Stroke: Annual Statement of Progress

January 2018
Overview

A stroke is a serious life-threatening medical condition which occurs when there is bleeding in the brain or when the blood supply to part of the brain is cut off, causing brain cells to be damaged or die. Strokes impact people in different ways. This depends on the part of the brain affected, how widespread the damage is and how healthy the person was before the stroke. Strokes can affect movement and speech, as well as thought processes and how somebody feels. Strokes are a medical emergency and urgent treatment is essential.

Following a stroke, people need urgent access to high quality acute care and supported afterwards by rehabilitation, psychological and at times longer term social care provision. Time is critical, the faster an individual gets expert help, the better the chance of making a full recovery, with fewer complications, less disability and fewer deaths.

Our aim is for all 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. NHS organisations, social services and the third sector must work together to continually strive to improve stroke services for all patients across all services in Wales.

The challenge

Stroke is a leading cause of disability in the UK, with almost two-thirds of stroke survivors leave hospital with some form of disability, either short or long-term. Stroke is the fourth single leading cause of death in the UK.

Each year around 7,400 people will have a stroke or transient ischaemic attack (TIA) in Wales - that is 20 people each day. The Stroke Association estimate that there are almost 66,000 stroke survivors living in Wales. In 2016-17, there were nearly 4,700 people admitted to hospitals across Wales following a stroke – that is almost 13 people per day.

The Royal College of Physicians (RCP) estimates that up to 70% of all strokes could be avoided if the risk factors were treated and people adopted healthier lifestyles. There are no proven ways to prevent a stroke. However, through lifestyle changes such as stopping smoking, healthy eating, exercise, and managing diabetes, blood pressure and stress, it is possible to reduce the chances of having a stroke.

Whilst there are only very small numbers of childhood strokes each year (around 400 in the UK), their needs and those of their families may be very different to adults. The Stroke Implementation Group (SIG), the group responsible for stroke across Wales has included childhood stroke as one of their priority areas for 2017-18.

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2. Stroke Association
3. Quality and Outcomes Framework - Wales
4. NHS Wales Informatics Service (NWIS)
Statistics\(^5\) consistently highlight that people living in Wales have the highest prevalence for hypertension and atrial fibrillation across the UK. Both conditions contribute to a higher risk of stroke.

Should someone have a stroke, it is important they receive the right care as rapidly as possible. Quick action to ensure the individual gets to a hospital is essential. Paramedics will assess the person having the stroke, and deliver a bundle of care prior to transporting them to hospital without delay.

The year 2016-17 saw in Wales:

- The number of people dying following a stroke has fallen. In 2016, 2,109 people in Wales died following a stroke; this is almost 6% less than in 2011 when 2,240 people died as a result of a stroke.
- Mortality within 30 days of hospital admission for stroke has fallen over the last five years, falling from 19.3% in 2011-12 to 14.5% in 2016-17.
- Patients reported on the Quality Outcome Framework (QOF) hypertension disease register increased by 2.2% (10,854 people) between 2011-12 and 2016-17 (from 492,386 to 503,240). Patients on the QOF atrial fibrillation (AF) disease register increased by 18.3% (10,500 people) over the same period (from 57,299 to 67,799).
- The number of emergency admissions for stroke has fallen by 330 since 2015-16, from 5,244 to 4,914. However, since 2011-12 there has been an increase of 313 emergency admissions.
- The percentage of patients thrombolysed within 1 hour across Wales increased from 38.3% in 2015-16 to 41.4% in 2016-17.
- 94.1% of patients in Wales had their rehabilitation goals agreed within 5 days of admission.

**Key achievements**

- **More people surviving stroke**

Stroke survival continues to improve across Wales. Over the last 5 years, survival rates following a stroke for people aged 74 and under have improved by 3.5% (from 88.7% in 2011-12 to 92.2% in 2016-17). For people aged 75 and over the rate has improved by 4.7% (from 75.1% in 2006-07 to 79.8% in 2016-17).

