



Meeting the Future Consultant Workforce Challenges: Stroke Medicine

Stroke Medicine Consultant Workforce
Requirements 2019 – 2022

ABOUT THE BRITISH ASSOCIATION OF STROKE PHYSICIANS

The British Association of Stroke Physicians (BASP) was established in 1999 to promote the advancement of stroke medicine within Great Britain.

Our members are all practising doctors who care for patients with stroke, with the aim of providing the highest standard of care. We value our diverse membership including physicians from a range of backgrounds and clinical roles.

Some stroke physicians look after patients throughout the pathway, while others have expertise in a particular specialist area. Some stroke physicians provide care exclusively for patients with TIA/stroke, whilst others provide care to patients from their parent speciality: for example, general medicine, geriatric medicine, neurology or rehabilitation medicine.

Many of our members have academic roles in stroke research. Our members also contribute to continuously improving the quality of stroke care according to the best available evidence.

AUTHORS

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EXECUTIVE SUMMARY

This report provides the most up-to-date guidance on stroke workforce requirements to help remedy the serious current shortfall in stroke consultants in the NHS – and ensure the highest quality care is available to all patients in the UK.

A growing problem

There is a significant and growing shortage of stroke consultants in the UK. Around four in 10 hospitals providing stroke care have an unfilled consultant post – compared to less than three in 10 in 2014.

This lack of specialist staff is limiting the ability of the NHS to deliver the latest medical advances and best treatment to stroke patients.

This report has been produced to help address this pressing issue by providing clear guidance on the workforce requirements that are necessary to support a modern NHS stroke service in the UK.

Our analysis

The calculations in this report were initially developed by the British Association of Stroke Physicians (BASP) and Getting It Right First Time (GIRFT) Stroke Programme Clinical Leads, using workforce data gathered by the Sentinel Stroke National Audit Program (SSNAP).

These calculations were further refined and agreed by a working group comprising representatives from BASP, GIRFT and stroke specialists from all four nations of the UK.

To reflect stroke specialist activity irrespective of service configuration, workforce estimates are based on the number of consultant sessions (referred to as Direct Clinical Care programmed activities, or DCC PAs) required to deliver care at the level of national care quality indicators and standards.

Our findings

The most recent estimates suggest there are currently 676 stroke consultants working in the NHS in the UK (*Sentinel Stroke National Audit Programme, November 2016*).

To provide a comprehensive dedicated stroke service, our calculations show that an additional 226 full-time stroke consultants are required. This is because a hospital admitting 600 stroke patients per year will require 40 Direct Clinical Care programmed activities (DCC PAs), and a hospital admitting 1,200 stroke patients will require 67 DCC PAs.

Key facts and figures

Stroke is the fourth single leading cause of death in the UK and the single largest cause of complex disability.*

40% of Stroke Unit sites now have an unfilled stroke consultant post, compared to 26% in 2014.

A hospital admitting 600 stroke patients per year will require 40 Direct Clinical Care programmed activities (DCC PAs), and a hospital admitting 1,200 stroke patients will require 67 DCC PAs.

Around 80,000 people have a stroke in England each year.**

Our calculations show that an additional 226 full-time stroke consultants are required to support a modern NHS stroke service in the UK.

Stroke mortality has halved in the past two decades – but without further action, survivors living with disability will increase by a third by 2035.*

** NHS Long Term Plan, ** NHS England*

Next steps

Establishing a clear recommendation for the level of medical stroke workforce required is key to raising awareness of the need for more doctors to be trained in stroke medicine and encouraging doctors to specialise in stroke medicine.

There is also significant potential to grow the stroke medicine workforce by increasing the proportion of stroke medicine programmed activities specified in consultants' job plans;

exploiting the potential for stroke medicine training within 'parent' medical specialties (acute medicine, geriatric medicine, neurology and rehabilitation medicine); and implementing additional strategies to promote stroke medicine at the undergraduate and postgraduate level.

BASP will continue to work actively with its members, allied associations and colleagues in the NHS and Department of Health and Social Care to achieve these recommendations.

