

A Reply to the ABNT

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It would be a pity for the call by British neurology trainees for a wider debate about the role of the neurologist in the UK to go unanswered.¹ Implicit in that call is a consideration of the number of neurologists needed in the UK and the nature of the jobs that they might do, an unresolved discussion that has occupied and perhaps divided British neurology (and general medicine) since the 1950s. The debate needs to continue and needs to take account of the changing political and health service climate. It can then inform those who can influence the supply and working patterns of British neurologists. The position that I take and can justify is that British neurology has failed to expand and is unlikely to expand sufficiently (in number or in geographical distribution) to fulfill its obligation to the nation's neurological health. To make matters worse, the problems caused by this failure are compounded by ever increasing demand, a consequence of well intentioned but poorly designed political imperative.

The first objective of the ABN is "to encourage nationwide availability of excellent and equitable neurological services".² In 1954, when there were 41 neurologists in the London metropolitan regions and 18 in the rest of the UK, a Royal College of Physicians Committee³ reported that there should be "an active neurological department in all such centres of population as necessary to cover the needs of the country". As the ABN approaches its seventy-seventh anniversary, with around 550 neurologists in the UK (one per 110,000) the goal of equitable access seems as elusive as ever.⁴

What's happening to outpatient neurology?

In 2005-6 the chance of an individual being seen in a neurology outpatient clinic varied hugely according to their PCT of residence⁴ despite a doubling of consultant numbers in the preceding ten years. This suggested that consultant expansion in UK neurology had not been driven by a rational initiative to improve neurological health but by a combination of outpatient waiting list targets and the prioritising of new patients with neurological symptoms. The need for outpatient neurology has proved to be much greater than predecessors anticipated and demand has yet to be satiated. David Stevens⁵ estimated that, according to need as calculated by disease prevalence figures, one neurologist was necessary per 100,000 population (or around 600 in the UK and very close to the current national figure) yet in some parts of the country there is already one neurologist per 60,000.⁶ Most areas are still struggling to meet outpatient demand but this shouldn't be a surprise. In other demand-led health systems, for example the USA or Italy, the average neurologist serves a much smaller population (1 per 22,000 USA, 1 per 8,000 Italy) and so it might have been anticipated that unchecked outpatient demand could propel the number of neurologists

needed in the UK to at least one per 60,000 (or around 1000 neurologists) if not many many more. GPs and other specialists are referring more and more⁷ as patient and professional expectations rise and they become less and less comfortable managing a medical specialty in which knowledge and practice are changing rapidly. NICE judgements on neurological conditions ask for early referral to an expert for suspected cases and continuing follow-up for established illness. Expansion has happened but, thus far, it hasn't made an impact on the lottery of neurology expertise; areas that already had a fair share have been as likely to gain more consultant neurology outpatient time over the past ten years as areas without.

What's happening to inpatient neurology?

Whilst the rising demand and continuing inequity in outpatients is visible,⁴ the situation with emergencies and in-patients is probably much worse (because ill patients don't travel unless they know to or have to) and is hidden. There are over 400 acute admitting hospitals in the UK and, in 2007, 550 neurologists (of whom 50 are counted as academic). Many hospitals have access to on-site inpatient neurology opinion for only one or two days a week, sometimes for outpatients but not for inpatients. The RCP manpower report of 2007⁶ showed that the population in the UK served by a neurologist varies by a factor of 3.9 (an imbalance only exceeded in the medical specialties by medical oncology) so what are the chances, throughout the country, of a patient admitted with an acute neurological illness being seen by someone in that place with specific training and qualification in that specialty? Does anyone know what is happening in those acute admitting hospitals without readily available neurology opinion to patients with new neurological illness or complications of existing ones? The doubling of consultant numbers since 1997 may have given more DGH's more neurology outpatient time but that doesn't necessarily imply improvement in the local management of acute neurology.

How did we get here?

The first report of the RCP committee on Neurology⁸ was published in July 1945, and recommended that "there will need to be a considerable increase in the total number of neurologists and a more even distribution of them throughout the country, in accordance with the distribution of the population". The follow-up 1954 report³ pointed out that "there had not been an expansion of the neurological services proportionate to the expansion in other medical specialties" and that "the public was not receiving as satisfactory a neurological service as it was entitled to expect". The latter report gives two explanations for the failure to expand the neurological services at that time: financial stringency and the attitude of the medical profession towards specialisation. In