- **Improving performance**

Performance against the Sentinel Stroke National Audit Programme (SSNAP) audit continues to improve across Wales. In quarter four, 2013-14, the majority of Welsh sites were achieving a level “E” (the lowest grade possible), with only four sites gaining a D grade. The December 2016 – March 2017 report indicates that one site (Aneurin Bevan University Health Board) is now consistently operating at a “B” level, seven units are achieving a “C” and the others a “D”.

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\(^5\) Quality and outcome framework (QOF)
• **Effective pre-assessment of stroke patients**

Hospitals are pre-alerted by the Welsh Ambulance Service NHS Trust when a patient is suspected of having an acute stroke or is showing signs of continuing FAST symptoms. This ‘pre-alert’ gives the hospital stroke team advance warning of the patient’s arrival and allows the hospital to prepare for them. WAST is consistently delivering high quality interventions to all stroke patients with an average of 97% (March 2017) compliance with the pre-hospital stroke care bundle. This is compared to 94.6% for the same period in 2016.

• **Quicker access to a brain scan**

The RCP national stroke guidelines, revised in 2016, include a recommendation that CT scans should be done within 1 hour for all stroke admissions rather than the previous 12 hours. The report to the end of March 2017 highlighted that half of Welsh sites performed better than the audit average of 52.5%. Performance ranges from 86.8% at Prince Phillip Hospital to 32.2% at Ysbyty Gwynedd. During 2016-17, the percentage of patients scanned within 1 hour of clock start increased from 41.6% in 2015-16 to 50.6%. The median time for Welsh patients being scanned reduced from 1:22 in 2015-16 to 1:00 in 2016-17.

Excellent progress has been made in ensuring that patients are scanned within 12 hours, with 91% of Welsh sites performed better than the audit average of 94%. Over 95% of Welsh patients were scanned within 12 hours.

• **Access to a stroke bed**

Early admission to a stroke unit ensures that patients have the best possible chance of receiving all the correct assessments and treatments to prevent complications, such as swallowing assessments to reduce the likelihood of pneumonia and intermittent compression stockings to prevent blood clots in the legs. It also ensures patients are looked after at the earliest opportunity by a specialist ward team of nurses, doctors and therapists, and they are more likely to see a stroke consultant within hours of admission. The RCP guidance states that stroke patients should be admitted to a stroke unit within four hours. During 2016-17, 50.8% of Welsh patients were directly admitted to a stroke unit within 4 hours. Compliance against this indicator has continued to improve, increasing by 12.3 percentage points since 2015-16.

• **Patients are spending more time on a stroke ward**

In 2012-13, only 47% of patients spent 90% of their time on a stroke ward. This has steadily improved year on year, with compliance across Wales in 2016-17 being 83%, ensuring access to efficient and effective care. Since 2015-16, an additional 256 patients spent 90% of their time on a stroke ward across Wales. NHS Wales has delivered this improvement over the past four years whilst the audit average position has remained relatively static at around 83%.
• **Improved identification and management of atrial fibrillation (AF)**

AF is a heart condition that causes an irregular and often abnormally fast heart rate. Across Wales there are over 42,000 patients with AF registered with a GP. AF is a contributing factor in up to 1 in 5 strokes in the UK, around 20% of stroke patients have AF prior to their stroke.

A pilot has been running in Cardiff and Vale University Health Board to identify people that may be suffering from AF, but who are not aware of their condition, and to ensure appropriate treatment. The finding from the “Stop a Stroke” pilot suggests that 40% of AF patients were not on the appropriate treatment could be anticoagulated. Based on the pilot, modelling work indicates that by ensuring all AF patients eligible for oral anticoagulation are identified and initiated on treatment where possible, in excess of 1,100 strokes could be prevented across Wales by 2022. The "Stop a Stroke" team were finalists in the recent prestigious Anticoagulation Achievement Awards. This approach is now being rolled out across all health boards.

