

A man in a blue surgical cap and gown is standing in an operating room. He is looking directly at the camera with a neutral expression. The background shows various pieces of medical equipment, including a large white machine with a red stripe and a blue light fixture.

Stroke
Association

Finding **strength** through **support**

Saving Brains: Northern Ireland

Save brains. Save money. Change lives.

'We were very lucky that Kim fell within the treatment window for thrombectomy. It absolutely frightened the life out of us when we discovered that it wasn't available 24/7. If Kim hadn't received the procedure, the outcome would have been incredibly different.'

Basil, husband of stroke survivor Kim



Foreword



Alasdair O'Hara
Associate Director
for Northern Ireland

Thrombectomy is a game-changing treatment for stroke – it can be the difference between a patient walking out of hospital or leaving in a wheelchair. Yet too many potentially eligible patients in Northern Ireland are still missing out.

I applaud the work of stroke and thrombectomy teams who have worked tirelessly to improve access to this procedure in Northern Ireland over the past few years. The fact that Northern Ireland currently has the highest thrombectomy rate in the UK is testament to their hard work.

But we mustn't stop now. There is still much to do to ensure that every patient who needs thrombectomy can access it.

Many of the stroke survivors quoted in this report talk about how lucky they were to receive a thrombectomy – this is true. But it shouldn't be about luck – thrombectomy should be available as a routine treatment for every patient who needs it no matter when or where they have their stroke.

The Stroke Association is calling on the Northern Ireland Executive and Assembly to recognize the importance of investing in thrombectomy and put their weight behind efforts to deliver the promised 24/7 service for Northern Ireland. Failing to do so will have devastating consequences on so many lives.

Every two hours in Northern Ireland, someone has a stroke. It's a leading cause of death and disability. Thrombectomy, a game-changing treatment for stroke, can save brains, save money and change lives. Yet it isn't available 24/7 so many patients are missing out.

We must urgently secure access to a 24/7 thrombectomy service in Northern Ireland for every stroke patient who needs it. We are calling on the Northern Ireland Executive and Assembly to:

- **Commit to thrombectomy expansion with multi-year investment.**
- **Tackle stroke workforce shortages.**
- **Progress stroke transformation to create efficient treatment pathways.**
- **Invest in innovations.**

What is a **thrombectomy**?

Thrombectomy is one of the most effective medical interventions ever discovered with some doctors calling it close to a miracle treatment.

'Thrombectomy is a life-changing treatment which patients can have within the first few hours of a stroke. I would say the most amazing and satisfying thing when you do the procedure is when you see a patient recover on the table.'

Dr Sanjeev Nayak, Interventional Neuro Radiologist

The majority of strokes are caused by a blood clot blocking an artery in the brain, depriving it of blood supply. For as long as the clot stays there, brain tissue can die.

Thrombectomy is an acute treatment for stroke where a doctor manually removes the clot, immediately allowing blood to flow freely again. It is a very time-sensitive treatment. The quicker the procedure happens, the more brain tissue the doctor can save. Thrombectomy can be performed up to 24 hours after a stroke but is most effective in the first six hours.¹

It's currently estimated that around 10% of stroke patients are eligible for thrombectomy. However, a recently updated National Clinical Guideline for Stroke recommends expanding the time window for thrombectomy and for patients to now be considered within 12 hours and up to 24 hours post onset of symptoms². This could significantly increase the number of patients who could benefit, with some recent research suggesting that approximately 15% of admitted stroke patients could now be eligible for this life-changing procedure³.

However, thrombectomy isn't available for everyone who needs it in Northern Ireland. Just over half of patients who need thrombectomy here actually get it. Despite the brilliant efforts of stroke doctors, nurses, paramedics and their teams to expand thrombectomy services to more patients, provision is still not available 24/7 due to a lack of staff, funding and resources.

Yet 24/7 access to thrombectomy is essential to reducing disability after stroke. **We want every patient who needs it to be able to access this transformative treatment, regardless of where they live or at what time of the day or night they have their stroke.**



'Before my stroke, I had never heard of a thrombectomy. But it's a truly remarkable procedure. There are only a few consultants who are qualified to do this procedure in Northern Ireland but as luck would have it, they were on call the morning of my stroke. I was lucky but many aren't.'

