

# **Stroke Improvement Plan**

**August 2014**

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# Foreword



The Quality Strategy (2010) set out a vision for NHSScotland focusing on safe, effective and person-centred care. This vision is central to our approach to the Improvement Plans across clinical priority areas such as heart disease and stroke.

This Improvement Plan identifies and prioritises what we value. In developing these plans we recognise that we won't always immediately hit upon the perfect solution. What is important is that we all work together to develop what works best for the people of Scotland – that we strive for improvement through 'doing', 'trying' and 'testing', making sure that we continually build upon what works best for patients.

Those working at the frontline of clinical care and those who have personal experience of these health issues are the ones who best understand the problems and more importantly have the ideas on how to most effectively address them. It is important that in seeking to implement and deliver the key priorities set out in this Improvement Plan people feel supported and empowered to work creatively together to deliver better care.

It is also important that we continue to encourage networks which help to develop our collaborative infrastructure for improvement in Scotland and which ensure that the focus of care is truly person-centred. Indeed, we must also link this approach clearly to our commitment to provide high quality services to the growing number of people living longer with more than one condition.

I hope that other clinical areas can learn from the approach outlined within this Plan and draw upon it to think about how patient care can be improved in their area, through an approach that is clear about our aims and about the role that each of us has in improving outcomes for patients.

I want to take this opportunity to thank everyone involved in improving patient care for your efforts to date and to ask you to continue those efforts to deliver even better outcomes and experiences for the people of Scotland.

A handwritten signature in black ink, which appears to read "Michael Matheson". The signature is fluid and cursive.

Michael Matheson, MSP  
Minister for Public Health

# 1. Introduction

## Context

1. The Better Heart Disease and Stroke Care Action Plan, published by the Scottish Government in 2009 (<http://www.scotland.gov.uk/Publications>) affirmed heart disease and stroke as a continued priority for NHSScotland. The Plan set out a series of actions across both disease areas that required focus and attention from a variety of partners within the respective clinical communities.
2. Whilst excellent progress has and continues to be made we will always strive to do more to deliver the best possible health and social care and to ensure that the issues we are focusing on continue to reflect current needs.
3. The purpose of this Plan is to ensure that the priorities remain current and by reflecting the progress that has been made, build upon these successes to ensure that in Scotland we continue to strive towards improved prevention, treatment and care of stroke.
4. NHSScotland is a world leader in quality improvement and patient safety. This document sets out plans to implement a quality improvement approach across our clinical priority areas.

## Quality Strategy and The Route Map

5. The NHSScotland Quality Strategy (2010) (<http://www.scotland.gov.uk>) is, and remains, the blueprint for improving the quality of care that patients and carers receive from the NHS across Scotland. It sets out ambitions which acknowledge:
  - Putting people at the heart of everything the health service does;
  - A focus on providing the best possible care; and
  - Recognition that real improvement in quality of care involves all staff, both clinical and non-clinical, working at all levels in all roles.
6. The publication of the Quality Strategy, with its ambition for world class health care, encourages us all to aim for services that at least match the best that can be found elsewhere in the world. The Quality Strategy remains our vision and the anchor point which we should continually reference as we move forward.
7. Building on the Quality Strategy and emphasising the continued commitment to pursuing the three Quality Ambitions of **Safe, Effective** and **Person-centred Care**, the Route Map to the 2020 Vision for Health and Social Care (2013) (<http://www.scotland.gov.uk>) sets out a new and accelerated focus on 12 priority areas for action. The Route Map maintains the focus on improving quality at scale with regard to both health and social care. Working in partnership – across Scottish Government, with the wider public sector, the Third Sector, staff and with patients – has been crucial to our past successes and will remain so as we progress further in our ambition to deliver safe, effective and person-centred care.

## Quality Improvement

8. The publication of this Improvement Plan marks an important milestone and further develops previous work. To support improvements in the quality of care we need to recognise where we have been and where we are going. In this context chapter 2 of this Plan provides a short summary of achievements since 2009. In developing this work, whilst recognising the continuity of effort, we also want to ensure a focus going forward on locally-led quality improvement.

9. Since 2013 the Scottish Government has been encouraging the use and implementation of the 3 Step Improvement Framework for Scotland's Public Services (<http://www.scotland.gov.uk>). This has been supported further by the publication of the Quality Improvement Hub document on 'the spread and sustainability of quality improvement in healthcare' (<http://www.qihub.scot.nhs.uk>) which identifies the factors that are vital to plan for at the onset of improvement work to optimise spread and sustainability. Further information on the resources available is provided in Annex 3.

10. This approach is not about developing something new but about unlocking and channelling the collective knowledge and energy of people towards a common goal of real and lasting improvement.

11. In line with this Framework, chapter 3 of this Plan sets out clear aims and priorities for stroke. The methodology of the 3 Step Improvement Framework is designed to prompt self-assessment and debate. It is about getting started and 'doing': creating conditions for and implementing the improvements that will make a difference. It is easy to become distracted by a series of assumptions based on how things have always been rather than try something new. It is about encouraging people to work together locally to test and try new approaches. And where successful work with our national advisory structures to ensure that there is spread and sustainability of these approaches.

12. In developing this Improvement Plan we have taken a partnership approach – supported by our National Advisory Committee for Stroke (NACS). Implementation of this work will depend on continued collaboration between all those involved.

13. All aspects of clinical care are important and matter to people living with specific conditions. Therefore, whilst this Improvement Plan focuses energy on specific areas for improvement, it is vital to recognise that many areas of activity which are not being highlighted, are nevertheless issues which will continue to require sustained effort to maintain and continuously improve outcomes for patients.

## Network Approach

14. Managed Clinical Networks (MCNs) have a crucial role in the continued development of structures and services to help support and influence the quality improvement of care and are the key vehicle for the delivery of our improvement aims. We encourage Boards to ensure that their MCNs are fit for purpose with a lead clinician working with a network manager to provide strong clinical leadership.

15. MCNs also have a key role in promoting preventative action and tackling inequalities in collaboration with the Health Promoting Health Service (HPHS) programme in hospitals. Access and use of health services is socially patterned with people living in socio-economic deprived areas and at risk of poor health more likely to use services than those living in affluent areas. Preventative action can be integrated within the scope of secondary care with the support of MCNs and influential clinical champions, ensuring pathways for health improvement are built into clinical care to encourage and support positive behaviours and increase access to support and health improvement services.