1. THE AIM OF THIS REPORT

This report aims to provide timely and useful guidance on workforce requirements to clinicians, managers, commissioners and others concerned to provide a modern NHS stroke service in the UK.

It updates the BASP 2011 report Meeting the Future Challenge of Stroke 2011-2015¹ and reflects new challenges and workforce data from the SSNAP, including its 2016 audit of the stroke consultant workforce².

It focuses on providing a much-needed appraisal and overview of future workforce requirements – and a clear justification of the numbers of consultant programmed activities needed to provide comprehensive stroke care that meets national and international guidelines set out by the Royal College of Physicians (RCP)⁴, National Institute for Health and Care Excellence (NICE)⁵ and European Stroke Organisation.⁶

This report has been written by the British Association of Stroke Physicians in partnership with the Clinical Leads from the NHS Improvement GIRFT Stroke Programme and the Stroke Medicine Specialist Advisory committee (SAC).

Why is guidance crucial now?

There is a shortfall of consultant stroke specialist provision in the UK. The supply of trained stroke specialists is not meeting the demand – leaving some 40% of Stroke Unit sites with an unfilled funded stroke consultant post. This shortfall had increased since 2014, when 26% of such posts were unfilled.³

This staffing deficit leaves UK stroke services vulnerable and unable to keep pace with advances in stroke care. There have been several key advances in recent years, particularly in acute treatments for ischaemic stroke (mechanical thrombectomy and advances in thrombolysis therapy) and intracerebral haemorrhage which benefit patients.

Yet in the UK, these important clinical developments have overtaken the specialist resource that is currently available to support them. As a result, patient access to new service developments such as mechanical thrombectomy is very limited and lags behind other countries.

If NHS stroke services are to keep up with technical advances in stroke medicine, then additional full-time stroke consultants will be required.

Lack of staffing is also limiting the ability of UK stroke services to meet best practice standards. The National Standards outlined in the Sentinel Stroke National Audit and Scottish Stroke Audit, and the guidelines set out by the RCP and NICE, now all specify higher standards of clinical care. Many of these new standards require consultant time, including new 7 day working standards set out by NHS England (NHSE), with extended hours and 24 hour availability.

A timely update

BASP's 2011 report estimated the likely stroke workforce requirements and concluded that 2,800 Direct Clinical Care programmed activities (DCC PAs) were required for a population of 60 million people¹.

However, this was before an organised stroke service aiming to meet modern clinical standards had been established in many areas of the UK. At that time, there were also no data indicating how many DCC PAs were available in the UK.

Subsequently, the SSNAP recorded that in 2016 there were 3,907 DCC PAs for the population across England, Wales and Northern Ireland. Although this finding is partly explained by the intervening time period, it suggests that our 2011 report underestimated the number of DCC PAs that would be required to provide stroke care.

In light of recent advances in stroke care, the need for more staff time to deliver acute treatments, the increased potential to prevent disability, and the NHS' ambition to provide high quality stroke care, this report provides a much-needed update.

Stroke mortality has halved in two decades – but without further action, the number of people who have a stroke will almost double, and the number of survivors living with disability will increase by a third by 2035.

NHS Long Term Plan

2. HOW MANY SPECIALIST STAFF ARE NEEDED?

Our analysis shows that a Stroke Unit admitting 600 patients a year will require 40 Direct Clinical Care programmed activities.

In order to reflect stroke specialist activity irrespective of service configuration, we have based our workforce estimations upon the number of consultant sessions (DCC PAs) required to meet current national care quality indicators and standards.

DCC has been divided into hyper acute care (first 72 hours), post hyper acute care, Out Patient Department (OPD), additional activities, front door assessment (including mimics) and finally an additional tariff for centres performing intra-arterial thrombectomy. This subdivision has been applied so that the data are relevant to all centres caring for stroke patients.

The table on the following page shows the numbers of DCC PAs required to provide a comprehensive dedicated stroke service that meets current standards of clinical care, for Stroke Units admitting 600, 1,200 and 1,700 stroke patients per year.

Assumptions that have been drawn are detailed in the text underneath the table.

How does Direct Clinical Care translate into consultant numbers?

