Llywodraeth Cymru
Welsh Government

The quality statement for stroke

4th February 2026

Note: This is a dynamic online document which will be refreshed as new evidence, learning, data and trends emerge. Any updates will be made clear. A glossary of terms and definitions is available at Annex 3.

Contents

WG53071, Digital ISBN 978-1-83715-972-7
Mae'r ddogfen hon ar gael yn Gymraeg hefyd / This document is also available in Welsh
Rydym yn croesawu gohebiaeth a galwadau ffôn yn Gymraeg / We welcome correspondence and telephone calls in Welsh

Introduction

Anyone of any age can have a stroke and it often happens with no warning. The good news is that, with the right strategy, and access to life saving, life changing and life improving treatments and interventions, stroke is not only preventable, but treatable and recoverable.

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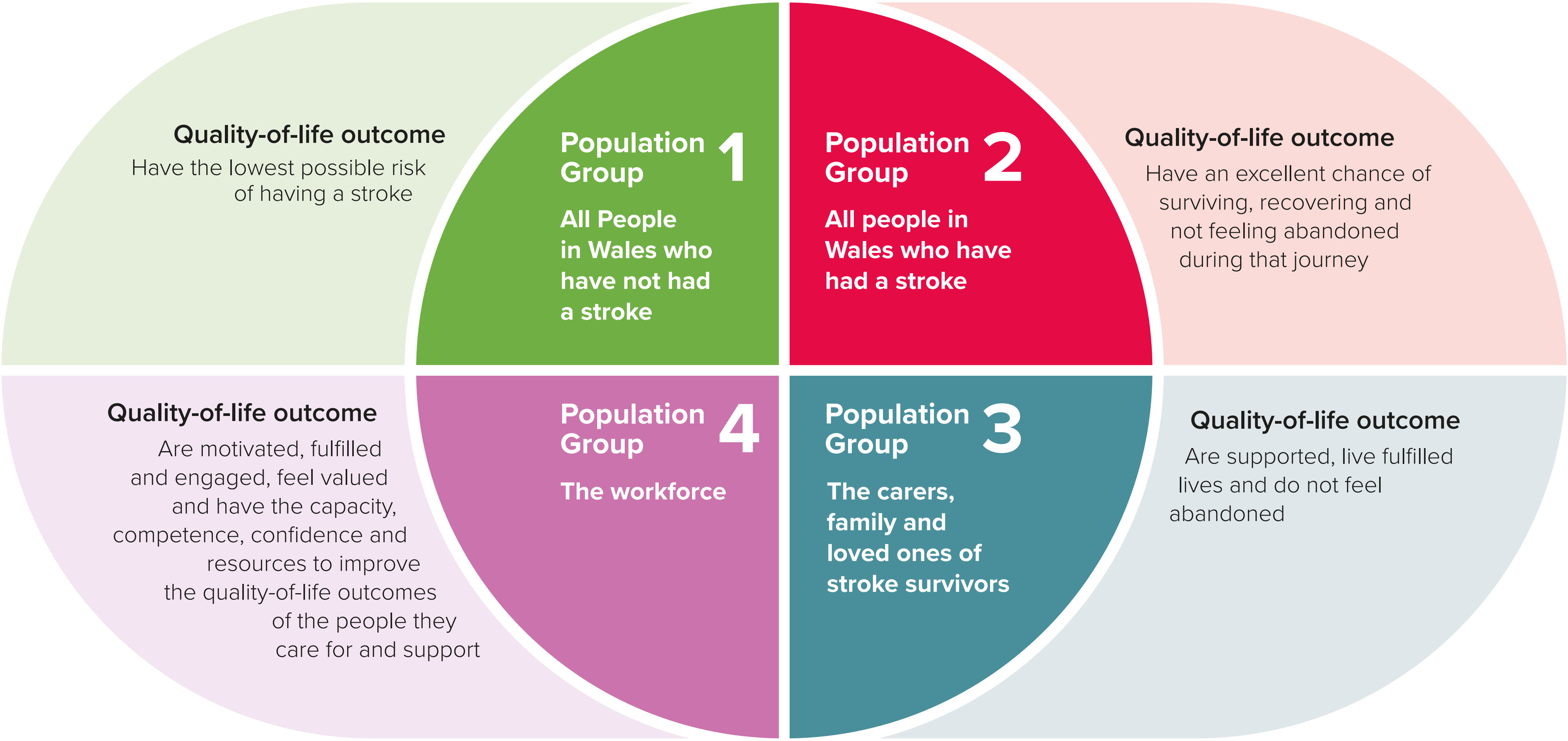
This Quality Statement identifies stroke as a priority and builds on the **2021 publication**[1]. It seeks to maintain an emphasis on prevention and timely and equitable access to life-saving treatment 24/7 to improve the quality-of-life outcomes of everyone whose lives are affected by stroke, using a whole system and whole pathway approach across four population groups (Figure 1). It also places a renewed emphasis on the provision of person-centred holistic care, particularly in relation to rehabilitation and ‘life after stroke’, ensuring the physical, psychological and social impacts of stroke are given renewed prominence for stroke survivors, and their family and loved ones.

The quality-of-life outcomes we aim to improve are:

- for people of all ages in Wales to have the lowest possible risk of having a stroke
- when stroke does occur, for those affected to have an excellent chance of surviving, recovering and not feeling abandoned during that journey
- to ensure carers and loved ones of stroke survivors are supported, live fulfilled lives, and do not feel abandoned
- to have a motivated, fulfilled and engaged stroke workforce who feel valued and have the capacity, competence, confidence and resources to improve the quality-of-life outcomes of people they care for and support.