16. MCNs role in measuring and monitoring the progress of the Improvement Plan priorities is discussed in further detail in chapter 4. This will be supported nationally by the National Advisory Committee for Stroke.

## Person-centred Care

17. If care is to be truly person-centred then any improvement work must not just be about health issues but also about social care. Integration of health and social care is the Scottish Government's ambitious programme of reform to improve services for people who use these services and ensure that health and social care provision across Scotland is joined-up and seamless. This Improvement Plan includes priorities relating to living with the condition.

18. As the integration agenda progresses we are committed to ensuring that we work with patients to ensure that any forthcoming priorities reflect their needs. Person-centred care will also mean recognising that many people live with more than one condition, that is have multi-morbidities, and as we take this work forward we must endeavour to ensure a holistic approach to their care.

## 2. Stroke Care in Scotland

### Background

19. Cerebrovascular Disease (CVD) is a condition that develops as a result of problems with the blood vessels supplying the brain. This can cause a stroke, a transient ischaemic attack (TIA) or a subarachnoid haemorrhage. Although CVD is largely a preventable disease, stroke remains the third biggest killer in Scotland and the leading cause of disability. Reducing the number of deaths from stroke has been a clinical priority for NHSScotland since the mid-1990s.

### History and Progress

20. The stroke priorities in our Better Heart Disease and Stroke Care Action Plan (2009) have been the focus of improvement work that has been undertaken by the stroke community in Scotland since it was published.

21. The priorities for stroke have been continually updated informed by the progress that has been made. As priorities have been achieved, others have been added – either developing from existing priorities or identified through research.

22. One of the key priorities set out in the 2009 action plan was to establish stroke units in all hospitals in Scotland. Once the stroke units were in place the Admission HEAT target was developed and introduced from 1 April 2011:

‘To improve stroke care, 90% of all patients admitted with a diagnosis of stroke will be admitted to a stroke unit on the day of admission, or the day following presentation by March 2013.’

23. The Scottish Stroke Care Audit ([www.strokeaudit.scot.nhs.uk](http://www.strokeaudit.scot.nhs.uk)) shows that progress against this previous HEAT target continued to improve by 4% in 2013.

24. In order to continue to progress the work of the HEAT target Boards are now required to report against progress on the ‘Stroke Care Bundle’ in their Local Delivery Plans (LDPs). The development of the bundle was informed by the data collected on the updated Stroke Care Standards (2013) (Annex 2), which highlighted that although patients were getting access to a stroke unit, they were not necessarily receiving other key elements of stroke care. It includes the most important drivers for improving outcomes for people admitted to hospital with a stroke: stroke unit admission, CT brain scan, swallow screen test and aspirin delivered within the recommended time. This year’s audit shows that NHSScotland has achieved a 10% improvement in 2013 in delivering the key elements of the Stroke Care Bundle.

25. The Stroke Care Bundle is reflected in the updated priorities 2 and 3 in this Plan and as stated above is the focus for performance improvement through its inclusion in NHS Boards LDPs for 2014/15.

26. Over the last 10 years the number of new cases of CVD in Scotland has decreased by 21% and mortality rates for CVD have fallen steadily – there are approximately 4,500 deaths in Scotland each year (4,479 people in 2012) where CVD is the underlying cause. The decrease for men (45.4%) has been greater than for women (39.2%), with a narrowing of the difference between the rates for men and women to almost zero. The percentage of people surviving 30 days or more following their first emergency admission to hospital with a stroke has improved slightly over the last 10 years from 80.2% in 2003/04 to 84.0% in 2012/13.

## Path to New Priorities

27. To improve services effectively this Improvement Plan recognises the need to set clear aims that have been established through a number of sources – the Scottish Stroke Care Standards (2013), emerging priorities from the Better Heart Disease and Stroke Care Action Plan (2009), data collected through the Scottish Stroke Care Audit (SSCA), evidence of best practice and patient experience feedback.

28. The stroke community will continue to work together to ensure that quality improvement approaches are utilised locally to deliver priorities, and improvements in stroke care throughout Scotland.

29. This Plan sets out areas where improvement is most needed and identifies 8 priorities for stroke care, with aims and actions aligned with the Route Map to the 2020 Vision (Annex 1). These priorities have been developed to ensure improvement across the whole patient journey as detailed in the stroke care pathway (chapter 3).

30. Most importantly, implementation of the priorities will deliver better outcomes for people who have had a stroke using health and social care services through a quality improvement approach already widely used by the stroke community.

## Engagement

31. In developing this Plan, we worked closely with the National Advisory Committee for Stroke (NACS), and its members who represent a range of stakeholders, both NHS and Third Sector. Patient experience is essential in developing services that are truly person-centred. Involving Patients is an important part of the stroke community at the local level through the Managed Clinical Network patient groups. All Stroke MCNs have active involvement from people who have had a stroke and their families.

32. Engagement is not a one-off process. We are committed to actively engaging with people during the period of life after stroke to ensure that the priorities identified within this aspect of care reflect their needs and experiences.

