specialist administration and monitoring (eg. immunotherapies for multiple sclerosis, thrombectomy for stroke and the advent of novel genetic therapies for inherited neurological diseases). Although there is geographical variation in the number of neurologists in the UK with particular recruitment difficulties in certain parts of the UK that need addressing, the total number of consultant neurologists in the UK is too low and workforce planning needs to focus on increasing this number. This is particularly important as neurologists are increasingly and appropriately involved in stroke care, and the plan for neurology training in the new Shape of training curriculum is for all future neurologists to be dually trained in neurology and stroke medicine for the benefit of the patients.

Another urgent concern is the dual impact of LTFT working doubling as trainees move to consultant posts and the 6% of neurologists who have retired and returned. We appreciate there are too few doctors across all specialities in the UK⁴ and that various long term solutions are being discussed to address this. There is an urgent need to immediately address the needs of young parents to make it easier to work more if they choose to do so. Making it more attractive for consultants not to either retire early or retire and return but to stay full time longer could also be made feasible immediately by removing the financial penalties of continuing to work full time. This is an issue which affects all specialities and is under active discussion which hopefully will lead to a speedy resolution.

We would like to thank all who contributed to this survey. Having accurate information is the first step towards recognising problems and working towards solutions.

REFERENCES

1. Royal College of Physicians. *Focus on physicians: 2018-2019 census (UK consultants and higher speciality trainees)*. Accessed December 2019
2. WHO & WFN. *Atlas Country Resources for Neurological Disorders*. 2004
3. Global Health Observatory data, WHO 2019. Accessed November 2019. WHO & WFN. *Atlas Country Resources for Neurological Disorders*. 2004
4. Goddard A. *Double or Quits: calculating how many more medical students we need*. Royal College of Physicians June 2018
5. Günther Deuschl, Ettore Beghi, Timea Varga. *The burden of neurological diseases on Europe: country profile of the UK*. European Academy of Neurology. 24.6.2019.

Working less than full time – trainee experience, and top tips

By Amy Ross Russell and Rhian Raftopoulos
Full author details on page 34

Data from the RCP 2017/2018 census demonstrates that the number of physicians training flexibly at both consultant and trainee levels is increasing. Approximately 27% of neurology consultants, and 12% of neurology trainees work Less Than Full Time (LTFT), according to the ABN workforce survey 2018, and 18% of responses to the recent ABNT census 2020 were LTFT trainees.

This perhaps reflects a changing culture within medicine and more broadly within society itself recognising the need for a better work-life balance with greater autonomy over how and when we work. There are many reasons a doctor may choose to work LTFT as well as many different ways of working flexibly and the concept and accessibility of flexible working within the NHS is still evolving.

We are two neurology trainees at different stages in our career who have chosen to work LTFT and we hope to give you the benefit of our experience so far.

We both started LTFT working on our return to work after our first maternity leave. We hoped that working flexibly would give us the best of both worlds, allowing us to spend important time at home with our children, whilst continuing to progress and thrive in our careers.

The reality is not always as simple and there are times when the two worlds compete and spill over into each other, and it can sometimes feel like we are performing neither role well. Juggling our two identities effectively without feeling a sense of disloyalty to either or both is a challenge.

However, overall LTFT working has been a positive experience for both of us and has given us the flexibility to enjoy the demands of neurology training, whilst also enjoying quality time with our family.

Eligibility (and being organised)

Recent changes to guidance mean that all junior doctors with “well founded individual reasons” should have the option of LTFT working and all applications should be viewed positively. In practice LTFT requests are mainly prioritised based on two categories. Category 1 includes disability or ill health (this can include undergoing IVF), caring for an ill or disabled partner, relative or