What we think about:

Rehabilitation

Rebuilding lives after stroke

Stroke Association

Key Facts: What is the current state of stroke rehabilitation?

- Of the stroke patients judged to need physiotherapy, occupational therapy, and speech and language therapy, **only 13.3%** went on to actually receive the recommended amount of these therapies between October and December 2022.
- **75% of those whose stroke had a very severe impact** told us they needed support from health and social care services for longer.
- **Less than 50%** of hospital rehabilitation services had the recommended levels of any of the core rehab disciplines according to the most recent data.
- Over 2017-2022, **the average number** of minutes of speech and language therapy that stroke survivors judged to need this therapy have received from Early Supported Discharge (ESD) and community teams has dropped from 12.3 minutes to 8.6 minutes per day.
- Over the same period, **the average number** of minutes of physiotherapy given by these teams to stroke survivors who need PT dropped from 11.1 minutes to 7.9 minutes per day.
- On average, stroke patients who were judged to need psychological support in 2021-22 received **less than 4 minutes of support per day**, over the period they needed support, measured across all the teams taking care of them.
- **Less than a third** of community-based rehabilitation teams meet recommended staffing levels.
- 58% of post-hospital rehabilitation services had a **time limit** on their provision of rehabilitation in the most recent audit year.

Background

Rehabilitation is a vital and sometimes overlooked part of the stroke pathway. With around two-thirds of stroke survivors leaving hospital with some form of disability, those who have had a stroke often face immediate physical, psychological, cognitive, and practical challenges.[1] However, through good rehabilitation and a foundation of strong support, stroke survivors can begin to rebuild their lives. Optimal post-stroke rehabilitation includes physiotherapy, occupational therapy, speech and language therapy, vocational rehabilitation, and neuropsychological support.

We want all stroke survivors to be able to access the rehabilitation they need, for as long as they need.[2]

What are the issues?

Despite the tireless work of stroke rehabilitation professionals, many stroke survivors miss out on necessary rehabilitation and support. This is primarily due to chronic shortages and gaps in the stroke rehabilitation workforce exacerbated by a lack of long-term planning around the health and social care workforce.

How does rehabilitation actually work?

Post-stroke rehabilitation starts in the hospital and continues once a stroke survivor is discharged into the community. In the hospital stroke unit, specialists will assess the patient's physical, communication, swallowing, and cognitive functions, as well as their psychological wellbeing, and design a tailored rehabilitation plan to suit their patient's needs.

Rehabilitation is centred on focused and repetitive movements, exercises, and actions. This repetition uses the brain's plasticity – or ability to form new connections throughout a person's life – to regain the functions lost due to the stroke.

Post-stroke physiotherapy, for instance, involves several sessions a week, focusing on improving a patient's muscle strength and overcoming any mobility difficulties. Speech and language therapy similarly uses repeated exercises to improve a stroke survivor's swallowing ability and control over their speech muscles.

Neuropsychological input focuses on helping the person to develop compensatory strategies that will help them improve function and quality of life (and enable the family to best support the individual).

Not only does good rehabilitation lead to a healthier and happier population, but it also reduces pressure on the social care system and increases the number of stroke survivors who can re-enter meaningful employment.

1. **Stroke survivors are not getting the rehabilitation they need and deserve, with services critically misaligned with both current professional guidelines and stroke service models.**

a) Rehabilitation focused on physical health

The Stroke Association's **Lived Experience of Stroke** report found that half of stroke survivors felt they needed support for longer or more frequently. In addition, 40% of survivors said they needed longer or more frequent support from physiotherapy services than was provided, and a third needed more speech and language or occupational therapy.[3] This shows how the long-term under-resourcing of stroke rehabilitation services is translating into measurably poorer outcomes and experiences for stroke survivors.

These challenges exist in both hospital and community settings. Despite stroke service models outlining ambitions for rehabilitation to be both 'needs-based' and available 7 days a week, resource constraints make a 5-day service common practice in community-based teams, placing restrictions on the accessibility of services.[4]

Over a third of community rehabilitation teams have a waiting time of more than 2 weeks to start therapy.[5]

In turn, Covid-19 had a significant impact on rehabilitation provision, with 54% of stroke survivors who responded to our 2020 **Stroke Recoveries at Risk** report stating that they had a therapy appointment cancelled or postponed during the pandemic.