These quality-of-life outcomes build on the vision and aims set out in the 2021 quality statement, and have been informed and co-developed with individuals who have expertise through lived experience. A themed summary of their feedback is at Annex 2. Insights gained through extensive engagement during the development of the NHS Wales Stroke Service Standards (Annex 1) have also been drawn upon.

Figure 1: The four population groups and their quality-of-life outcomes



Population Group 1

All People in Wales who have not had a stroke

Quality-of-life outcome

Have the lowest possible risk of having a stroke

Population Group 2

All people in Wales who have had a stroke

Quality-of-life outcome

Have an excellent chance of surviving, recovering and not feeling abandoned during that journey

Population Group 3

The carers, family and loved ones of stroke survivors

Quality-of-life outcome

Are supported, live fulfilled lives and do not feel abandoned

Population Group 4

The workforce

Quality-of-life outcome

Are motivated, fulfilled and engaged, feel valued and have the capacity, competence, confidence and resources to improve the quality-of-life outcomes of the people they care for and support

Strategic context

Quality Statements have been developed by the Welsh Government in alignment with the commitments outlined in **A Healthier Wales**[2]. Their purpose is to define the quality-of-life outcomes, clinical and service standards expected in high-quality, person-centred care delivered by Welsh Health Boards, NHS Wales Trusts and supporting NHS Wales bodies. A Healthier Wales directs us to improve population health outcomes and the **National Clinical Framework**[3], created in response to A Healthier Wales, sets out the purpose of Quality Statements in shaping the vision for specific clinical services and how clinical pathways should describe interventions, outcome measures and standards for delivery. Quality Statements are supported by detailed service specifications, and associated infrastructure and workforce standards (Annex 1), and aligned to relevant NICE and other clinical guidelines to enable a consistent, long-term approach to improving quality-of-life outcomes. They also embed the principles of **Value-Based Healthcare for Wales**[4], where value is measured across the entire cycle of care, not just a single intervention or part of the pathway. The Stroke Quality Statement seeks to maximise opportunities to embed these principles across all elements of the stroke pathway (see figure 2).

A Healthier Wales also highlights the need for services to evolve in response to future challenges, such as an ageing population, and encourages collective action to improve health outcomes. This vision was reinforced through **refreshed priority actions in 2024**[5] and the **priority delivery actions for better health and care**[6] and aligns with the **Well-being of Future Generations (Wales) Act 2015**[7], the **Social Services and Well-being (Wales) Act 2014**[8], and the **Equality Act 2010**[9], ensuring stroke care in Wales is preventative, inclusive, and person-centred.

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Welsh Government policy prioritises the delivery of care closer to home, seeking to improve outcomes through prevention, early intervention and supported self-management. Easier access to care improves user experience and can help to reduce inequity by removing potential barriers to care. Moving care closer to home also supports the ambition of Net Zero Wales by redesigning the whole journey with care closer to home and a reduced need to visit hospital, supported by the use of digital and technological solutions, in line with the **NHS Wales Decarbonisation Strategic Delivery Plan**[10] which states that:

> *'Strategic planning of non-acute healthcare will consider initiatives set out to modernise and improve health and social care in Wales. This includes greater use of technology to enable home monitoring of health conditions and increasing the community outreach by providing health and social care from hub locations closer to home.'*

The Welsh Government's **'More than just words'**[11] strategy to promote the Welsh language in health and social care must be fully integrated into service provision. Central to this is the adoption of the 'active offer' principle, which ensures that Welsh language services are offered proactively, without individuals needing to ask for them. This approach is key to respecting linguistic rights and enhancing patient experience.

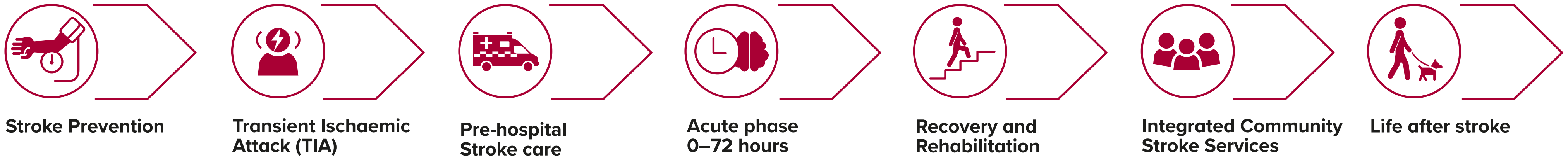
Expectations of Health Boards

Health Boards and Trusts are expected to adopt the Quality Statement for Stroke as a framework for planning and delivering optimal stroke prevention and care in collaboration with their partners. It promotes a population health approach in line with strategy. Underpinned by the six quality domains in the Duty of Quality Act it provides a framework for NHS organisations to support planning, transformation and improvement across the whole pathway (Figure 2) to improve the quality-of-life outcomes for the four population groups (Figure 1).

The changes needed to improve the quality-of-life outcomes cannot be delivered within stroke services alone. Typically stoke prevention and care encompass a range of services and organisations across the statutory and third sectors, and across community, primary, and secondary care. Improving quality-of-life outcomes for populations requires these to work together in collaborative partnerships and mutually reinforcing ways. When united by shared outcomes and goals, their collective impact becomes greater than the sum of their individual efforts. The four quality-of-life outcomes act as the 'north star' for these collaborative efforts. The aim is to deliver integrated services across primary and secondary care with pathways that best meet the needs of patients.