There are additional factors to consider in the estimation of consultant numbers from stroke DCC PAs. Supporting programmed activity (SPA) includes:

- Audit and service development
- Clinical governance
- Continuing professional education
- Staff training
- Trainee and non-medical specialist staff supervision
- Service development, including introduction of emerging therapies and support for clinical research.

To accommodate these activities, a figure of two supporting programmed activities is proposed for a 10 session job plan. Local arrangements will be needed to balance the job plans for consultants who also work in other specialties as well as stroke.

Recommended Direct Clinical Care programmed activities (DCC PA) allocation for different numbers of stroke admissions per year

Number of confirmed stroke admissions/year	Hyper-acute (1st 72 hours)	Post Hyper-Acute			TIA/OPD		Additional activities (e.g. MDT meeting/case conference/family meetings, teaching)	Thrombolysis / front door assessment including stroke mimics	Additional PA for centres performing IAT	Total
		ASU	Inpatient Rehab	TIA/Minor Stroke Clinic	Stroke F/UP					
600 (Total beds = 27) HASU = 8 ASU / in-pt rehab = 19	23 (8am-8pm, 7 days a week)	5 (daily ward round, 5 days, HASU cons cover at w/e)	3 (includes MDT meetings/family meetings and 2 WR's per week)	5 (1 clinic a day M-F, weekend TIA work by HASU cons)	Seen within TIA clinic template	MDT: 1.25 Neurorad MDT meetings: 0.75 ESD/Community: 1 Expectation that some time to deliver this will be included with 'HASU' PA allocation.	Performed by HASU consultant	1.5	41	
1200 (Total beds = 52) HASU = 15 ASU/in-pt rehab = 37	23 (8am-8pm, 7 days a week)	7 (daily ward round, 7 days)	5 (includes MDT meetings/family meetings and 2 WR's per week)	12 OPD (2xclinics per day M-F, 1 per day w/e) Triage: 2	3	MDT meetings: 2.5 Neurorad MDT meetings: 1.5 ESD/Community: 2	7	3	68	
1700 (Total beds = 71) HASU = 19 ASU/in-pt rehab = 52 N.B. 1700 has been included as 'surrogate for "1 million population, with stroke incidence of 1.7 per 1000)	35 (8am-8pm, 7 days a week) for 2 consultants	12 (2x WR per day M-F, 2 WR'S over w/e)	7 (includes MDT meetings/family meetings and 2 WR's per week)	17 OPD 3: triage (3xclinics per day, M-F, 1 per w/e)	5	MDT meetings: 4 Neurorad MDT: 2 ESD/Community: 3	10.5	4.2	103	

For Neurointerventional Hub centres providing regional thrombectomy, a provision of radiology DCC PAs will be required separately to support the Interventional Neuroradiologists (INRs). This neuroradiology department/service PA allocation is outside the remit of this report.

3. WHAT IS THE CURRENT GAP?

There is a gap of approximately 1,800 Direct Clinical Care programmed activities (DCC PAs) between the current actual number and the staffing figures recommended in this report. This translates into 226 full time full-time stroke consultants.

According to the SSNAP:

- in 2016 there were 3,907 DCC PAs available in England, Wales and Northern Ireland for stroke care
- and in 2017-2018, there were 102,389 patients per annum admitted to hospital with stroke.

Assuming that all of these patients were initially admitted to one of 85 Hyperacute stroke units which see 1,200 patients per year, 5,716 DCC PAs would have been required to meet the recommended staffing figures.

This approximation indicates a shortfall in the region of 1,800 DCC PAs for England, Wales and Northern Ireland.

Through the outputs of the Shape of Training review, a new structure for physician training will be introduced by the JRCPTB (on behalf of the Federation of Royal Colleges of Physicians) from August 2019. The proposal for training in Stroke Medicine has involved collaboration with a number of stakeholders and includes; all doctors training in neurology will undergo specialist training in stroke as will selected trainees from Acute Medicine and Geriatric Medicine. It is envisaged that this will increase the total number of doctors who are capable to practise as a consultant in Stroke Medicine at the end of training.

4. CONCLUSION AND NEXT STEPS

The guidance on future stroke workforce requirements given in this report is designed to support all those who are involved in the provision of stroke care in the UK – to help deliver the best possible treatment for stroke patients.

