



Neurology Workforce Survey
conducted by
the Association of British Neurologists
2018-2019
V10 28th January 2020

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Introduction

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 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 2019¹. 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, 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 of respondents determined their role as specialist registrars and 35 as clinical fellows (Table 1). 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 clinical 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 of the ABN held by the respondents.

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

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 1b – The ABN membership categories for all respondents.

Neurology Consultants

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

Consultant workforce

The RCP survey calculated the number of neurology consultant 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 2 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 neurology consultant 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 are >30, 10-30, 2-10, <2 respectively. A very 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 very different job plans (Table 2).

	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 2: The average number for each different type of Programmed Activity for all neurology consultants 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.

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, this remains well below the numbers in other high income countries.

	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

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

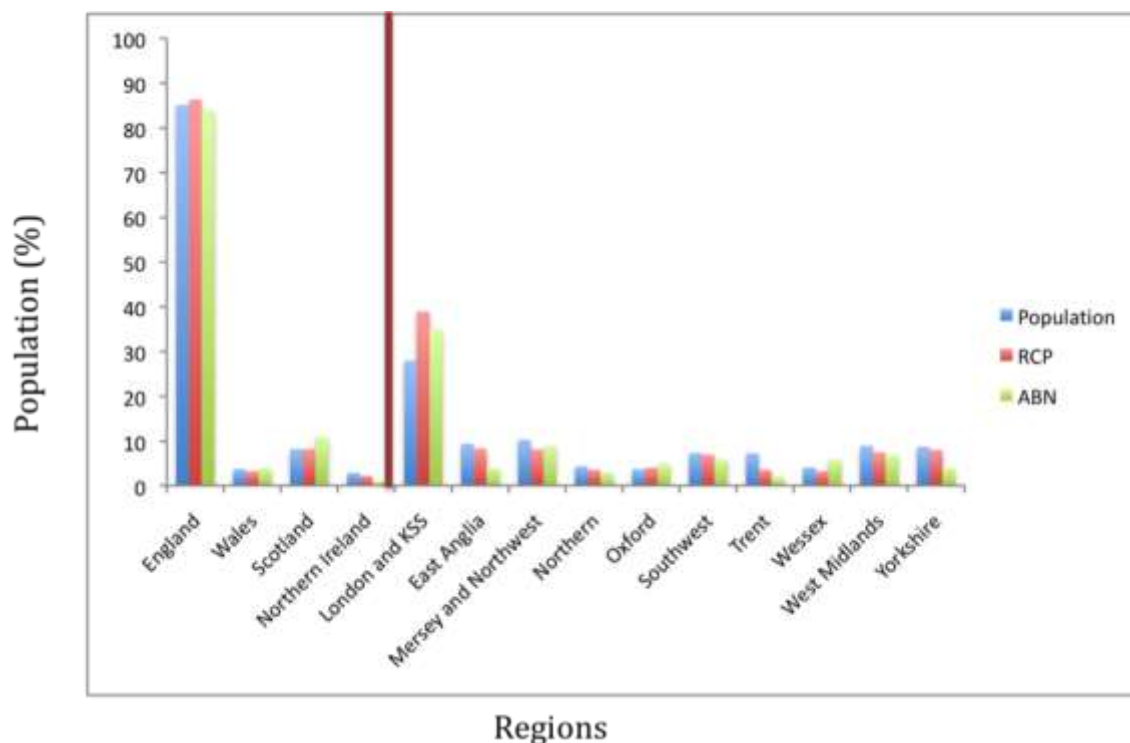


Figure 1: Geographical spread of consultants across the country as a percentage of the total. First section for the four nation countries and the next section is the regions. Blue bar is for the regional populations. Red bar is derived from the RCP survey and the green from this ABN survey.

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. This survey found that the balance was better (10% did not answer the question) but still not on par with physicians as a whole.

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

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.

Ethnicity

	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

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

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

Country of Graduation

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

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

The proportion of neurologists from Europe and outside Europe is reversed compared to physicians as a whole.

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 age – 84% of women were for family commitments and 65% of men were due to partial retirement.