Health Boards should embrace their role within this, acting as anchor institutions[12] for stroke partners, creating sustainable partnerships tied to the wellbeing of the populations they serve, and adopt a Community by Design (CbD) approach, ensuring service planning and design assumes that care and support is provided in the communities where people live, utilising hospital based care only when this is required by more complex or escalating clinical need.

Figure 2: The seven elements of the stroke pathway



Health boards must seize the widespread consensus to reconfigure stroke services around the Comprehensive Regional Stroke Centre (CRSC) model. This transformation demands:

- redesigning care pathways to eliminate unwarranted variation and ensuring consistency across regions
- strengthening national leadership while deepening local engagement and collaboration with the third sector
- embedding lived experience into service design to ensure care is person-centred and responsive
- building multiprofessional and transdisciplinary capacity to deliver timely, effective, and equitable care.

The CRSC model is clinically accepted as the optimal model for hyper-acute stroke care, maximizing opportunities for improving the quality-of-life outcomes following stroke, and part of the solution to resolving service and workforce fragilities. Where this model has been adopted elsewhere outcomes have been sustainably improved. CRSCs will become the focal point for intensive hyper-acute stroke care and rehabilitation in the first 72 hours, and for the delivery of life saving interventions such as mechanical thrombectomy, for those who need it. The CRSC model affords opportunities to significantly improve quality-of-life outcomes for those impacted by stroke beyond what the current model of stroke care in Wales can achieve. By moving to regional models of care and addressing current gaps in provision, we can ensure that every individual affected by stroke receives the support they need, when and where they need it. However, this should align with the aims for CbD, and health boards should invest in all areas of the pathway. Investment and planning must reflect the equal importance of prevention, integrated community rehabilitation and ‘life after stroke’ services to acute care, as core components of the stroke pathway and in securing long-term recovery and prevention of stroke.

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All decisions must be guided by the Duty of Quality under the Health and Care (Wales) Act 2020[12] ensuring that services are safe, timely, effective, person-centred, efficient, and equitable. Service design and investment must be based on population need, improving quality-of life outcomes, and long-term value. Where there is evidence of significant or widespread harm, or service fragility that may result in harm, this is identified and escalated for system action through the mechanisms in place to support such escalation.

We must capitalise on opportunities to optimise quality-of-life outcomes afforded through transformational and revolutionary technological and digital innovations. These are critical to stroke care now, and essential building blocks for the success of regionalised care through CRSCs. Health Boards, the Strategic Cardiovascular Clinical Network and Stroke Implementation Network should work with industry partners to identify, test, and where appropriate, roll out innovation in stroke care through national programmes. Our ambition remains to digitally connect the whole stroke pathway.

Organisational leaders, clinical teams, and operational managers routinely collaborate with each other and their partners, including Welsh Government, NHS Wales Performance and Improvement, the National Strategic Cardiovascular Clinical Network, the Stroke Implementation Network, other NHS bodies – such as Health Education and Improvement Wales (HEIW) and Digital Health and Care Wales (DHCW), the Stroke Association and Local Authorities, to prevent and reduce the incidence of stroke and optimise quality-of-life outcomes through effective high quality information services, pathways and models of care. This should include work to improve understanding of the socioeconomic burden of stroke in Wales to guide sustainable quality-of-life outcome focused policy making and value based service planning across the whole pathway and the four population groups.

Stroke survivors and carers must be involved from the outset in shaping services, governance and evaluation. Their lived experience should be embedded in decision-making and should inform every stage of the pathway using a ‘nothing about us without us’ approach. Patient and public voice must be embedded with support from Stroke Association Wales and Llais to ensure services reflect what matters most to people.

Priority planning expectations

People are at the heart of this quality statement. Priority planning expectations have been identified and organised using the four population groups to maintain a focus on the whole stroke pathway and the quality-of-life outcomes that matter to people. Each expectation has been aligned to the six domains of quality in the Duty of Quality[12] – Safe, Timely, Effective, Person Centered, Equitable, Efficient.

Population Group One: **All people in Wales who have not had a stroke**

Quality-of-life outcome: **For people of all ages in Wales to have the lowest possible risk of having a stroke**

Aim: To prevent as many strokes as possible by working with people to make healthier choices (stop smoking, be more active, drink alcohol within agreed recommended limits, eat a healthy diet and stay a healthy weight) and to improve the early detection and management of underlying risk factors for stroke to help people live longer, healthier lives.

Domains of Quality	Priority Planning Expectations
	Prevent as many strokes as possible
Timely	Prevent as many strokes as possible by working with people to make healthier choices, making every contact count, and by improving the management of underlying risk factors through earlier detection of the **ABCD** high risk conditions in the Cardiovascular Disease Prevention Plan for Wales[13] (**A**F, **B**lood pressure, **C**holesterol and **D**iabetes), and early access to diagnostic investigation, proactive management and treatment to help patients live longer, healthier lives.
Effective	Health Boards work towards routinely knowing **ABCD** numbers to inform prevention activity and identify areas 'ripe for improvement', with monitoring in place to know the proportion of patients in treatment whose risk has been reduced in line with appropriate guidelines and a demonstrable continuous improvement approach.
Person Centred	Care must be delivered in a way that is accessible and provides support to optimise outcomes, and that ensures equity of outcome. A co-produced treatment plan should be developed through a person-centred and shared decision making approach, ensuring that people with high-risk conditions are supported to make decisions, understand the risks and benefits of treatment, and how to self-manage their care.
Safe and Efficient	Prevent as many additional strokes as possible by optimising the care of those who have suffered a stroke or TIA.