• **Improved access to stroke rehabilitation**

Many stroke patients need rehabilitation whilst in hospital. Multi-disciplinary teams consisting of doctors, nurses and therapists work alongside the patient and their family to try to achieve the best levels of recovery prior to discharge home. Therapy often continues after the patient leaves hospital to ensure the best possible outcomes. The latest SSNAP report indicates that 83.4% of applicable patients received a joint health and social care plan on discharge at routinely reporting Welsh stroke units. It is really important that goals, however small, are set for stroke patients. This gives them a sense of focus and allows them to measure their progress. SSNAP data also indicates that 94.1% of patients in Wales had their rehabilitation goals agreed within 5 days of admission.

• **Investment in clinical research**

The Stroke Implementation Group has prioritised the development of a clear stroke research agenda in Wales. Its vision is to achieve a step-change in high-impact stroke research for the benefit of the health, well-being and prosperity of the people of Wales. A speciality lead for stroke research has been appointed through the Health and Care Research Wales. Projects ongoing include the development to validate the patient reported outcome measure (PROM) for both stroke and neurological conditions, which is due for completion in December 2017. This will be the first joint stroke and neurological PROM in the UK.

A Stroke Research Hub was launched in November 2017, supported by funding from the Welsh Government and Stroke Implementation Group. This collaboration with Cardiff Metropolitan University provides an opportunity to stimulate new research which will benefit both stroke sufferers and those most at risk of stroke.

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6 Quality Outcome Framework (QOF) register
7 SSNAP
8 SSNAP clinical results summary report for Wales (December 2016 – March 2017)
Areas of focus

• **Lifestyle modifications**

A large proportion of people in Wales could do more to reduce their risks of having a stroke. The National Survey undertaken in 2016-17 reported that 59% of adults were classified as overweight or obese, of which 23% were obese. The percentage of adults reported being physically active (doing at least 150 minutes of moderate intensity physical activity in blocks of 10 minutes or more in the previous week) was 54%, and those who reported being inactive (active for less than 30 minutes in the previous week) was 32%.

In 2016-17, the Stroke Association led a national stroke awareness campaign, “Lower Your Risk of Stroke” with the support of the Stroke Implementation Group. The ultimate aim of the campaign was to increase public understanding of actions which can reduce stroke risk and the risk of stroke harm (recognising stroke as a medical emergency and responding quickly).

• **Better management of blood pressure**

The latest QOF data indicates that there are over 503,000 people in Wales with hypertension registered with their GP in Wales. The latest SSNAP report highlights that 55.3% of stroke patients treated in Wales had hypertension prior to their stroke. High blood pressure is often preventable, and is worsened by poor lifestyle behaviours (such as poor diet and physical inactivity). Individuals with high blood pressure need to be identified and given appropriate advice to ensure that their blood pressure is controlled and remains at the recommended level.

• **Increase the numbers of eligible patients being thrombolysed**

While there have been considerable improvements in compliance for eligible patients receiving thrombolysis across Wales – with 11 out of 12 sites achieving over the audit average of 85% - the number of all patients receiving thrombolysis is low. In 2016-17, 12.2% of stroke patients were thrombolysed. The clinical audit at the end of 2016-17 highlighted that five of the twelve routinely reporting sites achieved below the audit average – with sites average scores ranging from 7% to 21.8%.

• **Access to a CT scan within one hour**

New standards have been introduced for stroke care in the last 12 months. The most challenging aspect of these is the change to the standard for access to the first CT scan. It is now recommended that the CT scan should be undertaken within one hour from the clock start (rather than 12 hours). The proportion of Welsh patients being scanned within one hour increased from 41.6% in 2015-16 to 50.6% in 2016-17. This demonstrates good practice as an additional 428 patients scanned within the hour, however further improvements are required and we expect compliance to continue to improve over the next 12 months.

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8 SSNAP clinical audit: December 2016 – March 2017
• **Direct access to a stroke unit**

Evidence indicates that the faster a patient is admitted to a stroke ward, that there is a better chance of a full recovery. The clinical guidance is that a patient should be admitted directly to a stroke ward within four hours of their arrival at the hospital. There has been a considerable improvement of 12.3 percentage points against this measure between 2015-16 and 2016-17. Yet there is still a long way to go until this target is achieved as almost 50% of Welsh patients are not being admitted directly to a stroke ward within four hours of their arrival at the hospital.