Most rehabilitation teams are struggling to deliver the dose of rehabilitation recommended in the 2016 National Clinical Guideline: 45 minutes of each type of therapy per day.[6] This recommended dose has now been increased to 3 hours of motor recovery and functional rehabilitation per day, 6 hours of prescribed activity per day, and an increased total dose of speech and language therapy. Without further resourcing and better workforce planning, overstretched teams are not going to be able to deliver this increased dose of vital rehabilitation.

b) Support focused on mental health

It is common for stroke survivors to experience a mixture of mood disturbances and cognitive

impairments after their stroke, including mild to severe mental health conditions.

Such effects can follow on from changes in the brain following stroke, as well as being influenced by struggles in post-stroke day-to-day living. Our research found that 52% of people have been impacted by depression or low mood since their stroke, 47% have had anxiety, and 12% have had suicidal thoughts.[7] Stroke changes lives in an instant. It is vital that neuropsychological and emotional support is made available to stroke survivors, at all points in the stroke treatment and rehabilitation pathway.

Although the provision of rehabilitation focused on physical health faces clear challenges, neuropsychological support for stroke survivors is in a relative state of crisis (being far more unavailable than available to patients, currently). This must change.[8] The 10 week average waiting time for psychological support has not improved from 2015 to 2021.[9] In 2021-22, stroke survivors received an average of just 5.3 minutes per day of psychological support from ESD and community stroke rehabilitation teams.

Within the context of these figures, it is no surprise that many stroke survivors tell us that they feel 'abandoned' and 'left to get on with it' when they leave hospital.

c) Support focused on returning to work

One in four strokes happen to individuals under the age of 65 and around a third of these stroke survivors have to give up their job following their stroke.[10] This can put huge pressure on a stroke survivor's finances, as well as denting their sense of independence, purpose, and self-esteem. When a stroke survivor is able and wants to return to work, vocational rehabilitation can help them to do so. Sadly, however, vocational rehabilitation is not easily accessible around the UK, with only around half of community rehabilitation teams in England, Wales, and Northern Ireland offering it to stroke survivors.[11] Working-age stroke survivors often tell us there are inadequate rehabilitation services to help them return to work.[12] Provision of vocational rehabilitation in Scotland is also patchy. Just 29% of Scottish NHS Boards have established vocational rehabilitation programmes for all stroke survivors in their region.[13] There is huge scope for improvement of these services, with potential benefits not just to the stroke survivor, but to the national economy.

2. There is a postcode lottery of services, with access varying dramatically across the UK

Access to post-stroke rehabilitation both in the hospital and community setting varies hugely across the UK. While 27% of services in the Surrey Heartlands Integrated Care System has an appropriate level of staffing for all core rehabilitation disciplines, for example, 0% of West Midlands meet this criteria.[14] These disparities in access are linked to other structural inequities in stroke care: in areas of high deprivation in England, people are having strokes 7 years younger on average than the rest of the country, for instance, and patients in the most deprived areas have a 26% higher risk of death in the first year after stroke compared with patients from the least deprived areas.[15]

Across the UK, there is consistently poorer access to services in rural areas compared to towns and cities. This continuum of care can also be seen across the devolved nations of the UK, creating a postcode lottery of services.