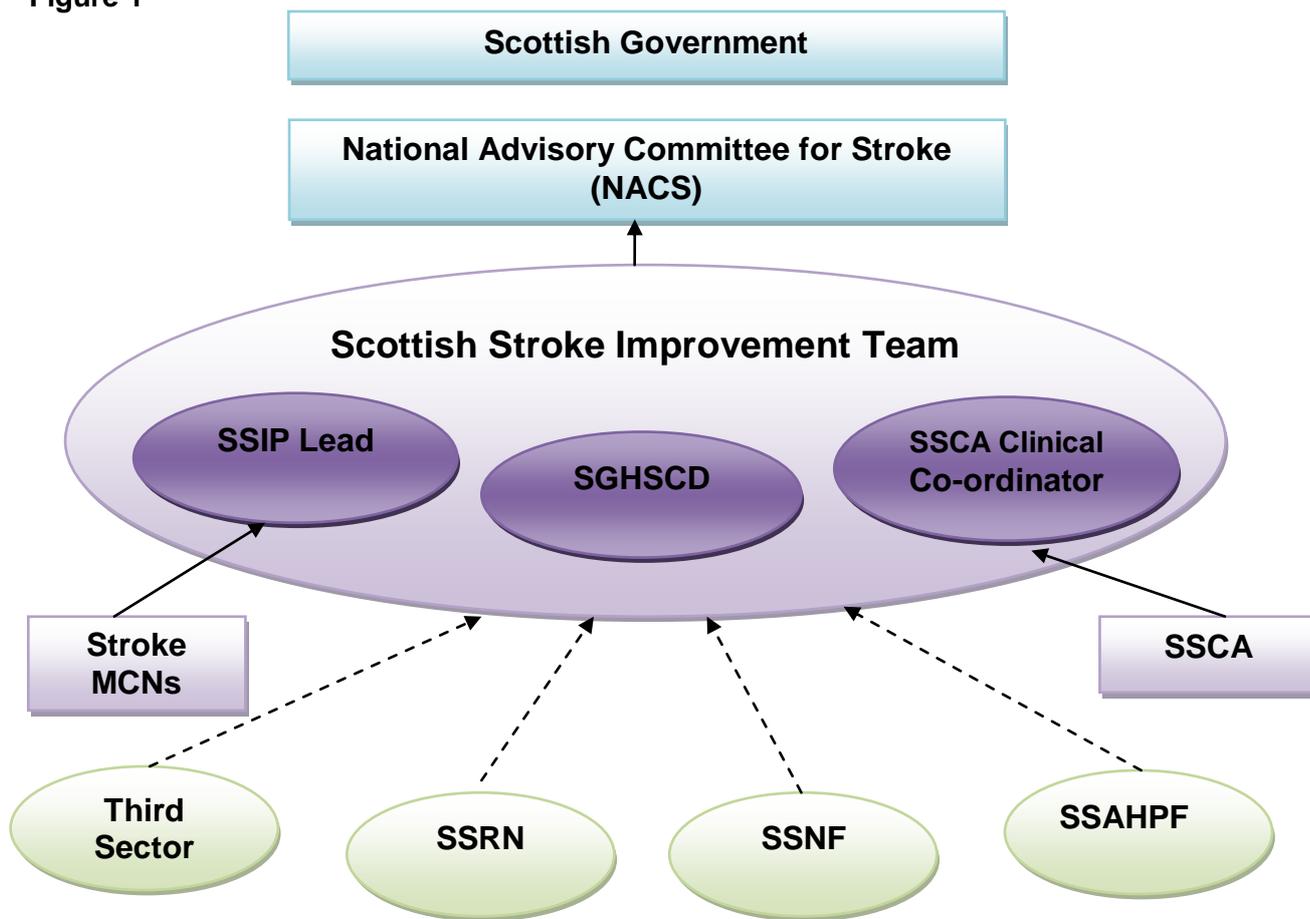
## Mechanisms

33. By giving recognition to the importance of this Plan, Boards will ensure that every patient admitted with a stroke is given speedy access to specialist care. Boards are responsible for delivering stroke care services in Scotland via their stroke MCNs. This means in practice that they are responsible for continuous improvement against the priorities set out in this Plan; the Scottish Stroke Care Standards and the Stroke Care Bundle indicator as outlined in Local Delivery Plans – and so improving the quality of stroke care delivered across Scotland.

34. Implementing the priorities for stroke care has been and continues to be led by the Stroke MCNs, which exist in each of the territorial NHS Boards, with the National Advisory Committee for Stroke (NACS) overseeing and providing direction at a national level. The Scottish Stroke Improvement Team provides support and guidance to MCNs and NACS through the monitoring and interrogation of the data submitted to the Scottish Stroke Care Audit (SSCA). Where appropriate local small scale improvement data may also need to be collected to monitor any local projects that are being tried out and tested.

35. The Stroke Improvement Team will continue to work closely with, and support NACS and the stroke MCNs to ensure that the key priorities from this Plan, and the wider stroke work are implemented and monitored. Figure 1 overleaf sets out the structure.

Figure 1



**Key:**  
**SSCA** (Scottish Stroke Care Audit) **MCN** (Managed Clinical Network)  
**SSRN** (Scottish Stroke Research Network) **SSNF** (Scottish Stroke Nurse Forum)  
**SSAHPF** (Scottish Stroke Allied Health Professional Forum)  
**SSIP** (Scottish Stroke Improvement Programme)  
**SGHSCD** (Scottish Government Health and Social Care Directorate)

36. Stroke MCNs are encouraged to develop local improvement plans and good practice and share this nationally. To support continuous improvement, stroke MCNs can access real time SSCA data along with the exception reporting methodology introduced in 2012/13. By examining emerging trends and deviations in stroke care small tests of change can be identified to influence change leading to improvement in patient care.

37. The Scottish Stroke Improvement Team, along with the National Advisory Committee for Stroke, will continue to support Boards and the stroke community in delivering improvement aims, and to help share best practice.

38. MCNs should also continue to share best practice at the National Stroke MCN Managers Forum, chaired by the Stroke Improvement Lead. Local MCN patient and carer groups and the Stroke Voices Programme, both of which empower stroke patients to share their views and expectations both nationally and as part of local forums will also be able to contribute to this improvement work.