1984 Hopkins⁹ asked neurologists and professors of medicine how they saw the development of neurology in the UK, his paper throwing an entertaining light on subsequent events. Whilst most neurologists argued for pure neurology posts, members of the Association of Professors of Medicine instead argued for posts of physician-with-an-interest-in-neurology. In 1992, when there were 152 whole time equivalent neurologists, Richard Langton Hewer published two linked papers^{10,11} beginning with a quote from a North American colleague that "The United Kingdom must have one of the worst neurology services in the Western World". He reviewed the history of British neurology and the distribution of neurologists in the country, and found that the population served by a neurologist in the UK varied by a factor of four (so it's changed since then by 0.1). Considering the burden of neurological disease (note that it was disease, not symptoms) he wrote that it would be unrealistic that this could all be dealt with by neurologists; the majority of people with neurological symptoms, and many with serious neurological disease, would have to continue to be dealt with by non-neurologists. The ABN report of 2002 'Acute neurological emergencies in adults'¹² looked instead at inpatients and called for a national ratio of one neurologist per 43,000 in order to provide a comprehensive on-site full time neurology service in all DGHs (so about 1400 nationally in total). Another ABN report, of 2003, 'UK-Neurology the next ten years'¹³ described what is needed for a high quality neurological service and stated that "all acutely ill inpatients with neurological problems should be looked after by consultant neurologists", requiring "significant increases in staffing". British neurology began in London and went on to develop in regional centres. As the number of neurologists has grown so the regional centres have grown, with the hub and spoke system touted as the way to best serve the country's needs. But now, whilst we seem to be in a position where we have many hubs and lots of spokes, some of the spokes are only in place once, twice or however many times a week the neurologist might visit (unless they are on leave that week). For many admitting DGHs, on-site neurology opinion is not a reliable resource.

What are the consequences?

Working in a DGH one sees daily consequences of the long-term rationing of neurological expertise outside of teaching hospitals. At least one generation of British doctors may not have been taught or has not learned enough neurology to manage the commonly presenting symptoms and illnesses.¹⁴ In this context, when the outpatient barriers came down, it was inevitable that so many patients with neurological symptoms would be referred; as part of the inundation of outpatients there are many who might not have been sent had the referring doctor a little more competence and confidence. Some patients are

referred unnecessarily whilst others are referred to the wrong place; a common complaint from patients with neurological symptoms is that they have seen several other specialists first. Just as the barriers to outpatient neurology have been forced down by waiting list pressure so they appear (in my opinion, properly so) to be coming down with inpatients too. Whilst some generalists appear paralysed by managing acute neurology others seem almost too keen to "have a go" themselves or, more likely, to be too aware of the scarcity of neurologists to wait. I'm often surprised both by how some non-neurology colleagues make little effort to sort out the problem, whilst others make too much effort in the wrong direction. Neurological experience and training in the UK has been in short supply for so long, yet we still expect non-neurologists to diagnose and manage so much neurology so well.

Thrombolysis is being introduced across the country¹⁵, the acute patients in many areas to be assessed by A&E doctors or geriatricians. So a potentially lethal treatment with still-debated benefit even to those who definitely have the condition is placed into the hands either of those trained to decide and act quickly in medical emergencies (probably OK if they get the diagnosis right, possibly fatal if they don't) or those who are trained in managing the complications of growing older. There are now specifically-trained stroke doctors. The production of doctors who are experts in only one acute brain illness strikes me as being another well-intended but poorly designed response to the lack of neurologists. The recently announced national dementia strategy¹⁶ calls for a rapid and competent specialist assessment. From which specialty will these specialists be drawn? Will it be from those with training in psychiatry, from those with training in elderly care, or from those with training in neurology? The scarcity of neurologists outside of teaching hospitals also has implications for neurological research. Samples are biased towards teaching hospital patients (predominantly urban and mobile), and patients living further away are denied the opportunity to take part. In the DGH the priority, in an over-stretched specialty, has to be service delivery, not research.

What is going to happen next?

At a time when the NHS is about to feel the consequences of the global economic crisis, and after ten years of increasing funding and consultant posts, it is no longer reasonable to blame financial stringency. Perhaps instead we have to look again at the attitude of the medical profession towards specialisation, within and outside of neurology and within and outside the regional centres. It may not be a surprise to neurologists that the professors of Medicine got it so completely wrong in 1984,⁹ although, being Professors, their opinion then may not have been representative of their DGH physician colleagues. What are the opinions now? Are GPs and general physicians likely to manage and hold back as much of the

general neurological symptomatology as they did? Ten years of managing waiting lists and seeing inpatient referrals as a DGH-based consultant has taught me otherwise. Would cardiologists, endocrinologists, gastroenterologists or nephrologists be happy for a sufficient level of expertise in their specialty to be assumed and delivered by non-specialists? And when these specialists are on-call for general medicine are they or should they be comfortable with acute neurology? What about other neurologist's opinions now? Do they want expansion? My best guess is that in the less well provided areas they will and in the better provided areas they won't. If regional centre neurologists aren't keen on expansion, do they support expansion in the rest of the country to bring it up to an equivalent level?