Population Group Two: **All people in Wales who have had a stroke**

Quality-of-life outcome: **When stroke does occur, people have an excellent chance of surviving and recovering from stroke, and do not feel abandoned during that journey**

Aim: Ensure individuals who suffer stroke have access to the best treatment, eliminating delays across the whole pathway, including raising awareness of the signs and symptoms of stroke and the need to access urgent medical attention by acting FAST.

Domains of Quality	Priority Planning Expectations
	Elimination of delays in access to acute stroke care, rehabilitation and 'life after stroke' services
Timely, Safe and Person Centred	Health boards, relevant trusts and NHS Performance and Improvement work together with Stroke Association Cymru to understand the public's awareness of stroke symptoms and the actions required when they occur.
	These partners work together to develop and implement a plan aimed at increasing recognition of stroke signs and symptoms to reduce delays in seeking emergency care by calling 999.
	Ensure pre-hospital processes are optimised to ensure timely identification of stroke to optimise access to treatments such as thrombectomy and thrombolysis.
Equitable	All eligible stroke patients should be investigated with CT Perfusion (CTP) imaging to enable rapid identification of ischaemic core and salvageable penumbra in accordance with The National Clinical Guideline for Stroke (2023 edition)[14] and the NHS Wales Stroke Service Standards (Annex 1).
Efficient and Safe	Optimise delivery of thrombolysis and expand access to a national thrombectomy service, with the aim of a national round-the-clock thrombectomy service, with at least 10% of eligible patients having access to 24/7 mechanical thrombectomy and 20% to thrombolysis.
Efficient, Effective, Equitable and Safe	Health Boards and Trusts work together to enable hyper-acute stroke services, in the first 72 hours, to be reconfigured into more resilient and sustainable comprehensive regional stroke centres to reduce unwarranted variation in care and quality-of-life outcomes.

Domains of Quality	Priority Planning Expectations
	Improve life after stroke services for stroke survivors across Wales
Person Centred	Stroke services should be designed and planned to address and reduce the feelings of abandonment experienced by stroke survivors with patient quality-of-life outcomes and experience measured.
Safe and Effective	Ensure all eligible stroke patients have access to high-intensity, evidence-based rehabilitation focused on personal goals in line with National Clinical Guidelines for Stroke[14], NICE Stroke Rehabilitation Guidelines[15], supported by adequate facilities and equipment for stroke rehabilitation.
Person Centred	Ongoing integrated acute stroke care and rehabilitation should be available in local acute and community hospitals, in primary and community care settings, and in people's homes or close to where people live and with local authority and third sector provision.
Person Centred and Effective	In preparation for discharge, all stroke survivors should be assessed to understand their needs, prevent complications, and set recovery goals, and have access to multidisciplinary care to aid recovery and reduce disability for as long as this is needed.
Person Centred	Life After Stroke' national standards should be co-produced with stroke survivors, carers and the stroke workforce.

Population Group Three: **Carers and loved ones of stroke survivors**

Quality-of-life outcome: **The carers and loved ones of stroke survivors are supported, live fulfilled lives, and do not feel abandoned**

Aim: Consistent support for unpaid carers and recognition of their role and needs.

Domains of Quality	Priority Planning Expectations
	Consistent support for carers or loved ones
Person centered and Equitable	Stroke services should be designed and planned to address and reduce the feelings of abandonment experienced by unpaid carers, with quality-of-life outcomes and experience measured.
	Health Boards provide carers with a personalised stroke carer specific assessment as early as possible and no later than the point of discharge from hospital.
	Health Boards/Social Care providers/Third Sector should provide unpaid carers with a consistent point of contact and continuity of support, including peer support and access to relevant, timely and accurate information.
	Recognition of the role of a carer or loved one
Effective and Person Centred	Health Boards should introduce a standardised method of collecting patient and carer feedback and be able to evidence how this translates into service developments and improvements.
Equitable and Person Centred	Working with Welsh Government, health boards and primary care providers should establish the feasibility of developing a register of unpaid carers with system flags to improve appointment scheduling and service delivery for those they support.
Effective and Person Centred	Health Boards should work closely with third sector and other partners to offer informed choices about the wide range of local services beyond NHS Wales and Local Authority provision.
Person Centred	Health Boards should work with a range of staff across professional disciplines and organisations, including the third sector, to develop a workforce that feels educated and empowered to engage with patients, their families, and loved ones, to support their emotional and psychological wellbeing.

Population Group Four: **Stroke prevention and care workforce**

Quality-of-Life Outcome: **To have a motivated, fulfilled and engaged stroke workforce who feel valued and have the capacity, competence, confidence and resources to improve the quality-of-life outcomes of people they care for and support**

Aim: To ensure high quality stroke prevention and care across the whole pathway through robust workforce planning and the availability of the right staff, at the right time, with the appropriate skills and knowledge.

Domains of Quality	Priority Planning Expectations
Person Centred	Clinical specialists working in stroke care are supported to work at the top of their license, to develop and improve their skill mix, and can take part in service innovation, quality improvement, and research activity.
Safe and Effective	Health Boards understand workforce capacity and demand across the stroke pathway, supported nationally by NHS Performance and Improvement and Health Education and Improvement Wales (HEIW), using workforce planning processes to ensure a sustainable workforce that is equitably distributed across the whole stroke pathway to meet regional and local delivery of stroke care, and grown to meet demand.
Safe and Efficient	Align staffing with national clinical guidelines, NHS Wales Stroke Service Standards and local population needs and make resource decisions based on long-term return on investment and economic benefit.