# 3. Stroke Care in Scotland: Priorities for Improvement and The Stroke Care Pathway

## Priorities for Improvement and the Stroke Care Pathway

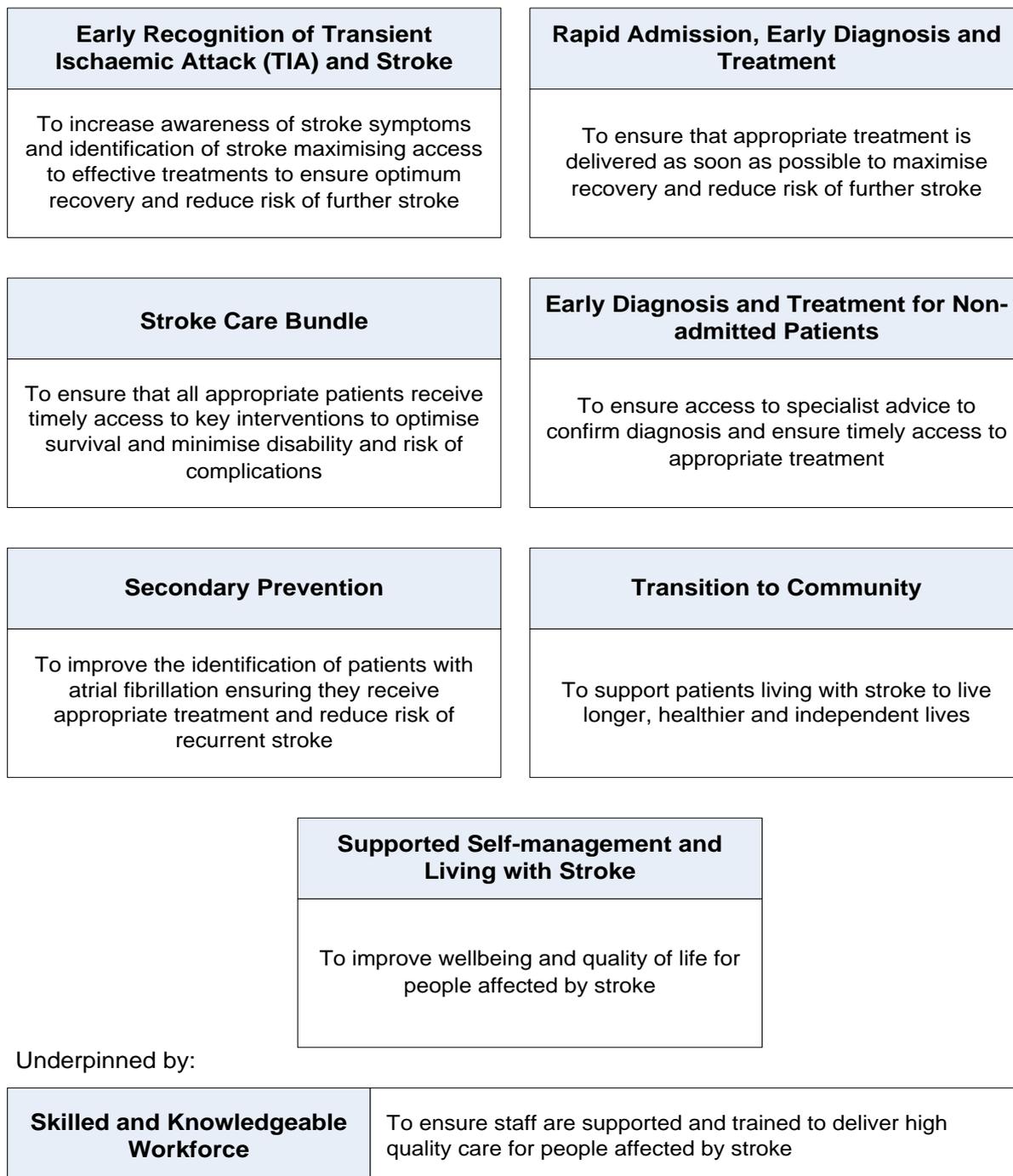
39. The Stroke Improvement Plan 2014 identifies eight priority areas for improvement linked by an overarching aim that are fundamental to success. Together, these contribute towards the prevention, detection, treatment and after care of stroke and patients with stroke. These priorities are summarised in Figure 3 on page 12 followed by a more detailed outline of each priority and its corresponding actions.

40. These priorities have been identified to improve the experience and clinical outcomes for patients living with stroke across Scotland by supporting the community to adopt a seamless approach to the delivery of care across the whole care pathway for stroke as set out in Figure 2 over the page. It reflects the priorities, best practice and emerging evidence to continually improve stroke care for patients regardless of where they live or are treated in Scotland.

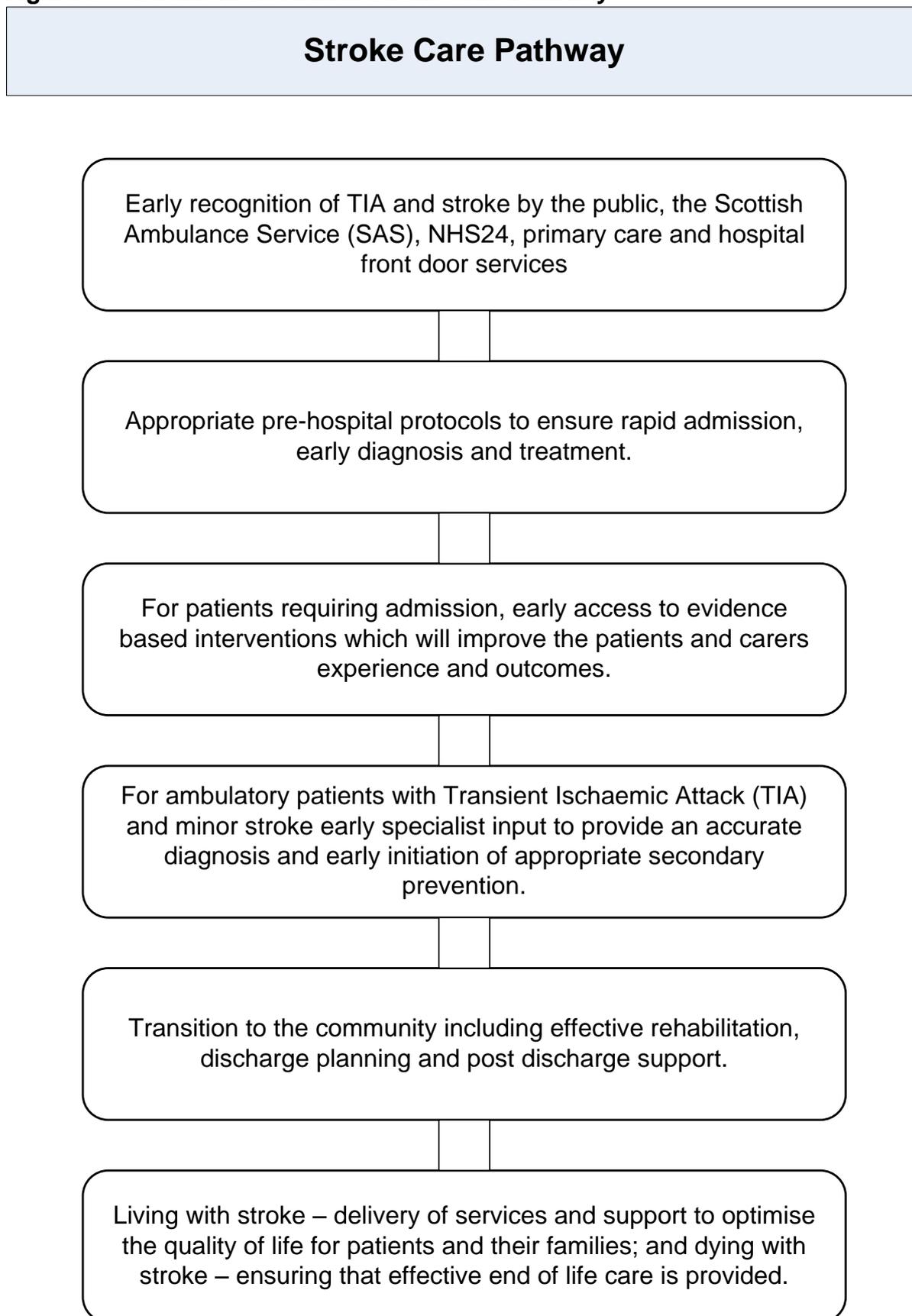
**Figure 2 Stroke in Scotland: Priorities for Improvement**

**Stroke in Scotland: Priorities for Improvement**

AIM: To improve the experience and clinical outcomes for patients living with stroke across Scotland by supporting the community to adopt a seamless approach to the delivery of care across the recognised care pathway for stroke for all patients regardless of where they live or are treated in Scotland.