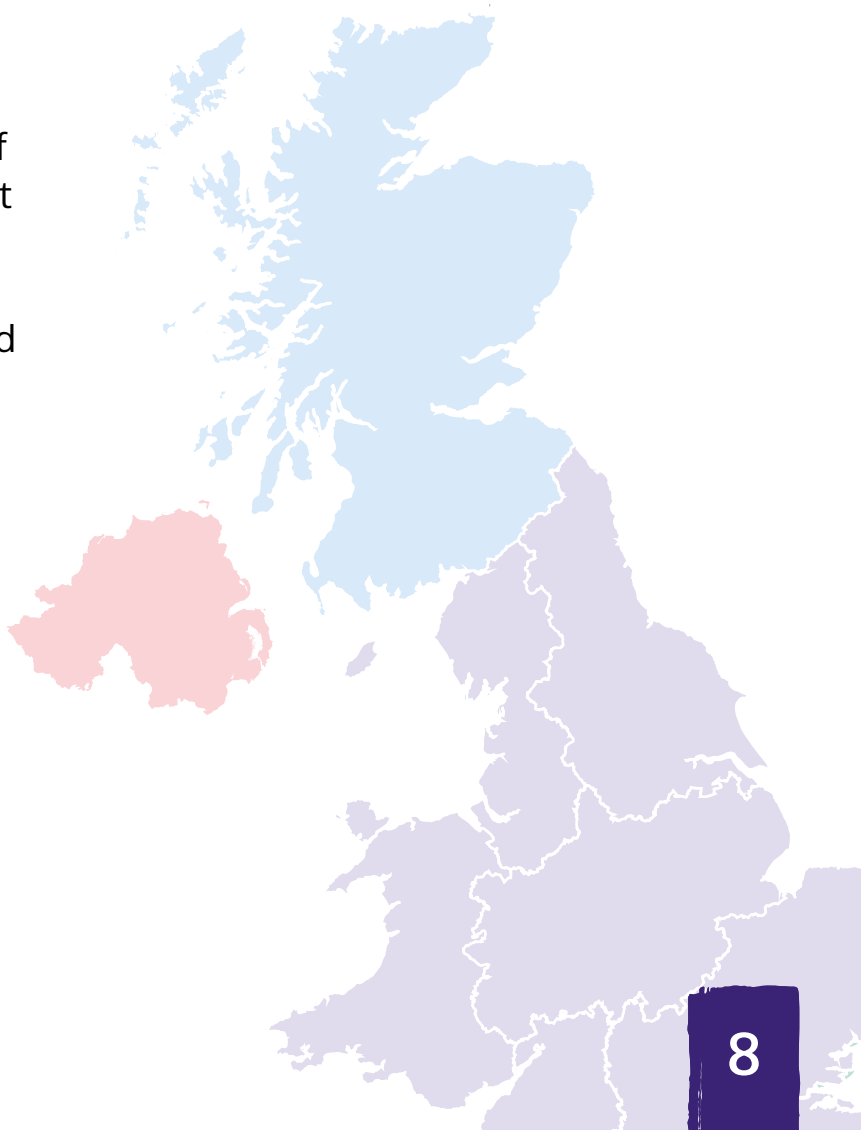
Northern Ireland

There has not been adequate investment of resources in rehabilitation in Northern Ireland in recent years, leading to poor provision of services and ultimately to worse outcomes for stroke survivors. For instance, in the inpatient setting between July and September 2022, only 8% of stroke survivors in Northern Ireland who were assessed as needing all three core forms of rehabilitation therapy received the recommended levels of these therapies.[16]

The provision of rehabilitation in Northern Ireland is particularly poor after the transition from the hospital back into the community. Shockingly, in a survey conducted by the Stroke Association in Northern Ireland, 67% of stroke survivors told us that they do not feel their physical needs are well met after hospital and 90% said that they did not receive adequate emotional and cognitive support after discharge.[17]

Scotland

There are around 128,000 stroke survivors living in Scotland, and this figure is projected to increase to 175,000 by 2035.[18] It is therefore vital that rehabilitation services are adequately resourced and functionally well. However, the current provision of services is not at a level that stroke survivors need: a gap analysis carried out by the Scottish Stroke Psychology Forum found that in 6 Health Boards, there was no dedicated stroke psychology service, while no health boards currently has a psychology staffing level that meets clinical guidelines.[19]



Wales

In Wales, the provision of rehabilitation in hospital and in the community is poor. Between July and September 2022, only 6.3% of stroke survivors in inpatient wards who were deemed to need all three types of rehabilitation therapy actually went on to receive the recommended levels of these therapies.[20]

In turn, there are very large gaps in the provision of post-stroke rehabilitation. A Stroke Association survey of stroke survivors in Wales found that 20% did not have the support they needed to cope after leaving hospital. In turn, while 83% of survivors were left with mobility problems after their stroke, 45% said they needed longer or more frequent support from physiotherapy services than was provided.[21]