Paul, stroke survivor



What is a thrombectomy?

You can view a video explaining thrombectomy at stroke.org.uk/SavingBrains

Why invest in thrombectomy?



It saves brains.

Thrombectomy is a very powerful treatment that restores blood flow to the brain. It can treat severe strokes that would otherwise cause multiple disabilities or death.



It saves money.

Thrombectomy is 100% cost-effective. Each patient who receives thrombectomy saves the NHS £47,000 on average over five years⁴. Money that could be reinvested in health and social care services.



It changes lives.

Thrombectomy changes the course of recovery from stroke in an instant, significantly reducing the chance of disabilities like paralysis, blindness and communication difficulties⁵. A quarter of patients who receive thrombectomy experience reduced disability while a fifth achieve functional independence⁶.



Thrombectomy in Northern Ireland

The Royal Victoria Hospital in Belfast provides the regional thrombectomy centre for Northern Ireland with eligible patients either being directly admitted to the Royal or transferred from their local stroke unit. The service has expanded over the past few years and is now accessible seven days a week, 8am - 6pm. However, we still do not have a 24/7 accessible service which could greatly increase the number of patients who are able to access and benefit from this life-changing procedure no matter what time of the day or night they have their stroke.

Northern Ireland as a region currently has the highest thrombectomy rate in the UK. 180 procedures were performed between March 2023 and February 2024 which equates to a thrombectomy rate of 6.4%⁷.

This clearly demonstrates the efforts of dedicated health and social care professionals who are working hard to make Northern Ireland a world leader in thrombectomy. However, it also means that **around 100 potentially eligible patients could have missed out on thrombectomy during this same period**, resulting in more serious disabilities and in some cases, death.⁸

If we continue at the current rate, at least 500 potentially eligible patients will miss out on receiving life-changing thrombectomy by 2029/30⁹.



Stroke Action Plan

The **Reshaping Stroke Care Action Plan** published by the Health Minister in June 2022 committed to expanding the thrombectomy service in Northern Ireland, moving to a 24/7 service by the end of 2024. The Department also set the target of 8% of patients receiving thrombectomy by March 2024, increasing to 10% by March 2026.

Unfortunately, with only 6.4% of patients currently receiving thrombectomy in Northern Ireland, **we are still not reaching everyone who could benefit** – currently estimated at around 10% of stroke patients. The Minister has also said it is now **unlikely the service will be expanded to 24/7 by the end of 2024**, meaning even more patients will be missing out on this life-changing treatment.

How can we improve access to thrombectomy?

Stroke teams across Northern Ireland are working tirelessly to expand thrombectomy and deliver more procedures for the patients who need it. And we are seeing progress with the thrombectomy rate improving gradually every year. But progress is too slow and thrombectomy is not being given the investment and attention it needs from decision-makers in government.

The National Clinical Guideline for Stroke is clear that stroke patients must have access to a designated thrombectomy centre 24 hours a day, seven days a week so that eligible patients can benefit from this treatment as quickly as possible¹⁰.

We must urgently secure access to a 24/7 thrombectomy service in Northern Ireland for every stroke patient who needs it.



We are calling on the Northern Ireland Executive and Assembly to: **Commit to thrombectomy expansion with multi-year investment**

Thrombectomy in Northern Ireland is significantly underfunded and has, to date, not received the recurrent funding it requires to expand the service to more patients.

A costed model has been submitted to the Department of Health by the Belfast Trust, outlining the funding and workforce requirements that would enable a move to a 24/7 service in Northern Ireland. This is a positive step. However, the Minister of Health has stated that additional funding of just over £5 million will be required to enable expansion of the service.

Yet we know that thrombectomy is an extremely cost-effective procedure that leads to huge cost savings due to a 'significant reduction in disability and long-term costs to healthcare systems'¹. If we had delivered thrombectomy to 10% (281) of stroke patients in the period March 2023 to February 2024, that could have resulted in around £13.2 million in savings over the next five years².

So clearly thrombectomy is an investment worth making.



A 24/7 thrombectomy service for Northern Ireland would cost £5 million.



Delivering thrombectomy to 10% of stroke patients could result in around £13.2 million in savings over five years.