**Figure 3 Stroke in Scotland: Stroke Care Pathway**



**Priority 1: Early recognition of Transient Ischaemic Attack (TIA) and stroke by the general public, Scottish Ambulance Service (SAS), NHS 24, primary care hospital front door services and social care staff.**

**Aim:** To maximise access to effective treatments, including early thrombolytic (clot busting) therapy for ischaemic stroke in order to optimise recovery and treatments to reduce the risk of further stroke. Maximising access to acute treatment through local protocols will help ensure recovery.

**Background:** Raising awareness of the signs and symptoms of stroke remain a priority since 2009. Greater awareness helps to ensure that medical advice is sought at the earliest opportunity and in doing so that treatment can be commenced as soon as possible. Much work has been done for example through continuing support to deliver the FAST campaign – this priority recognises the on going need to maintain this work.

**Actions:**

**1. Public campaign to raise awareness of stroke symptoms (Face Arm Speech Time (to call 999) (FAST))** – Deliver public education to increase awareness of common symptoms of stroke and TIA, and the need to seek emergency medical care.

**2. Improve early identification of stroke and TIA by SAS/NHS24, primary care and hospital emergency departments.**

- Call handlers for NHS 24 trained to recognise stroke and TIA (e.g. FAST test) and those with stroke should be re-directed to the SAS;
- Call handlers for the SAS, paramedics and staff dealing with patients' calls in primary care trained to recognise stroke and TIA, treat those with stroke as Category B emergencies and be aware of local protocols to access early hospital care; and
- Staff working in hospital emergency departments receive training to identify strokes and TIA (e.g. Stroke and TIA Assessment Training (STAT)) and to follow local protocols for assessment, referral and treatment.

**Priority 2: Appropriate pre-hospital protocols to ensure rapid admission, early diagnosis and treatment.**

**Aim:** To ensure that appropriate treatment is delivered as quickly as possible to all stroke patients to reduce the risk of future strokes and to maximise recovery by: rapidly distinguishing stroke from non stroke, ischaemic from haemorrhagic stroke with brain imaging; identifying patients with symptomatic tight carotid stenosis who require urgent carotid endarterectomy and ensuring thrombolytic treatment is given to appropriate patients, as early as possible.

**Background:** Thrombolysis has emerged from the 2009 plan through the on going refresh process. In 2009 the aim was to record the number of people being thrombolysed and that this was at least 5 per 100,000 of the population each year in line with the guidance published at the time and that the right people were being thrombolysed. The priority for this plan now focusses on specific actions to improve the door to needle time for patients who receive thrombolysis. The stroke community started to work with the SAS and front door hospital services some time ago – the initial work has been done allowing this priority to now be measured.

**Actions:**

- 1. Pre-alert by SAS** – The SAS should pre alert Emergency Departments of the arrival of stroke patients who might potentially benefit from thrombolysis.
- 2. Early imaging** – Imaging services should work with stroke services, Emergency Departments, and other services where patients with stroke/TIA may present, to provide rapid access to CT or MR brain imaging (as appropriate) for all patients with suspected stroke, and those patients with TIA in whom brain imaging is clinically indicated; timely access to carotid imaging for patients with TIA and minor stroke should also be provided.
- 3. Thrombolysis teams** – Develop local teams and protocols to ensure that intravenous thrombolysis is offered to all eligible acute stroke patients with the minimum possible delay.

### **Priority 3: Delivery of Stroke Care Bundle**

**Aim:** To ensure that all appropriate patients receive timely access to key interventions to optimise survival and minimise disability and risk of complications. Outcomes for acute stroke patients are improved with admission and care in a stroke unit. All patients who may benefit are admitted to a stroke unit as quickly as possible. Early identification of swallowing problems and aspiration risk, prior to any oral intake, is important to avoid pneumonia.

**Background:** The Better Heart Disease and Stroke Care Action Plan recognised that the key action to deliver improved outcomes for people with stroke was early admission to a stroke unit and for these to be established in every NHS Board. The updated clinical standards published in 2009 and 2013 set targets for the provision of swallow screening, timely administering of aspirin and thrombolysis. NHS Boards have continued progress towards these targets however emerging evidence indicated that survival outcomes would significantly improve with focus on the provision of all four of these elements of care. The Stroke Care Bundle was developed to ensure the delivery of these elements – access to a stroke unit, swallow screen test, CT scanning and aspirin.

#### **Actions:**

**1. Ensure early access to stroke unit** – Acute stroke patients will be admitted rapidly to a stroke unit and remain in that care setting for as long as is clinically necessary.

**2. Swallow screen** – Stroke services should ensure swallow screening is part of the stroke admission protocol and provide a programme of education to support delivery.

- Swallow screening is a pass/fail procedure to rapidly identify patients who require referral for comprehensive swallowing assessment to inform appropriate management;
- Keeping patients nil by mouth for extended periods pending screening reduces patient satisfaction and may present other health risks such as missed medications; and
- The swallow screening procedure requires close observation of both non-swallowing and swallowing behaviours that require sound clinical judgement and competence to practice.

**3. Evidence based interventions** – Ensure that protocols are in place and effectively implemented to guide the appropriate use of:

- **Thrombolysis** with alteplase for selected patients with ischaemic stroke;
- **Aspirin** in patients with acute ischaemic stroke; and
- Intermittent Pneumatic Compression (IPC) for venous thromboembolism prophylaxis in patients who are immobile after a stroke.