Just over three-quarters of the stroke survivors we surveyed in Wales experienced mental health issues following their stroke, including anxiety, depression, mood swings or suicidal thoughts.[22] Despite this pressing need for psychological (and neuropsychological) support for stroke survivors, Wales currently has only one full time neuropsychiatrist and there are severe shortages of psychologists, particularly in rural areas.[23] This places limitations on the country's ability to care for the mental wellbeing of stroke survivors; these challenges are thrown into sharp relief by the fact that only 2% of stroke patients in Wales are able to access psychological support during their inpatient stay, compared to 5% in England.[24]

Case Study: The perspective of a stroke survivor

Gail Anderson's story

Gail Anderson, 64, from Yorkshire, knows better than most how more support is needed following her stroke In April 2022. Gail's daughter, Alana, who was with her at the time, called an ambulance in the early hours after she discovered her Mum's mouth was drooping and she was unable to move. Shockingly, the ambulance took over 3 hours to arrive.

Gail, who had a stroke caused by a blood clot on the left hand side of her brain, has been left with one sided weakness and serious fatigue while she also has problems with her memory and mental health.

Understandably, the family needed support but as Alana says, after the initial occupational and physiotherapy, this hasn't been forthcoming. Alana said: "We were so confused and there wasn't a lot of communication from the hospital at all. We were told we would be seen by the stroke consultant within six weeks but we actually waited for over three months for a five minute phone call.

"We've really just had to wing it. Mum is moving but she is still really suffering with her leg and she's not had any more physio even though we've wanted and need more. She has also been referred to different departments in the hospital but been informed there are long waits which we feel is slowing down her recovery.

"Mum has done great with her recovery and can manage to get about with a walking stick if it's not a far distance, but if going far she still needs a wheelchair."

Now Alana and her Mum want to work with the Stroke Association to raise awareness on the need for ongoing support – both physically and mentally.

Alana said: "I reached out to the Stroke Association following a colleague's advice as we have had little involvement from health professionals so we were still in the dark of what to expect with her recovery.

"Mum gets tired and confused so easily. She's also had to go on anti-depressants as her recovery is having a massive impact on her mental health. She is also now unable to work due to her stroke which has definitely had an impact too. We didn't know anything after her stroke and we just need more support!"

What is causing these issues?

1. The stroke rehabilitation workforce is insufficiently planned, overworked, overstretched, and undervalued.

Only 18% of inpatient stroke units have appropriate access to all the core disciplines involved in stroke rehabilitation, with this figure dropping to 17% for community-based services.[25] Looking closer at these figures, it is clear that the failure to meet recommended staffing levels applies across the board. As of December 2021, all three of the major therapeutic professions, as well as psychologists, were included on the UK Government's list of shortage occupations for health and care services.[26]

As an example of how chronic workforce shortages are not being currently met by realistic plans for increases, the Royal College of Speech and Language Therapists has estimated a growth in the profession of 2% per year, but in order to effectively meet increased demand would need to see a minimum increase of the skilled workforce of 15%.[27]

Spotlight:
The stroke rehab workforce

A large community of health and social care professionals contribute to a stroke survivor's recovery, including stroke doctors, nurses, physiotherapists, occupational therapists, speech and language therapists, and psychologists. These professionals typically work within multidisciplinary teams (MDTs) that bridge the hospital and community environments.

Through the tireless work of these dedicated specialists, rehabilitation can help stroke survivors recover skills such as their motor functions, speech and communication, and cognitive ability, often allowing them to return to work and regain levels of independence. Professionals such as clinical, neuro-, and assistant psychologists can also support the psychological and emotional wellbeing of stroke survivors, helping them to cope with the destabilising and disorienting impact of stroke on mental health.

2. **The distribution of stroke care resources is skewed towards the acute setting and inpatient rehabilitation services, leaving community rehabilitation care under-resourced.**

Stroke survivors often speak to us about their desire for a smoother transition through the different parts of the stroke treatment pathway, from the hospital into the community. There is a desperate need for a greater allocation of resources towards community rehabilitation services. More support for community-based rehabilitation has been shown to be economically-sensible policy, as well as clinically effective. A study by the Stroke Alliance for Europe (SAFE) found that 'community-based rehabilitation for eligible stroke patients would generate savings across the 32 countries of €295 million over a five-year period'.[28]

3. **There is limited research into actionable ways of improving post-stroke rehabilitation.**

Compared with the acute part of the stroke pathway, there is a lack of research into rehabilitation best practice – particularly in the community setting – and an even further lack of clear plans as to how service providers are to implement that research. This was highlighted in the James Lind Alliance's Stroke Priority Setting Partnership which emphasised that investment in stroke research must increase if we want to improve the lives of those affected by stroke.