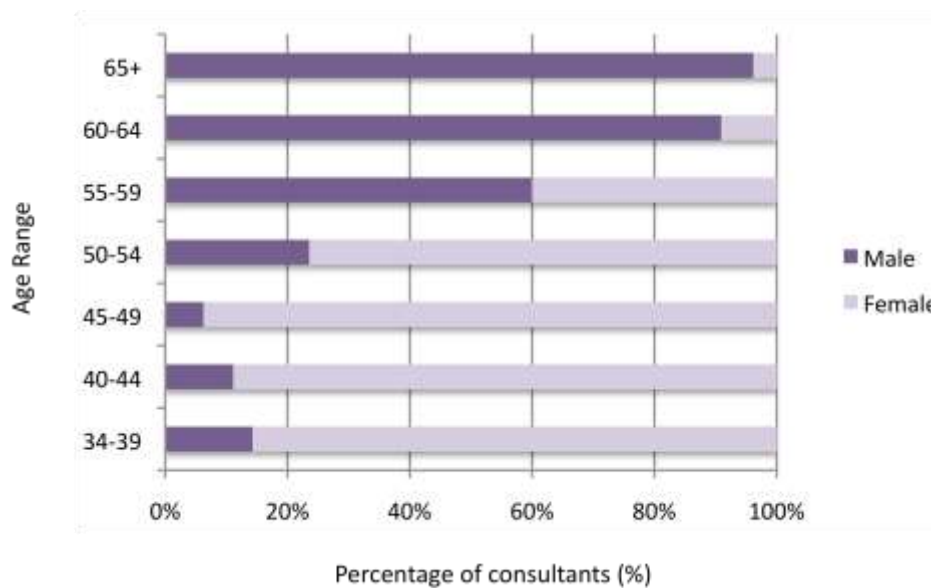
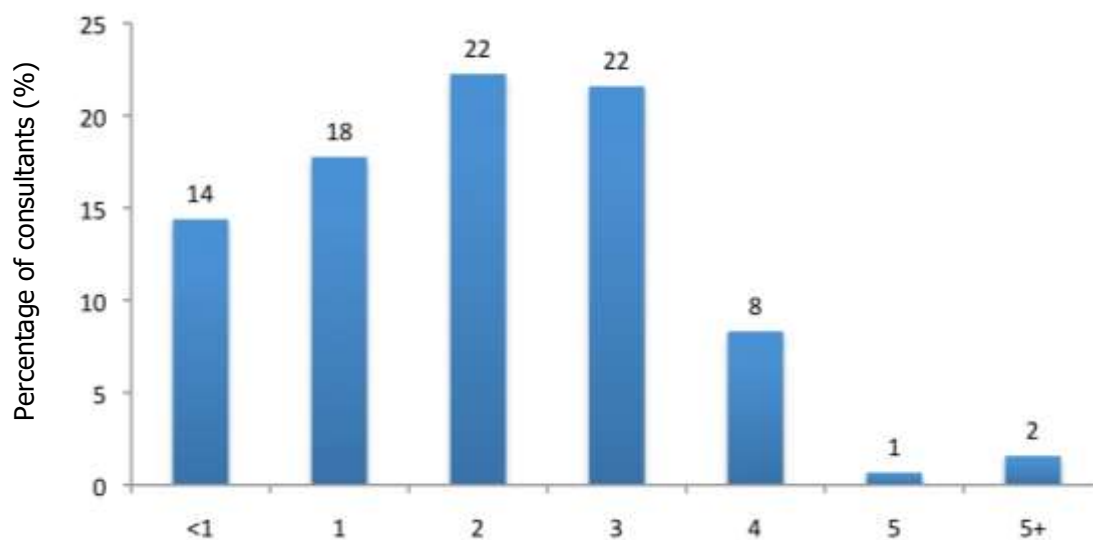


Figure 2: The percentage of consultants working LTFT (less than full time) differentiated by age range

Clinical work performed

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



Number of general neurology clinics per week

Figure 3: The spread of the number of general neurology clinics run by neurologists (as a percentage of the total number of consultants)

The top three sub-specialities were epilepsy, multiple sclerosis (MS) and movement disorders with 15%, 14% and 13% of consultants reporting these three as their main subspecialist interest. 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 is not within the top three which is probably explained as other medical specialities are involved in stroke care. However Shape of Training changes with more involvement in acute neurology and stroke may impact on this. Figure 4 shows the spread of sub-specialities covered by neurologists.