NB – the fourth element of the Stroke Care Bundle (CT scan) is listed under priority 2, action 2.

#### **Priority 4: Developing a skilled and knowledgeable workforce**

**Aim:** A trained and competent workforce ensures health and social care staff in contact with people affected by stroke have the knowledge and skills to deliver person-centred, safe and effective stroke care.

**Background:** The 2009 clinical standards recognised the need for stroke units to be able to demonstrate that their staff underwent appropriate training. This priority builds on this further recognising the need for appropriate levels of training across the wider health and social care workforce. A current project led by the National Advisory Committee for Stroke (NACS) and the Stroke Improvement Team to measure the correlation between training provision and performance of the Stroke Care Bundle and door to needle time will provide evidence on training provision.

**Actions:** Health and social care staff in hospital and community settings are trained to an appropriate level depending on whether their contact with people affected by stroke is: occasional (stroke awareness), regular (core competencies) or in the context of specialist services (specialist competencies).

- All NHS Boards utilise the education training template to accurately identify training delivery and demonstrate appropriate level of training; and
- NHS Boards use the information collated from the education template to identify and address training needs at all levels.

## **Priority 5: Early diagnosis and treatment for non-admitted patients**

**Aim:** To ensure access to specialist advice to confirm diagnosis and timely access to appropriate treatment. By ensuring that patients with TIA/stroke are started on treatments such as aspirin, clopidogrel and statins to reduce their risk of stroke at the earliest possible time and that only patients with definite or probable TIAs and strokes receive lifelong treatment with secondary prevention. Also, to rapidly investigate the underlying cause of any TIA/stroke (e.g. carotid disease, cardiac embolism) to refine the treatment options and ensure that delays to starting these treatments (carotid surgery, anti-coagulation) are minimised.

**Background:** The 2009 clinical standards recognised that the risk of early stroke recurrence is high in all patients who have had a TIA or stroke. Therefore, early rapid specialist assessment of patients is important for accurate diagnosis and secondary prevention in those patients not requiring admission to hospital. This priority re-enforces the need for treatment to be given very early after a TIA/stroke, when the risk of stroke is at its highest, as it is much more effective than that given later.

### **Actions:**

**1. A specialist service to deliver immediate specialist advice** – Stroke services should provide GPs, Emergency Departments and other services where patients with TIA/stroke may present with immediate access to advice from a specialist stroke physician.

**2. Service to provide early access to confirmatory clinical assessment** – A specialist service should be available to confirm the diagnosis of TIA/stroke, to differentiate these from mimics and to provide early access to brain and vascular imaging.

## **Priority 6: Appropriate secondary prevention**

**Aim:** To improve the identification of Atrial Fibrillation (AF) which is a significant risk factor for stroke, ensuring appropriate treatment with anti-coagulation and to reduce the risk of a patient having a stroke whilst waiting for carotid surgery, and to maximise the effectiveness of the surgery.

**Background:** Secondary prevention to reduce the risk of further stroke are key aims which remain current since the 2009 plan and are relevant across the priorities in this plan. The identification and diagnosis of AF is recognised as a specific priority in both this plan and at Priority 6 of the Heart Disease Improvement Plan. Appropriate treatment with anti-coagulants reduces the risk of recurrent stroke by two-thirds in patients in AF. This plan also provides specific focus on provision of carotid surgery as the number of strokes prevented by surgery is much higher if it can be performed within 14 days of the index TIA/stroke event.

### **Actions:**

**1. Anti-coagulation for patients in AF** – To develop and implement a local protocol to:

- Identify people with atrial fibrillation and assess their risk of ischaemic stroke and bleeding to determine whether they would benefit from anti-coagulation;
- Identify persistent and paroxysmal AF in patients with ischaemic stroke and TIA; and
- Ensure that patients' risks of ischaemic stroke and bleeding on anti-coagulants are assessed to maximise the number of appropriate patients with AF receiving anti-coagulants.

**2. Carotid endarterectomy for patients with recently symptomatic carotid stenosis** – To modify the patient pathway to ensure that at least 80% of patients undergoing carotid endarterectomy for symptomatic carotid stenosis have the procedure within 14 days of their index TIA/stroke event (see details of Scottish Stroke Care Standards in Annex 2).

## **Priority 7: Transition to the community**

**Aim:** To support patients living with stroke to live longer, healthier and independent lives by ensuring that: specialist stroke rehabilitation, is started early after stroke; patients with visual problems after stroke (i.e. eye movement disorders, visual field loss, visual perceptual dysfunction and low vision) are identified early and offered appropriate support; people with cognitive, emotional and psychological issues following stroke have access to psychology services for assessment and treatment of on-going needs; people have access to an assessment of their ability to return to safe and effective driving after stroke.

**Background:** The 2009 standards recognised the need for good discharge planning with provision of appropriate advice and support. This priority emphasises the need for specialist stroke rehabilitation provided with sufficient intensity and duration to reduce mortality and long-term disability. Appropriately resourced stroke specialist early supported discharge and community teams will optimise patients' personal outcomes and reduce lengths of hospital stay.

### **Actions:**

**1. Access to stroke rehabilitation services** – Acute therapy assessment is provided within 4 days of having a stroke. Stroke rehabilitation should be delivered by stroke specialists at an appropriate intensity and duration based on the needs of the individual in hospital, early supported discharge teams and community settings.

**2. Person-centred approach** – Stroke services should implement a person-centred approach including goal setting where practical in hospital and community services. To ensure that rehabilitation is planned according to the person's individual needs and preferences by agreeing what they will work on with the multidisciplinary stroke team over an agreed period of time.

**3. Access to specialist services** – Patients with stroke are assessed for visual, cognitive, emotional and psychological issues and have access to services such as orthoptics and psychology for specialised assessment and intervention. This will include provision of advice, information, support and referral for driving assessment for patients who drove previously and who have residual deficits which require specialised assessment before returning to driving.

## **Priority 8: Supported self management and living with stroke**

**Aim:** To improve wellbeing and quality of life for people affected by stroke by ensuring the provision of supported self management approaches, appropriate advice and signposting to physical activity and vocational rehabilitation.

**Background:** As the acute care of stroke continues to improve this Plan recognises the need for the delivery of services to support people living with stroke and their families, to optimise quality of life. It focuses on the need to improve the provision of supported self management, physical activity and services to support people wishing to return to work. Increased levels of physical activity resulting in improved physical fitness contribute to secondary prevention of stroke and improved levels of function.