Why is this important?

Driving improvements across the whole stroke pathway aligned to consistently improving the quality-of-life outcomes will prevent many hundreds of strokes, save lives, and give stroke survivors, their families, and loved ones the best chance to rebuild their lives after a stroke. How well we prevent, treat, and manage stroke all carries personal and economic benefits and consequences, not just for individuals, but for health and care services and society[16], and our ambitions for being A Healthier Wales[2].

> **"The economic burden of stroke will almost treble within 20 years, due to predicted rises in the number of older people in the population, the number of stroke survivors and costs of formal care. This will present real societal challenges in future, especially as stroke increasingly affects people of working age. The Stroke Association reports that around one in four strokes in the UK happen in people of working age, and their factsheet notes that about a third occur in people under 65."**
>
> (https://www.stroke.org.uk/stroke/statistics)

Prevention

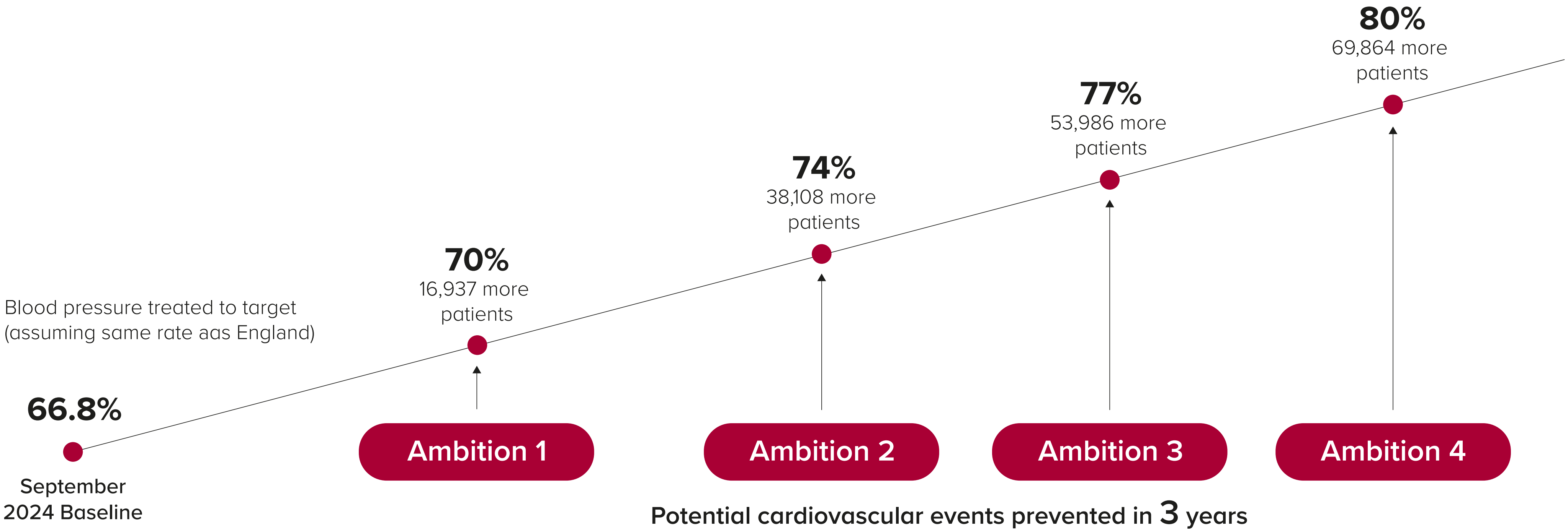
Stroke is the fourth leading cause of death in Wales, modifiable risk factors explain 90% of CVD incidence and up to 80% of premature deaths from CVD are preventable. The Stroke Association[16] estimate more than 7,000 people will have a stroke in Wales each year, and these numbers are rising with projections suggesting up to a 50% increase in the number of people expected to have a stroke by 2035.

Annually, stroke costs NHS Wales £220 million, and the Welsh economy £1.63 billion. Without intervention, this could rise to £2.8 billion by 2035. Whilst mortality rates associated with cardiovascular disease, which includes stroke, have halved in recent decades, this is changing and the curve is turning in the wrong direction. The Cardiovascular Disease Prevention Plan for Wales[13] highlights that we are seeing the first sustained increase in CVD mortality for at least a generation, with Wales experiencing the highest rate of all the UK nations. CVD more broadly accounts for 27% of deaths in Wales with a cost to NHS Wales of £770 million pound each year[17].

The evidence for preventing CVD is some of the strongest in medicine, and compelling. This is powerfully illustrated from a secondary prevention perspective using the size of the prize modelling tool[18] (Figure 3). This demonstrates the potential for over 600 strokes to be prevented over 3 years through the proactive identification and management of people with high blood pressure, and the associated cost savings for health and social care.

Figure 3: The size of the prize modelling tool

The Size of the Prize is a modelling tool based on an estimated percentage of people with diagnosed and controlled hypertension. It shows that supporting people to contr
even one risk factor such as high blood pressure, can prevent hundreds of heart attacks and strokes across Wales.