Recommendation:

Given the wealth of evidence for the cost-effectiveness of thrombectomy as well as its life-changing impact for patients, we believe that it is an investment worth making, even in these times of financial pressures. **The Northern Ireland Executive and Assembly must prioritise multi-year investment in thrombectomy to enable expansion to a sustainable 24/7 service.**

Tackle stroke workforce shortages

The stroke workforce is dedicated, passionate and committed to delivering the best possible treatment and care to patients. Yet workforce shortages, recruitment and retention issues and underfunding are placing extreme pressure on hard-working staff. This results in a huge personal cost to those working to deliver thrombectomy, including working extra-long shifts and being on call very frequently.

Thrombectomy is a complex and specialised procedure. In Northern Ireland, there are currently only a small number of specialists (or Interventional Neuro-radiologists / INRs) who are trained to provide it.

However, thrombectomy does not only require INRs to perform the procedure but involves a wider team of specialist staff from paramedics to nurses, stroke physicians, support staff, anaesthetists and radiographers. And there are serious staff shortages in the stroke workforce.



A 2021 audit showed that only 25% of stroke units in Northern Ireland have an out of hours stroke specialist nurse while no stroke units have appropriate clinical psychology cover¹³.

The Stroke Action Plan committed to developing a long-term stroke workforce plan for Northern Ireland by summer 2023. However, this work has still not started, and workforce gaps are continuing to grow. With the number of strokes projected to increase by 60% across the UK by 2035, stroke services will be even more stretched in the future if we don't start to address workforce gaps now¹⁴.

Recommendation:

Workforce shortages are hindering an expansion to a sustainable 24/7 thrombectomy service in Northern Ireland. Stroke patients deserve to receive safe and high-quality care, and our stroke workforce deserve fully-staffed services that alleviate undue pressures and support their wellbeing.

The Department of Health must urgently invest in the stroke workforce so teams are fully staffed to provide a 24/7 thrombectomy service. The Department must also progress the stroke workforce plan outlining how we will recruit, retain and train professionals across the whole stroke pathway, both now and in the future.



'I owe my life to the team at the Royal Victoria Hospital who, when contacted out of hours, made the decision to come to work and save my life. I am, and forever will be, grateful for their good will.'

Clodagh, stroke survivor

Progress stroke transformation to create efficient treatment pathways

The full benefits of a highly specialised service like thrombectomy can only truly be achieved within an efficient and properly organised network of 24/7 acute stroke services. Evidence shows that reorganising how stroke care is delivered and creating large Hyper Acute Stroke Units (HASUs) with the equipment and experts to treat patients all day, every day can save lives, improve recoveries and result in greater cost effectiveness for health services.^{15 16}



Currently in Northern Ireland, only 57% of stroke patients are being scanned within one hour of arriving at hospital.¹⁷

Establishing 24/7 HASUs will therefore help speed up access to thrombectomy for those who need it, regardless of where or when they have their stroke. Well-organised stroke care will also benefit patients who are not eligible for thrombectomy and ensure they quickly receive the specialist care they need.

The Department of Health committed to identifying a future model of hyperacute stroke care by summer 2023. However, we are still waiting for this work to progress and a decision to be made.

Recommendation:

24/7 specialist hyperacute stroke care can not only speed up access to thrombectomy but can improve outcomes for all stroke patients. The Department of Health must urgently progress work to coproduce a future model of hyperacute stroke care for Northern Ireland.



'I am so grateful to the ambulance team for blue-lighting me straight to Royal Victoria Hospital in Belfast. Thankfully I was eligible for a thrombectomy which saved my life. It's vital that thrombectomy is available all the time for anyone who needs it.'

Paul, stroke survivor

Invest in innovations

Thrombectomy is a very time-sensitive procedure and the quicker the procedure is undertaken, the more brain tissue can be saved. This is because for **every minute a stroke is left untreated, 1.9 million brain cells die.**

Access to accurate brain imaging to inform urgent decision-making regarding appropriate treatment is therefore key in the care of stroke patients. **Advanced Artificial Intelligence (AI) imaging software** was first introduced in Northern Ireland in February 2022 and is now being gradually rolled out across the region. The software acts as a decision-support tool, helping consultants more quickly and accurately identify patients who are suitable for thrombectomy. The software also helps prevent unnecessary transfers to the regional thrombectomy centre for patients who may be deemed unsuitable, thereby improving patient experience while also saving the resources of a stretched ambulance service. Advanced imaging software therefore plays an integral part in expanding access to thrombectomy.