### **Actions:**

**1. Self management post discharge support** – Multidisciplinary stroke teams offer a range of supported self management approaches including individual and group support, written and on-line resources including:

- Self Management tools;
- Web sites;
- Information in different formats, including aphasia accessible;
- Support services (life style classes, communication support services, exercise groups and peer support); and
- Professional advice (primary care, NHS 24 and Third Sector help lines).

Patients and their carers are provided with a key contact on discharge from hospital, available for up to 12 months post discharge.

Patients and families/carers are supported during their transition from hospital care to the community and engage with supported self management to ensure they have the confidence, control and coping mechanisms to live life to their full potential.

**2. Exercise** – Stroke patients being discharged home from hospital should have access to appropriately resourced, evidence-based exercise after stroke services; and patients with stroke are given advice about increasing their physical activity levels where appropriate.

**3. Living with stroke – vocational rehabilitation** – Stroke services should ensure that people of working age who wish to return to paid or unpaid work or voluntary work are signposted to vocational rehabilitation services.

- People who wish to return to work are assessed with regards to their capacity to do so; and
- Vocational rehabilitation services are available if further advice and support is required.

## 4. Measuring and Monitoring

41. There are already established processes that are embedded in the stroke community around monitoring and reporting. Monitoring and reporting have continually developed over the years through the Scottish Stroke Care Audit (SSCA) data collection, and were embedded throughout the period of the HEAT target. This has moved on significantly, and Boards are now able to access real time data, which enables meaningful improvements to be made.

42. The Scottish Stroke Care Audit is one tool that will be used to measure and monitor performance against the priorities in this Plan. Other tools include MCNs / Boards collecting their own local data to help inform improvement through small tests of change. Some Scottish Government funded projects will also provide a means of measurement.

43. Boards have set their own trajectories and actions to achieve the Stroke Care Bundle, included in Local Delivery Plans.

### The Scottish Stroke Improvement Team and the Scottish Stroke Care Audit

44. The central SSCA team maintain the eSSCA database enabling MCNs to access data and reports on a daily basis. The central SSCA team also prepare routine reports to allow Boards and others to monitor progress towards priorities.

45. Data collection is done locally, with reports being prepared by the SSCA central team monthly, quarterly and annually. Boards, via their MCN, are encouraged to utilise this information to highlight trend or areas of local variation from the standards, and of course best practice.

46. Data are published annually in the SSCA National Report and Public Summary. The Scottish Stroke Improvement Team visit all Boards at least once per year facilitating a formal review of stroke care at a local MCN Review Meeting which includes other Board representatives (Board management and clinical teams) to assess performance, discuss where standards are not being met and formulate an improvement plan with clearly identified actions.

47. It should be noted that during all aspects of this process the role of the Scottish Stroke Improvement Team will be to support the MCNs to evaluate their performance, identify areas of concern and work with them to implement local action plans that will lead to improvement in performance against the priorities in this Plan, the Scottish Stroke Care Standards, and delivery of the Stroke Care Bundle to all patients and ultimately improve the delivery of stroke care across Scotland.

48. The Stroke Improvement Lead will continue to monitor the progress against the priorities in this Plan, the Scottish Stroke Care Standards and the Stroke Care Bundle, reporting progress to the MCNs, the National Advisory Committee for Stroke and the Scottish Government Health and Social Care Directorates.

## 5. Next Steps

49. This Improvement Plan sets out our continued ambition to deliver world-leading health and social care which is person-centred, clinically effective and safe.

50. Although much progress has been made we must always seek to increase the pace and scale of improvement.

51. This Plan identifies the key priorities and sets out why these issues are important. It identifies the key actions which if delivered will contribute towards improvement. The Plan also emphasises the importance of being able to measure the impact of what we do and thereby demonstrate the change that has happened.

52. This approach is about bringing together our collective knowledge and experience to make improvements. An approach which encourages people to test and try new approaches. And to ensure that we seek to spread and to sustain what works.

53. All those with a vested interest, across all levels and roles, have an important part to play in this improvement work. It is by working together, learning together and sharing that we will deliver improvements.

54. We must also seek to actively engage with people to identify the issues that are important to them in living with their conditions.

55. We must ensure that the priorities remain current and by reflecting the progress that has been made, build upon these successes to ensure that in Scotland we continue to strive towards improved prevention, treatment and care for all.

Annex 1 – 2020 Route Map for Stroke Care in Scotland

Triple Aim	Quality of Care						Health of the Population			Value and Sustainability		
<b>Scottish Stroke Improvement Plan 2014</b> <b>Delivering the 2020 Vision for Health &amp; Social Care</b>	Person Centred Care	Safe Care	Primary Care	Unscheduled & Emergency Care	Integrated Care	Care for Multiple & Chronic Illnesses	Early Years	Health Inequalities	Prevention	Workforce	Innovation	Efficiency & Productivity
	<b>Priority 1</b> <b>Early recognition of Transient Ischaemic Attack (TIA) and stroke care by the general public, Scottish Ambulance Service (SAS), NHS 24, primary care, hospital front door services and social care staff</b>											
1. Public campaign to raise awareness of stroke symptoms (Face, Arm, Speech Time (to call 999) (FAST))												
2. Improve early identification of stroke and TIA by SAS, NHS 24, primary care and hospital emergency departments												
<b>Priority 2</b> <b>Appropriate pre-hospital protocols to ensure rapid admission, early diagnosis and treatment</b>												
1. Pre-alert by SAS												
2. Early imaging												
3. Thrombolysis teams												
<b>Priority 3</b> <b>Delivery of stroke care bundle</b>												
1. Ensure early access to stroke unit												
2. Swallow screen												
3. Evidence based interventions												

<b>Priority 4</b>												
<b>Delivering a skilled and knowledgeable workforce</b>												
1. Health and social care staff in hospital and community settings are trained to an appropriate level depending on whether their contact with people affected by stroke is: occasional (stroke awareness), regular (core competencies) or in the context of specialist services (specialist competencies)												
<b>Priority 5</b>												
<b>Early diagnosis and treatment for non-admitted patients</b>												
1. A specialist service to deliver immediate specialist advice												
2. Service to provide early access to confirmatory clinical assessment												
<b>Priority 6</b>												
<b>Appropriate secondary prevention</b>												
1. Anticoagulation for patients in atrial fibrillation (AF)												
2. Carotid endarterectomy for patients with recently symptomatic carotid stenosis												
<b>Priority 7</b>												
<b>Transition to the community</b>												
1. Access to stroke rehabilitation services												
2. Person centred approach												
3. Access to specialist services												
<b>Priority 8</b>												
<b>Supported self management and living with stroke</b>												
1. Self management post discharge support												
2. Exercise												
3. Living with stroke – vocational rehabilitation												