Stroke research receives just 1% of public and charity health research spend (£30m of £2.56bn). This is compared to 19% (£483m) for cancer and neoplasms, and 10% (£248m) for other neurological conditions.[29] This dearth of funding is despite the clear returns on investment that stroke rehabilitation research presents: investing £10 million into stroke cognitive rehabilitation research could save £725 million over 20 years, saving over 71 times the amount invested.[30]

Research resources allocation increases should not just be limited to the rehabilitation therapies themselves, but also to service delivery and system design, which are vital to the implementation of any innovative therapy or treatment.

What do we recommend?

We want all stroke survivors to get the rehabilitation and support they need. This support should endeavour to meet the variety of physical, psychological, emotional, cognitive, behavioural, and social rehabilitation needs that can be so integral to rebuilding lives after stroke. Rehabilitation should be individualised to each stroke survivor, available 7 days a week, and based primarily on need rather than mandated time limits. It should match or exceed the dose and quality of rehabilitation outlined in the updated NICE and National Clinical Guideline and it should be informed by professional guidelines.

Not only does good rehabilitation lead to a healthier and happier population, but it also reduces pressure on the social care system and increases the number of working age stroke survivors who can re-enter meaningful employment. Inadequate rehabilitation undermines any improvements in acute treatments and social care.

In order to realise this...

Across the UK:

1. **The post-stroke rehabilitation workforce should be valued, expanded, and appropriately resourced.**

Governments across the UK should develop sustainable stroke workforce strategies that outline costed and long-term plans to alleviate the structural and chronic labour shortages across the stroke pathway. These strategies should be co-produced by governments with the third sector, stroke survivors, researchers, and clinicians.

Central to this should be a plan to address the underlying reasons for extremely high turnover rates in the health and social care workforce, namely poor working conditions and low pay. Independent analysis from the House of Commons Health and Social Care Committee emphasises the scale of this problem: 'the National Health Service and the social care sector are facing the greatest workforce crisis in their history'.[31]

2. **The delivery of psychological and emotional support for stroke survivors should be prioritised across the UK.**

Around one in three stroke survivors will develop depression as a result of their stroke; one in four will develop anxiety; and around 90% of stroke survivors experience a level of cognitive deficit post stroke that impacts day-to-day living.[32] Despite these common struggles, a very small proportion of survivors receive any form of professional psychological or neuropsychological support.[33] We believe that every stroke survivor should have timely access to professional support for any psychological or emotional challenge they face after their stroke, for as long as they need.

3. **Early supported discharge (ESD) services should be made available to all stroke survivors who can benefit.**

ESD is a highly effective intervention for stroke survivors that transfers their care from an inpatient setting to the community, enabling them to continue rehabilitation at home, with the same intensity and quality of care they received in the hospital. This intervention is recommended by the NICE guidelines on stroke rehabilitation and is widely evidenced by strong clinical data, as well as recommended in the Integrated Community Stroke Service Model.[34]

4. **Vocational rehabilitation should be made available for all stroke survivors who need and want it.**

Vocational rehabilitation can help working age stroke survivors to re-enter the workplace and regain degrees of professional independence. The majority (71%) of stroke rehabilitation teams are providing vocational rehabilitation without it being formally commissioned. Service specifications should detail the need for vocational rehabilitation to avoid a postcode lottery of provision. While research and the evidence-base around vocational rehabilitation is at an early stage, there are promising signs that it holds potential for improving wellbeing.

5. **Greater funding is desperately needed for research into post-stroke rehabilitation, in line with the findings of the James Lind Alliance Priority Setting Partnership, alongside increased utilisation of technological solutions to challenges in rehabilitation.**

A focus needs to be places on research that is clearly implementable and has a set of actions attached to it. In 2021, The James Lind Priority Setting Partnership for Stroke identified 18 areas for further research into rehabilitation-related subjects, including appropriate intensity of stroke rehab therapies.[35] The updated National Clinical Guidelines for Stroke highlight this need for more targeted research on stroke rehabilitation.