Potential cardiovascular events prevented in 3 years

(NHS and social care savings refer to the costs averted in the first year after the cardiovascular event)

102 heart attacks NHS savings £0.8m	**229** heart attacks NHS savings £1.7m	**324** heart attacks NHS savings £2.4m	**419** heart attacks NHS savings £3.1m
152 strokes NHS savings £21.m Social care savings £1.4m	**341** strokes NHS savings £4.7m Social care savings £3.2m	**483** strokes NHS savings £6.7m Social care savings £4.6m	**626** strokes NHS savings £8.7m Social care savings £6.0m

The **ABCD PLUS** approach within the Cardiovascular Disease Prevention Plan for Wales offers a systematic approach to identifying and treating risk factors. It can avert strokes and the other consequences of CVD more broadly and should be adopted and embedded into our approach to prevention. **ABCD** relates to 'secondary prevention' and proactively identifying and managing people with four high risk conditions (Figure 4).

Figure 4: ABCD PLUS approach

A **Atrial fibrillation (heart rhythm problem)**

B **Blood pressure (hypertension)**

C **Cholesterol (hyperlipidaemia)**

D **Diabetes**

PLUS relates to key lifestyle behaviours such as healthy weight, physical activity, tobacco use and alcohol consumption.

Actions on wider 'primary prevention' risk factors for cardiovascular disease, represented by the PLUS element of the ABCD PLUS approach are addressed by other Welsh Government policies and programmes focussing on Healthy Weight-Healthy Wales[19], Smoking[20], Alcohol[21], and Physical Activity[22]. Whilst the PLUS element is not within the scope of this quality statement which will focus on the **ABCD** element, Health Professionals play a key role in promoting healthy behaviours as part of the treatment of ABCD risk factors and more generally as part of Making Every Contact Count conversations (MECC[23]), and the Supporting Healthy Behaviours[24] resources are available for health professionals.

> **"The risk factors associated with ABCD are often silent and it is estimated that there are 220,000 people in Wales currently living with undiagnosed high blood pressure that could lead to a stroke or heart attack."**
>
> **Source:** Cardiovascular Disease Prevention Plan for Wales[13]

In the longer-term, primary prevention will get us to where we want to be, but in the shorter-term secondary prevention will have the most immediate impact on health. We must refocus our commitment to reducing the incidence of stroke, the number of lives lost to stroke, and the amount of disability caused by stroke. This necessitates collaboration across Public Health, Primary and Community Care, the Diabetes, Stroke, Cardiac and Vascular Implementation Networks.

People at higher risk of stroke want to be proactive

People want to work with us. The Cardiovascular Disease Prevention Plan for Wales[13] highlights that 46% of people with risk factors for CVD monitor their own health and 85% want to act to improve their condition. It is incumbent on the NHS and its partners across primary and community care to identify those at risk, make every contact count, and capitalise on this motivation.

Every minute counts

When stroke occurs, 'time is brain'. Stroke is a medical emergency and every minute lost in accessing care and treatment can result in the loss of millions of brain cells and a lost opportunity to regain recoverable brain function. Health Boards must accelerate work to ensure 100% of those eligible for life saving and disability preventing treatments such as mechanical thrombectomy (removal of a clot from the brain) and thrombolysis (the use of drugs to dissolve clots in the brain) receive these within the optimal time window. This includes introducing regional solutions that are sensitive to different needs of populations in different geographies, that address the fragility in stroke services through the development of Comprehensive Regional Stroke Centers (CRSCs), and delivering communications and campaigns to increase public awareness of the signs and symptoms of stroke and encouraging people to call 999.

Too many people are not calling 999 fearing ambulance delays or not believing their symptoms are severe enough to warrant emergency attention. Welsh Ambulance Services Trust (WAST) and Health Boards across Wales have implemented changes aimed at improving access to emergency care. These reforms must now translate into tangible improvements in the stroke pathway, reinforcing the message that stroke is a medical emergency. Calling 999 remains the fastest and safest route to specialist stroke care and system improvements must rebuild public trust in emergency response. Public awareness campaigns, clinical leadership, and community engagement must work together to shift perceptions and ensure that individuals recognise stroke symptoms and act immediately.

Recovery and rehabilitation

The right rehabilitation following stroke is critical to recovering brain function and reducing the physical and psychological impact of stroke. In a study of twenty-five developed countries, Wales ranked 21st in relation to Disability Adjusted Life Years (DALYs)[25]. This measure represents the total number of years lost due to ill health, disability or early death, helping to assess the health impact of disease across populations. This means that for stroke survivors in Wales they are more likely to live with more disability compared to the other 24 high-income countries studied. This is an area ripe for improvement and why this Quality Statement places renewed emphasis on rehabilitation and 'life after stroke' provision. It is neither prudent or value-based to focus on improvements and gains in earlier parts of the pathway revolving around prevention and hyper acute care, only to lose these gains later in the pathway.

Life after stroke

People who survive stroke, and their family and loved ones, too often tell us they feel abandoned – how we provide stroke care must address these feelings. Recovery can be a hard slog for some after a stroke, and each stroke survivor's recovery is unique to them. For some, it might mean being able to work again. For others, it's about regaining independence, being able to wash, dress and feed themselves without help. It's a personal journey that can take years and it impacts every aspect of the lives of survivors. But with strength, determination and the right support, recovery is possible. However, too many feel unsupported and unprepared when they need it most. They often lack adequate information, a named point of contact, and continuity of care. This can leave them feeling socially and emotionally isolated. 'Life after stroke' services must be survivor-led, co-produced with third sector and underpinned by measurable quality-of-life outcomes that reflect recovery, wellbeing and re-integration.

