



What we think about:

Thrombectomy

Rebuilding lives after stroke

Stroke
Association

Background

Thrombectomy or mechanical thrombectomy is a relatively new procedure used to treat some ischaemic stroke patients. Ischaemic stroke is the most common type of stroke caused by a blood clot cutting off blood flow to part of the brain. Thrombectomy involves using a specially-designed clot removal device inserted through a catheter to pull or suck out the clot to restore blood flow. When used with other medical treatments on a specialist unit, evidence shows thrombectomy can significantly reduce the severity of disability a stroke can cause.

As with clot-busting drugs, thrombectomy is most effective the faster it is used following a stroke and it is normally only performed up to six hours after symptoms start. A clot doesn't stay in the body long term after a stroke, so thrombectomy is an acute treatment which means it is only used in the very short term

Although only a relatively small number of stroke patients (around 1 in 10) are suitable for this treatment, for those that are, it is a very powerful intervention. It is able to remove clots which are too big to be broken down by clot-busting drugs and is therefore effective in preventing and reducing long-term disability in people with severe strokes.

What we think

Thrombectomy is an exciting and effective way of treating strokes caused by a clot. It involves inserting a catheter into an artery to access a clot, usually within six hours of someone having their stroke, which is then mechanically removed.

This treatment is extremely cost-effective as without this treatment option, people with severe strokes are more likely to be dependent on others for their daily needs, requiring life-time care. But there are challenges to delivering thrombectomy in many parts of the country.

There are currently not enough trained doctors – Interventional Neuro-Radiologists – to be able to provide a 24/7 service in all areas. Specialist neuroscience centres, where thrombectomy procedures usually happen, are not evenly spread out across the UK. Also, in some areas, even the most basic stroke treatments are not being given to all stroke patients, let alone new cutting-edge procedures like thrombectomy.

We want all eligible patients to be able to access this game-changing

treatment as quickly as possible. For this to happen we need more specially trained professionals. We also need all stroke services to be efficient and organised to assess patients quickly, and potentially transfer them to a regional centre to perform a thrombectomy. Thrombectomy is potentially a powerful driver for change to drive improvements in stroke services across the UK, as well encouraging areas and regions to work together for the benefit of those affected by stroke.

In England, the new national stroke programme will give national leadership to the rolling out of thrombectomy services, and we will be involved in implementing it, including co-chairing the national programme board. We will continue to support commissioners in Wales to develop new thrombectomy



services and call for routine funding of thrombectomy in Scotland and Northern Ireland. Of course, we will also keep fighting for radically improved community services to support people after leaving hospital

and influence for a workforce which is better able to deliver thrombectomy services.

Why do we think this?

Thrombectomy is effective at reducing disability

Some trials have shown that eligible patients who receive thrombectomy are more likely to return to 'functional independence' (or have fewer problems with disability) within three months of their stroke, compared to those who didn't get a thrombectomy.¹ Others have found that compared to standard treatments, more of those patients who had received thrombectomy made a full neurological recovery. In one example, 49% of patients who received thrombectomy had a good outcome compared to only 13% who received standard medical treatment alone.²

It is also extremely cost-effective

While thrombectomy is quite an expensive treatment, its benefits in the long term outweigh the initial cost.

A UK roll-out of thrombectomy could mean every year an additional 2420 stroke survivors are left without disability following their stroke. Thrombectomy means patients get a greatly improved quality of life for a relatively small amount of investment.

It has been estimated that on average one patient would save the NHS £47,000 a year³, this could save the health and social care system £73m every year.⁴

It's as safe as other treatments

Thrombectomy is at least as safe as other treatments. Studies have shown that, on average, mechanical clot retrieval does not cause any greater risk of death, bleeding or secondary stroke, compared to other types of stroke treatment.

It can be performed over a slightly longer time frame than thrombolysis

While thrombolysis can only be given up to four and a half hours after a stroke, NHS England has approved thrombectomy for use up to six hours after stroke symptoms begin. There are some very specific and rare circumstances in which thrombectomy may be given up to 12 or even 24 hours after the onset of stroke.⁵ In addition, there is ongoing research to explore longer time windows in carefully selected patients.

The experts agree

NHS England has considered the evidence and decided that thrombectomy should be routinely funded on the NHS. In February 2016, the National Institute for Health and Care Excellence (NICE) updated its stroke treatment guidance to include mechanical clot retrieval. It is also recommended by the Royal College of Physicians.

Patients are positive about their experience of thrombectomy

In 2015, we also carried out one of the first ever surveys of stroke survivors who had experienced thrombectomy. Through this, we got the views of 39 people with direct experience of thrombectomy. Most of those who responded described their experience in a positive way, with 24% describing it in a neutral or negative way. When asked about the main benefits, half said the procedure had helped to avoid severe disability, with others saying that it had saved their life. Some people reported negative experiences, including pain or discomfort during the procedure, or mental health problems associated with actually being discharged home so early (as the thrombectomy had been so successful).