Technological advancements have great potential to improve the stroke rehabilitation pathway. Where appropriate, advancements such as telehealth should also be promoted as a way of increasing the accessibility of rehabilitation, while not acting as a replacement for in-person care.

6. **Data collection on the provision of post-stroke rehabilitation, including psychological support, should be prioritised across the UK.**

Rehabilitation, including psychological support, should be prioritised within data-gathering activities and audits, across the UK's four nations, including in the Sentinel Stroke National Audit Programme (SSNAP) and the Scottish Stroke Care Audit (SSCA). Much of the stroke data currently collected relates to the hospital setting, while very little is collected around community-based rehabilitation, making it hard to see and understand the gaps in provision, and difficult to monitor improvements.

7. **Collaboration across the public and third sectors needs to be increased.**

Innovation and collaboration should be encouraged and actively facilitated through improved links between clinical service providers and the third sector, following the example of the Stroke Association's collaboration with Mind Cymru in Wales or its cooperation with Northern Ireland Chest Heart and Stroke (NICHS) to run self-management workshops. Health systems need to make the most of innovative partnership opportunities in the planning and design of services to ensure they are person-centred, integrated and meet the needs of patients.

In Wales:

1. **Plans to transform stroke services and produce new service specifications in Wales should realise the rehabilitation commitments within the Welsh Government's existing Stroke Quality Statement.**

The Stroke Quality Statement states that the Government's aim is 'for people of all ages to have the lowest possible risk of having a stroke, and, when it does occur, to have an excellent chance of surviving, and returning to independence as quickly as possible.'[36]

In Scotland:

1. **Health Boards should implement a holistic model of stroke rehabilitation as outlined in the progressive stroke pathway.**

The Stroke Association supports the Scottish Stroke Psychology Forum model of Psychological support, produced for the National Advisory Committee on Stroke as part of the progressive stroke pathway document. This model places psychological care on an equal pairing with physical rehabilitation.

2. **The Scottish Stroke Care Audit (SSCA) should fully integrate data collection on the quality and provision of rehabilitation.**

The SSCA does not collect data on rehabilitation to the same extent as the Sentinel Stroke National Audit Programme (SSNAP). The Stroke Association strongly advocates for the inclusion of detailed metrics of inpatient and community rehabilitation provision and quality, including data on the intensity of the rehabilitative therapies, waiting times for therapy, and staffing levels for rehabilitative professions.

3. **The forthcoming Stroke Improvement Plan should ensure alignment with the updated 2023 National Clinical Guidelines for Stroke.**

This Plan should emphasise the need for stroke survivors to have access to good quality longer term support, including access to a 6-month review, individualised and needs-based rehabilitation, and psychological support throughout the treatment pathway.

In Northern Ireland:

1. **Rehabilitation, and in particular psychological and emotional support, must be prioritised in national stroke planning.**

The Stroke Association welcome the rehabilitation commitments made in the Department of Health's Stroke Action Plan, including the recommendation that Early Supported Discharge should be available across all health trusts and that stroke patients should have access to timely clinical psychology support. We want these commitments to be implemented and invested in fully.

In particular, improvements in access to psychological and emotional support for people affected by stroke must be prioritised through investment in the psychology workforce, co-production with stakeholders, and enhanced collaboration with the voluntary sector.

In England:

1. **Integrated Care Boards should appoint a strategic rehabilitation lead who is responsible for annually reporting on rehabilitation provision in each Integrated Care System.**

The Stroke Association supports the creation of a new position within England's Integrated Care Boards, with oversight of rehabilitation provision that meets clinical guidelines and delivers the National Stroke Service Model, and with particular emphasis on the transition from the inpatient to the community rehabilitation service.