This report has quantified the baseline medical workforce needed to deliver national clinical stroke standards in order to help remedy the significant shortage of stroke consultants in the UK.

In doing so, it aims to help deliver national clinical stroke standards, maintain and improve stroke care, and provide a better supported network of stroke specialists.

It is hoped that establishing a clear recommendation for the medical stroke workforce that is needed will help to attract many more doctors in training into stroke medicine – to deliver the important new treatments now recommended for stroke patients.

There is also significant potential to increase the number of programmed activities (PAs) available for the stroke medicine workforce through:

- Existing stroke consultants rebalancing their job plans and increasing the proportion of stroke medicine programmed activities (PAs) in their job plans. This could be driven by national guidelines and this BASP workforce document.
- Including comprehensive specialist training in stroke medicine within the curricula of parent medical specialties for stroke medicine.

- Increased promotion of stroke medicine at undergraduate level, including increased exposure of medical students to acute stroke patients, so that doctors in training regard stroke medicine as an attractive future career.
- The potential in the near future for training by credentialing of stroke physicians in the technique of mechanical thrombectomy, to meet the shortfall in thrombectomy provision. Similar training is now taking place in many other developed countries.

BASP will continue to work actively with its members, allied associations and colleagues in the NHS and Department of Health to help these recommendations turn into reality.

5. METHODS, CONSIDERATIONS AND ASSUMPTIONS

This report was drafted by BASP and the GIRFT Stroke Programme Clinical Leads.

It updates the BASP 2011 report, 'Meeting the Future Challenge of Stroke 2011-2015' and reflects new challenges and workforce data from the SSNAP, including its 2016 audit of the Stroke Consultant Workforce².

The report and calculations were refined and finalised based upon discussions held at a joint BASP / GIRFT working group with representation from all four UK nations (England, Scotland, Wales and Northern Ireland). Contributions were made by specialists with experience of IAT, Hyperacute stroke units (HASU), Acute stroke units (ASU) and stroke-specific inpatient rehabilitation centres, in a meeting on 14 September 2018.

The purpose of the calculation is to help the NHS deliver high quality, patient focused, evidence-based care to all patients in the UK. The calculation covers provision of all stroke care in line with national and international stroke guidelines and recommendations; includes time for full documentation, immediate clinical review of radiology / telemetry and multi-disciplinary team (MDT) communication; and unless otherwise stated, assumes that ward medical activities are assisted by at least one trainee ward doctor.

There have been some general assumptions made for PA calculations:

1. PA allocations assume that HASU / post-72 hours (incorporating in-patient rehabilitation) is all co-located at the same hospital. If parts of the stroke pathway are across split sites, PA allocations will need adjustments to reflect diversification of the provision of stroke care.
2. The expectation is that HASU ward rounds and HASU cover by a Stroke Physician / senior decision maker is 8am-8pm, irrespective of the size of the unit. Smaller units will need only one consultant on duty at a given time. This consultant will also be able to see TIA patients and cover the HASU and ASU beds at weekends. However it is envisaged that once a unit accepts more than 900 stroke patients a year, two consultants will be required at weekends to ensure the service is safely delivered and a true '7 day service' is sustainable. Then larger units admitting more than 1,700 patients a year are likely to need a minimum of three consultants involved in HASU / ASU / front door assessment and TIA assessment at weekends.
3. In some models of care, stroke follow up clinics at around six weeks post discharge, may be delivered by others (e.g. stroke specialist nurses) and will be able to signpost back into the acute trusts as required. For the purposes of this calculation, we have assumed that 20% of stroke patients will need to be brought back for follow up at the acute trust by a consultant led service. It is essential that all stroke patients have a 6 month and then annual reviews, performed by a stroke skilled practitioner; this has not been incorporated in the workforce calculations given the most appropriate individual is unlikely to be a stroke consultant.
4. All new stroke referrals should be seen by a specialist – there will inevitably be a stroke mimic rate which will vary by centre, a standard stroke mimic rate has been assumed.