Speedy ambulance transfer to the regional thrombectomy centre in the Royal Victoria Hospital is also key to providing thrombectomy to eligible patients as quickly as possible. Yet we know the ambulance service in Northern Ireland are under extreme pressure and delays in the emergency response to stroke patients

could potentially be causing some to miss out on life-changing thrombectomy.

PITSTOP: An Altnagelvin Hospital and Northern Ireland Ambulance Service Pilot Project

To speed up thrombectomy transfers for eligible patients, the stroke team at Altnagelvin Hospital in the Western Health and Social Care Trust are working with the Northern Ireland Ambulance Service to pilot an **innovative new model.**

Under current arrangements, an ambulance will hand over a stroke patient to the emergency department team and then leave to take another call. If initial brain scans suggest that thrombectomy may be suitable for the patient, an ambulance will be called back to transfer the patient to the Royal Victoria Hospital. However, ambulance pressures can sometimes cause delays with a second ambulance arriving.

Under the new model, the ambulance which initially brings the stroke patient to Altnagelvin stroke unit will now wait for a decision to be made about thrombectomy eligibility and immediately make the transfer to the Royal. This will result in more rapid inter-hospital transfers, ensuring eligible patients can access thrombectomy as quickly as possible.



In 22/23, the mean response time of 18 minutes for Category 2 calls (the category which stroke falls into) was not met in any month, with the longest mean response time during this period being 59 minutes 37 seconds.¹⁸

Recommendation:

The Department of Health and Health and Social Care Trusts must **maximise the possibilities of innovations such as these to enhance access to thrombectomy by universally adopting well-evidenced projects such as advanced imaging software and investing further in future research.**

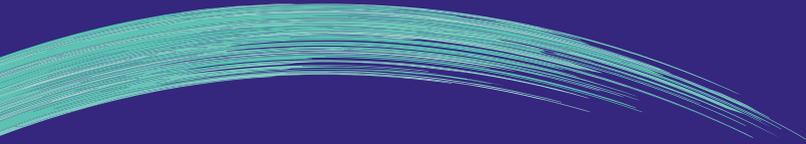


'Thrombectomy is a life-changing procedure which I was fortunate enough to access when I had my stroke five years ago. Everyone who is eligible should have that same opportunity.'

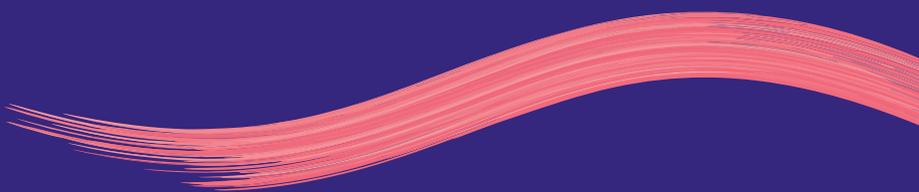
Kim, stroke survivor

Endnotes

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6. Wolfe, C. et al. (2020). Stroke pathway – Evidence based commissioning – An Evidence Review. Kings College London.
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8. If 6.4% = 180 procedures, then we can assume there were 2812 emergency ischaemic (clot-based) stroke admissions to NI acute stroke units between March 2023 and February 2024. If 10% of those are estimated to be eligible for thrombectomy, that would mean around 281 procedures should have been carried out in that period.
9. Based on around 100 potentially eligible patients missing out on thrombectomy each year.
10. National Clinical Guideline for Stroke for the UK and Ireland: www.strokeguideline.org/contents/
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Every day in the UK, another 240 people wake up to the catastrophic impact of a stroke. With strength, determination and the right support, recovery is possible.



The Stroke Association is the only charity in the UK providing lifelong support for all stroke survivors and their families. We provide tailored support, fund vital scientific research, and campaign to secure the best care and support for everyone affected by stroke. We can only do this with your help.

Learn more about stroke support: stroke.org.uk

Contact us

We're here for you. Contact us for expert information and support by phone, email and online.

Stroke Support Helpline: **0303 3033 100**

From a textphone: **18001 0303 3033 100**

Email: helpline@stroke.org.uk

Website: stroke.org.uk

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