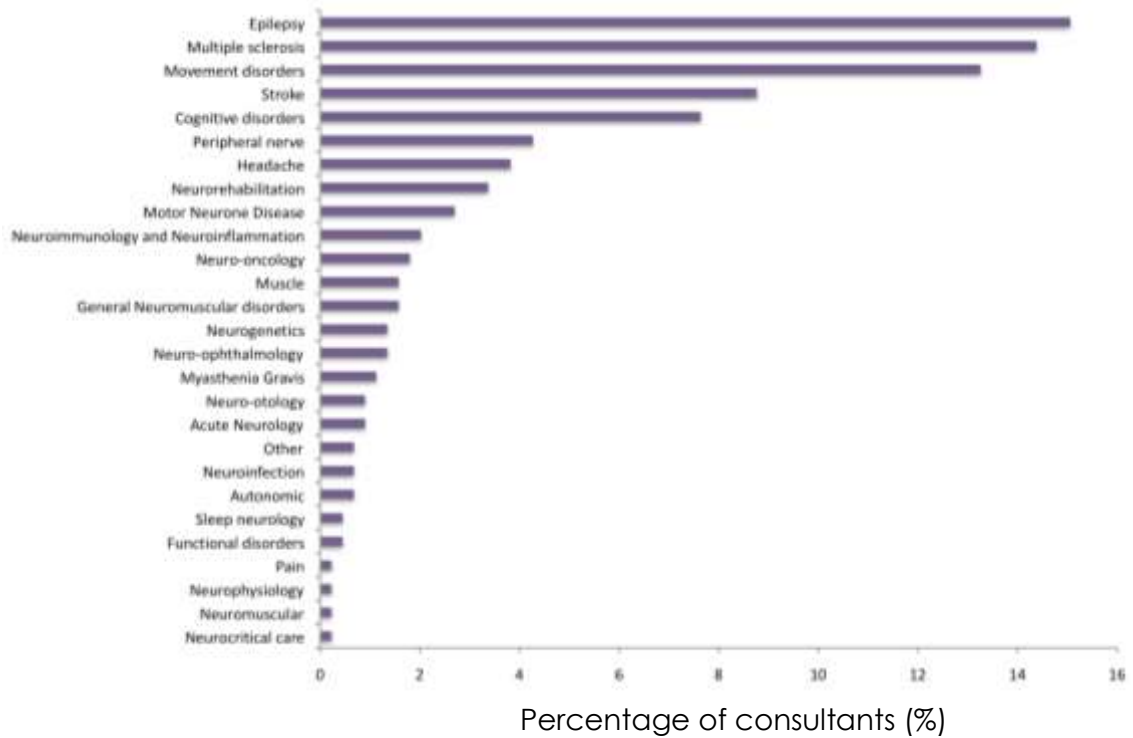


Figure 4: The range of sub-specialities reported by consultants as a percentage of the total number of consultants

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 8 as compared to the consultant neurologist group as a whole.

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

Table 8: The average number for each different type of Programmed Activity for neurology consultants who have "retired and returned" compared to consultant neurologists as a whole. DCC (Direct Clinical Care), SPA (Supporting Programmed Activity).

Neurology Trainees

For the next section, the trainees' data are analysed. 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.

Gender

Although the trend is shifting towards gender equality, this has not reached the level of medical trainees as a whole – see Table 9.

	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	

Table 9: The percentage of male and female trainees compared to consultant neurologists as per the ABN survey. Also compared to the RCP survey of the trainees as a whole and for neurology trainees alone.

Ethnicity

As with gender, the shift in neurology training ethnicity data is moving towards the ethnic distribution seen for trainees as a whole.

	ABN survey Consultants (%)	ABN Survey Trainees (%)	RCP survey (%)	
			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

Table 10: The percentage of trainees in each ethnic group compared to the consultant neurologists and to the RCP survey of trainees (neurology and as a whole).

Country of Graduation

This is similar to RCP trainees as a whole.

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

Table 11: The percentage of neurology trainees who have graduated from either UK, Europe or otherwise compared to the ABN survey data of neurology consultants and RCP survey data of trainees as a whole.

Less than full time working

Fewer trainees work less than full time compared to consultants and this needs to be taken into account when planning the workforce as the number of consultants who work LTFT is over double the number of trainees who do so. Compared to trainees as a whole, more male neurology trainees work LTFT. The reason given was “other – not specified” for the 75% of men working LTFT whilst 25% cited family commitments. In contrast, 75% of female trainees cited family commitments.

	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

Table 12: 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.

Summary

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

1. For neurology consultants 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 neurology consultant numbers in the immediate future.
5. The number of sub-specialist consultants is appropriately centred around the three most prevalent neurological conditions with the exception of stroke which may be explained by stroke care being traditionally shared by multiple medical specialities.

Discussion

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.

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 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). Although there is geographical variation in the number of neurologists in the UK and there are particular recruitment difficulties in certain parts of the UK that need addressing, the total number of neurologists is too low and the focus needs to be increasing this number. This is particularly important as neurologists are increasingly and appropriately involved in stroke care and the vision of 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 immediate impact of LTFT working doubling when moving from trainee 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 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.

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