Specific time assumptions made

5. The following time assumptions were made for various elements of pathway:

IAT intervention centres only (7% rate): 4 hrs / patient

TIA activity, TIA Triage (including telephone call if required): 10mins / patient

TIA ambulatory, clinic assessment: 50mins / patient

Thrombolysis calls:

- Patients who require referral for IAT: 2hrs / patient
- Patients who require IV thrombolysis only: 40mins / patient
- Patients with a confirmed stroke who do not require thrombolysis, or mimics: 20mins / patient

6. Ward rounds:

Twice daily (7 days a week) HASU ward rounds (e.g. first 72hrs):

First review = 40 mins per patient, subsequent reviews 10 mins / patient

Once daily (5 days a week) ASU ward round (e.g. day 3 to day 10):

First review = 20 mins per patient, subsequent reviews 15mins / patient

Once daily (5 days a week) Inpatient hospital stroke specific rehabilitation ward rounds:

First review = 20 mins / patient, subsequent reviews 10mins / patient

7. Additional specialist ward rounds:

Once weekly feeding round (25% all patients): 10mins / patient

Daily (7 days a week) safety round (all patients: ie VTE/Falls etc.): 5mins / patient

Attendance at MDT Board Rounds:

Twice daily (7 days a week) HASU MDR: 1 min / patient

Once daily (7 days a week) ASU / Rehab MDR: 1 min / patient

8. Stroke Outreach reviews (i.e. orthopaedic wards, intensive therapy units and coronary care units):

1 / day / 600 confirmed stroke admissions / year: 30mins / patient

9. Communication and goal setting:

Once weekly MDT meeting: 10 min per patient

Next of kin discussions / meeting (all patients: once): 20mins / patient

10. Clinical governance:

Neuro-Radiology review (MDT) of all confirmed strokes (10 mins per patient) and TIA with vessel imaging (3 mins per patient)

11. Other clinical activity:

Once weekly community stroke team liaison: 1hr / 150 patients / year discharges

Medically required OPD reviews (20% total discharges): 1hr / 100 discharges / year

Activity not calculated which may need to be performed if alternative workforce not provided:

- 1) routine 6/52 reviews (80% discharges)
- 2) 6/12 reviews

6. REFERENCES

1. British Association of Stroke Physicians, Meeting the Future Challenge of Stroke, Stroke Medicine Consultant Workforce Requirements, 2011. <https://basp.ac.uk/wp-content/uploads/2017/02/BASP-Meeting-the-Future-Challenge-of-Stroke-2011-15.pdf>
2. Sentinel Stroke National Audit Programme <https://www.strokeaudit.org/>
3. Sentinel Stroke National Audit Programme, Acute organisational audit report November 2016 National Report, England, Wales and Northern Ireland. Prepared by Royal College of Physicians, Care Quality Improvement Department (CQID) on behalf of the Intercollegiate Stroke Working Party <https://www.strokeaudit.org/Documents/National/AcuteOrg/2016/2016-AOANationalReport.aspx>
4. National Clinical Guidance for Stroke, 5th edition, RCP London 2016. <https://www.rcplondon.ac.uk/guidelines-policy/stroke-guidelines>
5. National Institute of Health and Clinical Excellence, Stroke Quality Standard, June 2010. <http://www.nice.org.uk/guidance/qualitystandards/stroke/strokequalitystandard.jsp>
6. European Stroke Organisation Guideline directory accessed 2019. <https://eso-stroke.org/eso-guideline-directory/>

GLOSSARY

ASU	Acute Stroke Unit
BASP	British Association of Stroke Physicians
DCC	Direct Clinical Care
DCC PA	Direct Clinical Care programmed activities
GIRFT	Getting It Right First Time
HASU	Hyper Acute Stroke Unit
IAT	Intra-arterial thrombectomy
JRCPTB	Joint Royal College of Physicians Training Board
MDT	Multidisciplinary team
NHSE	NHS England
NICE	National Institute for Clinical Excellence
OPD	Out Patient Department
RCP	Royal College of Physicians
SAC	Stroke Medicine Specialist Advisory Committee
SSNAP	Sentinel Stroke National Audit Program
TIA	Transient ischaemic attack