All respondents who had experienced thrombectomy felt that the procedure should be made available on the NHS. Nearly half believed that any procedure which enables people to recover more quickly or prevent disability should always be available.⁶

But not enough patients currently have access to thrombectomy

Currently, only a fraction of those eligible for the treatment actually get it. It is estimated that around 9,000 patients a year could benefit from thrombectomy in the UK but it is thought that fewer than 10% of those eligible actually receive it. There are a few centres where thrombectomy is available in the UK but there are not enough trained professionals for the services to be rolled out across the country. This is because thrombectomy is a highly-skilled operation. But just 83 consultants in England, Wales and Northern Ireland said they could undertake the procedure as of 2016⁷, far fewer than the 150 Interventional Neuro-Radiologists we estimate are needed to provide 24/7 coverage across the UK.

What do we want to see happen?

We want all eligible patients to be able to access this game-changing treatment as quickly as possible. For this to happen we need more specially trained professionals. We also need all stroke services to be efficient and organised to assess patients quickly, and potentially transfer them to a regional centre to perform a thrombectomy.

We believe thrombectomy could be a catalyst for improvements in stroke treatment and care more widely. Thrombectomy can only work within efficient and properly organised acute services, as well as a post-acute pathway, able to deal with the requirements of a highly specialised service such as thrombectomy. That's why we are calling on STPs, CCGs, Health Boards and Trusts to reconfigure their stroke services.

What are we doing?

We will:

- Support commissioners in England to develop new services following NHS England's decision to fund the procedure, including through the national stroke programme, which we helped develop.
- Through the stroke modernisation consultation in Northern Ireland, we are influencing to ensure a sustainable thrombectomy service.
- Call on NHS leaders and Ministers to re-establish a thrombectomy service within NHS Lothian and evaluate the case for reconfigured acute stroke services to make better use of resources and improve outcomes.
- Work with the Welsh Government and Welsh Health Specialised Services Committee (WHSSC) to increase access to thrombectomy services in Wales.
- Continue working with NHS England and Health Education England and devolved counterparts to increase the number of specially trained professionals who can carry out this procedure. This may include redesigning training pathways to include doctors from other specialities – such as cardiologists - being trained to perform thrombectomies.
- Ask NHS services across the UK to set out how they will be reorganising their acute stroke services to make them more efficient and better able to cope with new treatments such as thrombectomy.

Q&A

Q. What, exactly, is thrombectomy and what happens during a

A. thrombectomy procedure?

Thrombectomy, also known as mechanical clot retrieval, is the surgical removal of a blood clot in an artery. It is used to treat some strokes caused by a blood clot (ischaemic stroke) and it aims to restore blood flow to the brain.

During the procedure, a specially-designed clot removal device is inserted through a catheter – usually at the groin and up into the brain – into the blocked artery to remove the clot, which is then pulled out or sucked out. Patients are usually sedated when the procedure happens and thrombectomy usually happens after thrombolysis has been unsuccessful.⁸

Q. Who receives thrombectomy and why?

A. It is thought that up to 10% of stroke patients may be eligible for the treatment every year. That's around 9,000 people across the UK.⁹

Thrombectomy can currently only be used to treat patients with blood clots in the brain's large central vessels. It cannot be used to treat haemorrhagic strokes (bleeds to the brain). It can benefit some patients whose clots are too big to be removed by thrombolysis (clot-busting drug treatment).

Most patients treated with thrombectomy within six hours after stroke symptoms begin, however in some very specific a small number of patients may be able to receive treatment up to 24 hours after onset of symptoms.¹⁰

Crucially, patients can only be treated if there is the infrastructure in place to do so. The appropriate specialists and equipment within specialist stroke units or in regional neuroscience centres need to be available.

Q. How many patients have received thrombectomy so far?

A. Unfortunately, it's not possible to say as data has not always been routinely collected. We do know that some areas have been delivering the procedure to small numbers of patients for the last two to three years. Now, about 600 people per year in the UK have access, so we would estimate that fewer than 2,000 have had a thrombectomy to date on the NHS.

The most up to date data that is available from SSNAP, from 2016-2017 shows that 580 people received thrombectomy in Wales, England and Northern Ireland.¹¹

Q. How much does it cost?

A. Thrombectomy is a more expensive treatment option per person but this is offset by long-term cost savings due to better level of recovery for stroke survivors.

Research estimates that on average one patient would save the NHS £47,000 over 5 years, as stroke survivors are able to return home sooner, saving hospital costs and are also less likely to need high levels of social care.