## Annex 2 – Scottish Stroke Care Standards (2013)

1. **Stroke Unit admission** – 90% of all patients admitted to hospital with a diagnosis of stroke are admitted to the stroke unit on the day of admission, or the day following presentation at hospital, and remain in specialist stroke care until in-hospital stroke-related needs are met.
2. **Brain imaging** – 90% of patients have CT/ MRI imaging within 24 hours of admission.
3. **Swallow screening** – 90% of patients are screened by a standardised assessment method to identify any difficulty swallowing safely due to low conscious level and/or the presence of signs of dysphagia on the day of admission before the patient is given any food/drink or oral medication. The result of the screen/test should be clearly documented in the patients' notes.
4. **Aspirin administration** – 95% of patients receive aspirin on the day of admission or the day following admission for all patients in whom a haemorrhagic stroke, or other contraindication, as specified in the national audit, has been excluded.
5. **Attendance at neurovascular clinic** – 80% of new patients with a stroke or TIA are seen within 4 days of receipt of referral to the neurovascular clinic.
6. **Thrombolysis door to needle time** – The MCN monitors the delay between arrival at the first hospital and administration of the bolus of recombinant plasminogen activator. 80% of patients receive the bolus within one hour of arrival.
7. **Carotid intervention** – 80% of patients undergoing carotid endarterectomy for symptomatic carotid stenosis have the operation within 14 days of the stroke event.

## Annex 3 – Resources and References

### **Stroke in Scotland**

**Better Heart Disease and Stroke Care Action Plan** (June 2009)

<http://www.scotland.gov.uk/Publications/2009/06/29102453/11>

**ISD Scotland – Stroke**

<http://www.isdscotland.org/Health-Topics/Stroke/>

**Healthcare Improvement Scotland – Stroke service improvement**

[http://www.healthcareimprovementscotland.org/our\\_work/cardiovascular\\_disease.aspx](http://www.healthcareimprovementscotland.org/our_work/cardiovascular_disease.aspx)

**Scottish Stroke Care Standards** (updated January 2013)

[http://www.strokeaudit.scot.nhs.uk/Quality/130311\\_ScottishStrokeCareStandards\\_2013\\_FinalVersion.pdf](http://www.strokeaudit.scot.nhs.uk/Quality/130311_ScottishStrokeCareStandards_2013_FinalVersion.pdf)

**ISD – Scottish Stroke Care Audit**

<http://www.strokeaudit.scot.nhs.uk/index.html>

**SIGN Guideline 119: Management of Patients with Stroke: Identification and Management of Dysphagia** (June 2010)

<http://www.sign.ac.uk/guidelines/fulltext/119/contents.html>

**SIGN Guideline 118 – Management of patients with stroke: rehabilitation, prevention and management of complications, and discharge planning** (updated March 2011)

<http://www.sign.ac.uk/guidelines/fulltext/118/index.html>

**SIGN Guideline 108 – Management of patients with stroke or TIA: Assessment, investigation, immediate management and secondary prevention** (December 2008)

<http://www.sign.ac.uk/guidelines/fulltext/108/index.html>

**NHSScotland Local Delivery Plan Guidance**

<http://www.scotland.gov.uk/Publications/2013/11/4395>  
<http://www.scotland.gov.uk/Resource/0043/00439375.pdf>

**National Advisory Committee for Stroke**

<http://scotland.gov.uk/Topics/Health/Services/Long-Term-Conditions/Stroke>

### **Policy Context**

**Route Map to the 2020 Vision for Health and Social Care** (May 2013)

<http://www.scotland.gov.uk/Resource/0042/00423188.pdf>

**The Healthcare Quality Strategy for NHSScotland** (May 2010)

<http://www.scotland.gov.uk/Resource/Doc/311667/0098354.pdf>

**The 3-Step Improvement Framework for Scotland’s Public Services** (November 2013)

<http://www.scotland.gov.uk/Resource/0042/00426552.pdf>

**2020 Framework for Quality, Efficiency and Value** (June 2014)  
[http://www.qihub.scot.nhs.uk/media/607430/2020framework\\_12062014\\_final.pdf](http://www.qihub.scot.nhs.uk/media/607430/2020framework_12062014_final.pdf)

**Everyone Matters: 2020 Workforce Vision: Implementation framework and plan 2014-15** (Dec 2013)  
<http://www.workforcevision.scot.nhs.uk/wp-content/uploads/2013/12/Implementation-Plan.pdf>

**Health Inequalities in Scotland** (Audit Scotland, December 2012)  
[http://www.audit-scotland.gov.uk/docs/health/2012/nr\\_121213\\_health\\_inequalities.pdf](http://www.audit-scotland.gov.uk/docs/health/2012/nr_121213_health_inequalities.pdf)

**Making it Easy: A Health Literacy Action Plan for Scotland** (June 2014)  
<http://www.scotland.gov.uk/Resource/0045/00451263.pdf>

**Preventing overweight and obesity route map** (February 2010)  
<http://www.scotland.gov.uk/Resource/Doc/302783/0094795.pdf>

**Creating a Tobacco-Free Generation: A Tobacco Control Strategy for Scotland** (March 2013)  
<http://www.scotland.gov.uk/Resource/0041/00417331.pdf>

### **Useful Websites**

**NHSScotland Quality Improvement Hub**  
<http://www.qihub.scot.nhs.uk>

**Scottish Patient Safety Programme (SPSP)**  
<http://www.scottishpatientsafetyprogramme.scot.nhs.uk>

**Person Centred Care resources – QI Hub**  
<http://www.qihub.scot.nhs.uk/person-centred.aspx>

**Everyone Matters: 2020 Workforce Vision**  
<http://www.workforcevision.scot.nhs.uk>

**The ALISS Project – Accessing Local Information to Support Self management**  
<http://www.aliss.scot.nhs.uk>

**The Health Foundation**  
<http://www.health.org.uk>

**Scottish Stroke Research Network**  
<http://www.ssrn.org.uk/>

**Charter for people living with stroke in Scotland**  
<http://www.strokecharterscotland.org.uk/>



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