Measuring quality-of-life for stroke prevention and care

Doing the right things, consistent with the four quality-of-life outcomes, is essential. Equally as important is knowing we are doing the right things well, through good measurement. To ensure fair and equitable quality-of-life outcomes across Wales, suitable indicators will be identified, and new ones developed if needed. These will assess clinical, and patient/person reported outcomes, experience and satisfaction, aligned to the quality-of-life outcomes across the four population groups. There must be a focus on groups who may be disadvantaged, and face barriers to access, engagement, or attainment of equitable outcomes. This includes populations affected by socioeconomic deprivation, geographic isolation, language needs, cultural expectations, or health-related vulnerabilities. They will be designed to identify variation and drive improvement with a specific focus on equity. They will address gaps in our existing suite of measures to ensure we fully understand the impact of our service on the quality-of-life outcomes of those who use them. For example, stroke survivors and their family and loved ones tell us they feel abandoned. To address this and ensure we are focusing on those things that matter most to people, we must ensure we have a way of measuring this.

As work moves forward to implement this Quality Statement other gaps in how we measure quality-of-life outcomes, and the impact of stroke services on the things that matter to people, will be identified. The aim is to ensure that every individual, regardless of background, receives high-quality care to keep them well, prevent deterioration of existing health issues, and recover and thrive following stroke.

Stroke prevention and care in Wales is measured through a robust framework of Quality Improvement Measures (QIMs) and the Stroke Sentinel National Audit Programme (SSNAP)[26], ensuring services are timely, effective, and equitable. These metrics assess critical aspects of activity across the stroke pathway and align to the National Clinical Guideline for Stroke (2023)[14] and NICE Stroke Rehabilitation Guidance[15].

National mechanisms and governance are in place to monitor, benchmark and provide assurance about the quality of stroke services across Wales, conducting routine audits against agreed service specifications. These incorporate the 20 QIMs and aim to provide robust assurance of service delivery and attribute accountability appropriately. Where necessary, new QIMs will be identified and developed to ensure we continue to understand the impact of our services on those who use them (knowing we are doing the right things well), and have the knowledge and information needed to continually improve, learn and adapt our offer to meet changing needs.

The indicators form the bridge between the quality-of-life outcomes and our understanding about the degree to which these outcomes are improving at a population level. QIMs tell us something about how well our services are contributing to improving quality-of-life outcomes for those using services.

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24. Public Health Network Cymru – Making Every Contact Count
25. Public Health Wales – Supporting Healthy Behaviours
26. IHME – Global Burden of Disease 2021 – Findings from the GBD 2021 Study (2024)
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Annex 1: Associated stroke standards, service specifications and guidelines

NHS Wales Performance & Improvement will support the local and regional implementation of nationally agreed standards, service specifications, guidelines, and pathways of care. These will be added here as they become available.

- National Clinical Guidelines for Stroke (UK and Northern Ireland) (2023)
- National Institute for Health and Care Excellence – Stroke Rehabilitation in Adults – NG236 (2023)
- NHS Wales Stroke Service Standards

Annex 2: Themed summary of engagement

Themed summary of what unpaid carers told us	
Initial hospital discharge can be a tipping point	Many carers feel abandoned, unprepared and unsupported, receiving little to no information at this point of crisis.
Lack of Information and Support	Carers often have to seek out information independently, with inconsistent signposting to support services and little to no assessment of their home situation. Carers need better information provision, emotional support, respite care options, and practical help such as sitting services to enable attendance at carers' activities.
A named point of contact and continuity of care	Carers need someone reliable and knowledgeable that they can turn to for advice, reassurance, signposting or to address concerns, especially post discharge.
Emotional and Social Isolation	Many carers express feelings of isolation, loss of friendships, and the emotional burden of caregiving. The need for peer support groups, both face-to-face and online is vital for emotional well-being. Yet access to emotional support and carer assessments is patchy, and some carers are told they are "not bad enough" to qualify for help.
Financial strain and inequality	There is variability in quality and availability of services such as physiotherapy, speech therapy, and personal assistance. Some carers have to pay privately for services due to gaps in public provision.
Being officially recognised as a carer would make a difference	Unpaid carers suggested that consistent carer registration with GPs and carer assessments is important to carers. Carers need empathy and understanding from health professionals and social contacts as well as acknowledgment of the complex emotional dynamics of caregiving with regular follow-up appointments – not just for the stroke survivor, but for the carer’s wellbeing too. The impact of care giving on the quality-of-life outcomes of carers is well known.

Themed summary of what members of the stroke workforce told us	
Workforce Shortages and Training Needs	There are significant workforce shortages across the stroke pathway, emphasising the need for an increase in the stroke workforce to meet the seven-day service standard for acute stroke services and the importance of cross-specialty or cross-profession accreditation of competencies to address these shortages.
Staff Motivation and Teamwork	Staff working in stroke care are motivated by the opportunity to make a meaningful difference in patients' lives, witnessing patient progress, and seeing individuals regain independence and quality of life after a stroke. The sense of teamwork in stroke services is a cornerstone of motivation, with a well-functioning multidisciplinary team (MDT) fostering a sense of belonging and shared purpose.
Systemic Barriers and Resource Limitations	Systemic barriers such as insufficient staffing, skill mix, workforce capacity, and lack of funding for stroke-specific training and education challenge staff morale and motivation. Inadequate or under-resourced facilities in stroke services leave staff feeling stretched and unable to provide the level of attention and rehabilitation that patients need.
Access to Essential Services	Access to essential services is a major concern, with delays in imaging, limited availability of specialist consultants, nurses, and therapists, and inconsistent access to community stroke services disrupting the care pathway. There is also a lack of funding for secondary prevention services.
Inconsistencies and Inequities in Service Provision	Staff face frustration with inconsistencies and inequities in service provision, including varying acceptance criteria and access to treatments across Wales. Poor information sharing and fragmented IT systems disrupt continuity of care.
Geographic Challenges	Geographic challenges, such as rurality and travel distances, leave some areas underserved and staff unsupported. Staff working in stroke services can feel isolated from other local recovery and rehab services, struggling to support patients and families to navigate through complex systems to access ongoing support.
Commitment to Improvement	Despite these challenges, staff remain committed to patients and believe in the potential for improvement. Their motivation is sustained by teamwork, professional growth, and the shared goal of delivering compassionate, effective care.