• **Specialist stroke consultant wards rounds**

Specialist ward round frequency is lower in Wales than in other parts of the UK, potentially reflecting lower consultant numbers based on current configuration of stroke services. For type 1 bed in Wales, there is an average of 5 consultant ward rounds being done 7-days a week, compared to the SSNAP audit average of 10. This will influence speed of diagnostic and therapeutic decision making, so may impact on outcome and length of stay.

• **Access to therapies**

Therapists are an essential part of the multi-disciplinary team caring for people with stroke, not only later in rehabilitation but also as part of the acute stroke assessment team. People with stroke benefit from appropriate early assessment and intervention, and length of stay may be reduced by increased availability of therapists, including at weekends and in the evenings. Access across the whole range of therapies in Wales is considerably worse than other participating countries. The SSNAP organisational audit in 2016 highlighted that the percentage of six or seven day working for therapists in Wales was significantly lower than the audit average. 25% of Welsh units have six or seven day working for occupational therapists compared to the audit average of 47%; 34% of Welsh units have six or seven day working for physiotherapists compared to the audit average of 53%; and 9% of Welsh units have six or seven day working for speech and language therapists compared to the audit average of 15%.

Early assessment of swallowing (both screening and by speech and language therapy (SALT)) is associated with a reduced rate of pneumonia in stroke patients. The SSNAP report for December 2016 – March 2017 highlighted poor performance for patient access to SALT services across Wales (43%). There have however been some improvements across Wales compared to the previous year (increase of 3.5%). The number of sites achieving the lowest “E” level has reduced from eight to four.

• **Increase recruitment to stroke clinical trials**

Over the last five years, nearly 1,250 people have been recruited to stroke clinical trials. However, the numbers each year have been slowly falling, reducing from 298 in 2011-12 to 153 in 2016-17.
• **Developing the appropriate stroke network for Wales**

The reconfiguration of stroke services in Wales, including the development of hyper-acute services has been identified by the SIG as a key priority for 2017-18. Last year, the Stroke Implementation Group (SIG) commissioned a study model by the Royal College of Physicians on what services were required to improve care for stroke patients across Wales.

The SIG clinical lead engaged with senior clinicians, managers and planning representatives at each Health Board and the Welsh Ambulance Trust to consider the implication of this report and what actions may need to be taken across Wales to reconfigure stroke services to ensure maximum benefits for patients. This includes considering geography, travel times, boundary issues, current stroke services, co-dependencies and recruitment and training. The case for hyper-acute stroke units will be considered in the coming year. The need for the development of robust thrombectomy services will also be considered as part of this work.
Each year it is estimated around 7,400 people will have a stroke – around 20 people per day.

A mini stroke or transient ischaemic attack (TIA) can be a warning sign. 1 in 12 people could have a stroke within a week of a TIA.

Over 96% of patients with atrial fibrillation have been assessed for stroke risk by their GP.

55.3% of stroke patients treated in Wales had high blood pressure prior to their stroke.

Over 92% of patients aged under 75 survive a stroke.

Over 97% of suspected stroke patients who called 999 were given appropriate pre-hospital assessments by the ambulance service.

The number of emergency admissions for stroke has fallen by 6.3% since 2015–16.

41.4% of eligible patients were thrombolysed within an hour of arriving at hospital.

50% of patients were scanned within an hour of arriving at hospital, and 95% were scanned within 12 hours.

52% of patients were directly admitted to a stroke unit within 4 hours.

83.5% of patients spent 90% of their time on a stroke ward.

95.7% of patients were assessed by relevant therapists within 72 hours of admission to hospital.

94.1% of patients in Wales had their rehabilitation goals agreed within 5 days of admission.

The number of people dying following a stroke has reduced by 6% in the last 5 years and by 31% over the last 10 years.