Current prediction¹ is of, at most, 65 new neurology consultants coming out of UK training each year. At 65 per year, as long as no-one departs the specialty or chooses to work flexibly, neurology will reach 1400 nationally (the figure estimated by the ABN to reach 1 per 43,000) in about twelve years. Planning and predicting jobs has always been difficult but I'm aware of at least three unfilled jobs in very desirable parts of the country already and there may be many more. If outpatient demand carries on up, and if general physicians become more reliant on specialist opinion in neurology (as I believe they should and will), then there should be even more unfilled posts to come. The predicted NHS financial difficulties ahead may however mean that there isn't the money to fund new posts and, sadly, that British neurology will have missed a golden opportunity to improve service provision.

What can we do about it?

Can we do anything in the meantime as the demand for inpatient and outpatient neurological expertise increases and the UK underproduces neurologists? The first thing might be to develop methods for sieving and serving the demand for new outpatient neurology opinion. Turning back the tide is impossible so we may need a tier of doctors in neurology who can manage the bulk of headache, dizzy turns and query first fit and TIA referrals. They would, in effect, be community-based and could come from neurology, general practice, general medicine or geriatrics. If they are to have sufficient credibility and skill it seems important that they are trained by neurology, accredited by neurology, and continue to work in close association with neurology. Relying on self-appointed GP (or other) experts in stroke, PD and dementia is surely not good enough. Freeing some neurologist outpatient time in this way might give more time for inpatient care. Perhaps also, for the time being, we should stop appointing neurologists to areas with plenty already; it is in the district general hospitals and communities that neurologists are needed. These hospitals usually have MRI machines, and neurophysiology can travel, so the lack of investigative facilities is no longer a reason for centre-based neurologists not to get

out more. Transferring patients to the local neurological centre may be OK in large cities but it doesn't work so well when the centre is 50 miles away. If we can't train and fund sufficient neurology expertise to provide for wherever the patient is admitted, then perhaps we should be arguing that it is only neurologically safe to admit them to selected places.

Conclusion

It is to be regretted that the problems in neurological service delivery in the UK have not been noted by neurology alone. The recent All Party Parliamentary Group report on Parkinson's disease (17) identifies significant inequalities in service for patients with Parkinson's disease. This group wasn't the first (3,11,18) and perhaps its stern reprimand, what it calls "a lack of leadership for

neurological services at local and national level", is deserved. A better staffed and more equitably distributed neurology could provide local and national leadership for service delivery in Parkinson's disease, as well as for epilepsy, multiple sclerosis, stroke, dementia, muscle disease and every other neurological illness.

The UK urgently needs more predominantly DGH-based neurologists. When they become available they will need to run outpatient clinics and organise around themselves teams of medical and paramedical staff to manage the acute admissions, the new outpatient referrals and the long term neurological illness in the community. In the meantime, whilst neurological expertise remains in short supply (not enough neurologists being trained, not enough money to pay for them), the UK needs

to make the most of what is available. That may mean teaching and supervising GP's and hospital doctors in neurology so that wherever the patient presents and is admitted in the UK they can be sure of competent neurological expertise and management. It may mean imposing local quotas on outpatient referrals, perhaps by condition, by age, by postcode or by GP. It may mean ensuring that, in the short term, undersupplied areas are encouraged to provide new consultant neurology posts whilst well-supplied areas are discouraged. It must surely mean that improving the neurology service in the UK becomes the first item on each ABN council agenda.

This is my opinion, admittedly shaped (or distorted) predominantly by south England DGH experience. Can anyone offer a different view and a counter-argument? ♦

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NEWS REVIEW

Elekta provides VMAT and radiosurgery solutions for New Jersey Health System

CentraState Medical Center (Freehold, New Jersey) has purchased two new state-of-the-art Elekta radiation therapy treatment systems, both with Volumetric Modulated Arc Therapy (VMAT). The first site in the world to have both Elekta Axesse and Elekta Infinity, CentraState will offer the most advanced cancer care available to its patients.

CentraState Medical Center, a part of the CentraState Healthcare System, currently is treating 45 to 50 patients a day – with fluctuations as high as 70 patients per day, all on one treatment unit. When the time came to add another treatment system, CentraState elected to replace another manufacturer's system and install two new Elekta systems.

One key determining factors in choosing Elekta was CentraState's desire to partner with a company that would ensure the institution would remain ahead of the technological curve. Robert Smith, MS, Director of Physics, says,



"We spent a lot of time comparing Elekta with other systems, and discovered that Elekta systems had many advantages over the competition, especially in imaging capabilities. "We'll be replacing our current IMRT techniques with VMAT," he explains. "We're looking to VMAT to increase throughput, but more importantly to reduce treatment times for our patients. That, in turn, will reduce the chance of patient movement during the treatment. We feel we can deliver a better, more precise treatment to the patient by delivering the dose in a shorter time."

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