Annex 3: Glossary of terms and definitions

Term and (abbreviation)	Description/Definition
Anchor Institutions	This term refers to large, typically non-profit, public-sector organisations whose long-term sustainability is tied to the wellbeing of the populations they serve. Anchors get their name because they are unlikely to relocate, given their connection to the local population, and have a significant influence on the health and wellbeing of communities.
Cardiovascular Disease (CVD)	Cardiovascular disease (CVD), also called heart and circulatory disease, is the general name for conditions that affect your heart or circulation. These include high blood pressure, stroke and vascular dementia.
Cerebrovascular disease	This is a general name for conditions that affect the blood vessels supplying the brain where oxygen and nutrients supplying the brain are damaged or deformed. The most common presentation is ischaemic stroke.
Community by Design	This approach drives service planning from the perspective of the service user and assumes, unless proven otherwise, that care can be provided in the community setting, utilising hospital-based care only when this is required by more complex or escalating clinical need.
Comprehensive Regional Stroke Centers	A comprehensive regional stroke center is a hospital that provides the highest level of specialist stroke care across a region in the first 72 hours following a stroke (the hyper-acute phase). It is equipped to deliver rapid diagnosis, advanced treatments such as clot-busting drugs and mechanical thrombectomy (surgical clot removal), continuous neurological monitoring, and intensive rehabilitation. These centers operate 24/7 with stroke multidisciplinary team specialists, imaging facilities, and coordinated emergency pathways, including pathways to specialist neurosurgical centers. They serve as hubs for referrals from surrounding hospitals within the region and support clinical teams in those hospitals. When co-located with other regional service provision such as vascular, cardiology and interventional radiology, they capitalise on opportunities to consolidate complimentary clinical expertise, provide telemedicine and networked support with smaller hospitals for remote expertise, patient transfers and repatriation, and provide a conduit for participation in stroke audits, clinical trials and ongoing staff training, development, and support. Combined, these elements ensure rapid diagnosis, treatment, and ongoing care across the stroke patients journey and optimise opportunities to improve the quality-of-life outcomes for patients, families and loved ones, and staff.

Term and (abbreviation)	Description/Definition
Disability-Adjusted Life Years (DALYs)	A measure of overall disease burden, representing a year lost due to ill-health, disability, or early death. It combines years of life lost due to premature mortality and years lived with disability into a single metric, helping to assess the health impact of disease across populations.
Indicator	A measure which helps to quantify the improvement in quality-of-life outcomes for populations, for example, incidence of stroke, mortality and disability rates associated with stroke, percentage of stroke survivors and unpaid carers living fulfilled lives. These will be based on a specific criterion for high-quality stroke care developed from research evidence, and agreed upon by experts, and reflect the things that matter to the four populations in the stroke quality statement. They will be used to monitor, track and assess improvement trajectories for quality-of-life outcomes over time, and may include upper and lower limits.
Multidisciplinary Team (MDT)	A group of health and social care professionals from different disciplines alongside third sector colleagues working collaboratively to deliver coordinated patient care and rehabilitation.
Prevention: **Primary** **Secondary** **Tertiary**	**Primary:** Strategies that build resilience, support well-being or prevent the onset or development of health-related harms/risks, which would potentially lead to poor health outcomes and the need for care. For example, lifestyle modifications. **Secondary:** Interventions that lead to the early identification of needs or conditions. These may be targeted towards those with a condition or risk factors, which can then be addressed, thereby reducing their potential effect on health and wellbeing outcomes. For example: early identification and management of high blood pressure. **Tertiary:** Interventions that mitigate poor outcomes in established diseases and conditions through treatment and care. For example: early Hyper Acute Care, including Rehabilitation and Early Supported Discharge, Thrombectomy and Thrombolysis.
Quality Improvement Measure (QIM)	These are measures of process and activity to evaluate and monitor ‘ how much’ services are doing, ‘how well’ they are doing it. The most important QIMs tell us whether those using our services are 'better off', and the impact of services on the quality of life and wellbeing of people. They tell us something about if we are doing the right things well against evidence-based standards and those things that matter to people, and what contribution this is making to turning the curve on the indicators for quality-of-life outcomes at a population level (see indicators above).

Term and (abbreviation)	Description/Definition
Quality-of-life outcome (QoLO)	This is a condition of wellbeing stated in plain language for a whole population or segmented population.
Strategy	A coherent collection of actions that have a reasoned chance of improving quality-of-life outcomes. Strategies are made up of our best thinking about what works, and they include the contribution of many partners. No single action by any one agency can create the improved outcomes we want.
Thrombectomy	The excision or removal of a blood clot from a blood vessel.
Thrombolysis	The use of medicines to break up a blood clot.
Whole Pathway	The whole pathway means looking at all health and care services and teams involved in stroke prevention and care.
Whole system	This means looking at all health and care services. Thinking about how all services link together, and integrate planning and decision making that would make things better for people across the whole health and care system and pathways of care.