The roll out of thrombectomy at University Hospitals of North Midland NHS trust, for example, cost £0.5million but saved £0.8 million due to reduction in length of hospital stay and £1.6 million in social care costs.¹²

Q. Can it be used to help with people's recoveries after they leave hospital?

A. No. In the vast majority of cases, thrombectomy is only effective up to five hours after a stroke. Although new research has shown that in some very specific cases thrombectomy can be performed up to 24 hours after a stroke.¹³ It is a procedure carried out quickly when someone is in hospital. If thrombectomy or other treatments are not used to remove a clot, the body breaks it down and absorbs it naturally.

Q. Does it save lives?

A. The evidence shows that the main benefit of thrombectomy is that it reduces the chances of a stroke survivor ending up with a significant disability, rather than reducing overall mortality. That said, one study found that, alongside a reduced risk of disability, mortality actually decreased too thanks to thrombectomy.¹⁴

Q. Does this policy apply to the whole of the UK?

A. Yes

Q. What's happening in England

A. In April 2017, NHS England agreed to fund thrombectomy on the NHS but they estimate it will take 7 years before all eligible patients are able to receive it.

Q. What's happening in Northern Ireland

A. In Northern Ireland, there were 69 thrombectomy procedures performed in 2016/17 15. These are all performed at the Royal Victoria Hospital in Belfast, and it is the second highest number of procedures at a single hospital across the UK, however the procedure is only available Monday – Friday 8.30-5.30. Introducing 24/7 Thrombectomy was one of 7 proposals included within the 2016 pre-consultation into reshaping stroke services. We strongly supported this alongside the need for reorganising acute services to improve outcomes and ensure that more eligible patients get the treatment they need, including thrombectomy. We will continue to support this when the next stage of stroke modernisation consultation is released.

We welcome the announcement in June this year from Richard Pengelly (Perm Sec for Department for Health) that there would be significant investment over the next 2 years to increase the number of thrombectomies performed at the Royal each year.

Q. Can patients in Scotland able to receive thrombectomy?

A. At the moment in Scotland there is no thrombectomy provision, only 13 people received the treatment in 2017 out of an estimated 600 who would be expected to benefit.¹⁶

There is not a widespread infrastructure in place to deliver thrombectomy and there are existing challenges delivering the Scottish Government's basic Stroke Care Bundle (which does not cover thrombectomy) – the minimum standards hospitals should be meeting. For example, only 59% of eligible patients are receiving potentially life-saving clot-busting drugs (thrombolysis) within an hour of arriving at hospital and only 2 hospitals meet the national standard of treating 80% of eligible patients within that timescale. Until Scotland's stroke treatment infrastructure improves and more hospitals start to deliver the Stroke Care Bundle, delivering thrombectomy on a wider scale to those who are eligible will be very difficult.

That said, thrombectomy can and should be a catalyst for change. We welcome the expert panel on thrombectomy that has been set up and we will continue to engage with the Scottish Government and want to work with them to improve outcomes for stroke patients. As part of this, we have asked Ministers about thrombectomy provision and also to consider the evidence of acute service reorganisation from elsewhere in the UK – areas which are now leading the way in delivering thrombectomy.

Q. What's happening in Wales

A. NHS England's decision to routinely fund thrombectomy is positive news for stroke patients in Wales living close to the border with England as we know many are treated in English hospitals. For patients from north Wales, thrombectomies are delivered at the Walton hospital in Liverpool. This is a service commissioned by the Welsh Health Specialised Services Committee (WHSSC), thrombectomies are also now carried out in a number of English hospitals on patients from mid and south Wales on a

case-by-case basis, however there is no routine access to thrombectomy following the stopping of the service in Cardiff in May 2017.

The Stroke Association would like to see a consistently commissioned thrombectomy service in Wales and welcome recent Welsh Governments plan to deliver a 24/7 thrombectomy service. The Welsh Government anticipate a gradual expansion of services over the next four years.

The Welsh Government is working with WHSSC to develop thrombectomy services in Wales. This will include short term arrangements through working with English thrombectomy services as well as re-establishing the service in Cardiff. WHSSC will then be working with local health boards to develop longer term services, including work with Health Education and Improvement Wales and the Royal College of Radiologists to extend the workforce who can deliver thrombectomy. The Welsh Government will also be setting up a Task and Finish Group to oversee this work.¹⁷ The Stoke Association supports this work, and wishes to see a long-term solution in place as soon as possible.

Q. Does thrombectomy take place in other countries?

A. Yes, thrombectomy is already well-developed in countries such as the United States, where there are around 10,000 procedures a year¹⁸, Spain, Italy, France and Germany, where around 5,000 patients are treated with thrombectomy.¹⁹

Q. When will this policy be reviewed?

A. August 2019

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