Annex A

Glossary of terms

- **Psychological support:** an intervention by a clinical psychologist or psychiatrist to manage a serious mental health issue, such as depression or anxiety, arising as a result of a stroke.
- **Emotional support:** help with the mild and transitory variations of mood that can be expected after a stroke, provided by peers, stroke healthcare professionals, or specialist psychologists and/or psychiatrists.
- **Cognitive assessment:** a test of the brain's functional ability to receive, process and manage information.
- **Core rehabilitative disciplines:** refers to physiotherapy, speech and language therapy, and occupational therapy
- **Clinical psychologist:** a specialist in the management and treatment of mental health issues, phobias, and addictions, trained to doctorate level.
- **Physiotherapy:** treats, restores, maintains, and makes the most of an individual's mobility, function, and wellbeing.
- **Occupational therapy:** treats and supports individuals to overcome challenges completing everyday tasks or activities.
- **Speech and language therapy:** treats and supports those who have difficulties with communication, or with eating, drinking and swallowing.
- **Early supported discharge (ESD):** an intervention for adults after a stroke that allows their care to be transferred from the inpatient to the community setting, while receiving the same intensity of rehabilitation that they would receive in hospital.

References

[1] https://www.strokejournal.org/article/S1052-3057(04)00070-9/abstract

[2] Please note that the statistics taken from the Sentinel Stroke National Audit Programme (SSNAP), which are referenced throughout this document, do not include figures from Scotland, which has its own stroke audit, the Scottish Stroke Care Audit (SSCA). This audit has limited relevant data points on rehabilitation.

[3] https://www.stroke.org.uk/lived-experience-of-stroke-report/chapter-4-rebuilding-lives-after-stroke

[4] https://www.england.nhs.uk/wp-content/uploads/2022/02/stroke-integrated-community-service-february-2022.pdf

[5] https://www.strokeaudit.org/Documents/National/PostAcuteOrg/2021/2021-PAOrgPublicReport.aspx

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[8] https://www.strokeaudit.org/Documents/National/PostAcuteOrg/2021/2021-PAOrgPublicReport.aspx

[9] https://www.strokeaudit.org/results/Clinical-audit/National-Results.aspx

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[12] https://www.stroke.org.uk/sites/default/files/jn_1920.276a_-_pps_-_work_after_stroke.pdf

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[14] https://www.strokeaudit.org/results/PostAcute2021/National.aspx

[15] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5887080/

[16] This figure refers to the number of applicable patients, who have been deemed to require these forms of therapy, receiving the recommended rehabilitation dose relevant at that time, as laid out in the 2016 National Clinical Guideline for Stroke. This dose has subsequently been increased in the 2023 National Clinical Guideline for Stroke: https://www.strokeaudit.org/results/Clinical-audit/National-Results.aspx; http://www.rcplondon.ac.uk/guidelines-policy/stroke-guidelines; https://www.strokeguideline.org/.

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[19] Ayrshire and Arran, Borders, Dumfries and Galloway, Forth Valley, Tayside and Western Isles; Improving Psychological Care in Stroke Services: A National Model for Scotland. Scottish Stroke Psychology Forum (October 2020).

[20] As above, this figure similar refers to the recommendations of the time, laid out in the 2016 National Clinical Guideline for Stroke: https://www.strokeaudit.org/results/Clinical-audit/National-Results.aspx; http://www.rcplondon.ac.uk/guidelines-policy/stroke-guidelines.

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[26] https://www.gov.uk/government/publications/skilled-worker-visa-shortage-occupations-for-health-and-education/skilled-worker-visa-shortage-occupations-for-healthcare-and-education

[27] https://committees.parliament.uk/writtenevidence/108552/pdf/

[28] https://www.safestroke.eu/wp-content/uploads/2020/10/03.-At_What_Cost_EIOS_Full_Report.pdf; the '32 countries' is made up of EU member states, in addition to the UK, Iceland, Israel, Norway and Switzerland.

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[36] https://gov.wales/quality-statement-stroke-html#:~:text=National%2C%20evidence%2Dbased%20pathways%20for,and%20carers%20are%20consistently%20accessible

[37] https://www.gov.scot/publications/progressive-stroke-pathway/pages/11/

When stroke strikes, part of your brain shuts down. And so does a part of you. Life changes instantly and recovery is tough. But the brain can adapt. Our specialist support, research and campaigning are only possible with the courage and determination of the stroke community. With more donations and support from you, we can rebuild even more lives.

Donate or find out more at **stroke.org.uk**

Contact us

We're here for you. Contact us for expert information and support by phone, email and online.
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From a textphone: **18001 0303 3033 100**
Email: **helpline@stroke.org.uk**
Website: **stroke.org.uk**

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