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LEARNING FROM... STROKE

A REVIEW OF SERIOUS ADVERSE
INCIDENTS, COMPLAINTS AND EXPERIENCE

EDITION 01
JULY 2022

Lessons and key learning points in relation to stroke care have been identified from complaints, Serious Adverse Incidents and patient experience of stroke shared with Care Opinion.

HSC Health and
Social Care

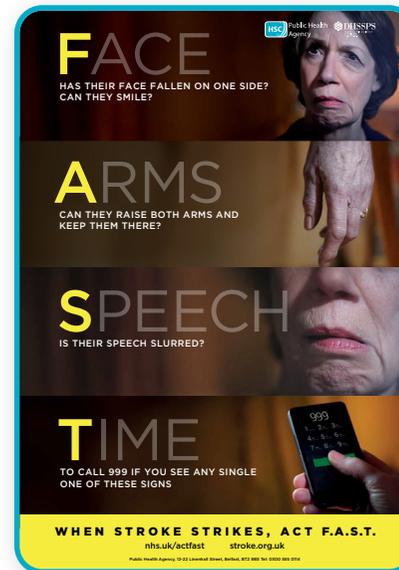


Strokes are a serious life-threatening condition that occur when the blood supply to the brain is disrupted. Strokes are a medical emergency and prompt recognition and treatment is critical.

Around 2,800 people are admitted to hospitals in Northern Ireland due to stroke. It is essential that healthcare professionals recognise the signs and symptoms.

A review of serious adverse incidents and complaints has identified a number of themes for the improvement of recognition of patients with stroke.

The main stroke symptoms can be remembered with the word **FAST**:



FAST is designed to recognise the main, common symptoms of stroke. However, not all stroke patients describe the common symptoms. This is particularly true for those who have a posterior circulation stroke.

Other symptoms of stroke include:

- ▶ Dizziness
- ▶ Headache
- ▶ Seizures
- ▶ Confusion
- ▶ Difficulty understanding what others are saying (aphasia)
- ▶ Reduced consciousness
- ▶ Visual changes
- ▶ Problems with balance or gait
- ▶ Difficulty swallowing (dysphagia)

“ I woke up and was listening to the radio so I tried to get out of bed and my legs left me. I crawled round to the other side of bed to get the phone and rang my son. I thought it was a stroke.

“ I was in the kitchen having a coffee with my sister when she started complaining of a weird sensation in her head and then collapsed. She had a brain aneurysm and a major stroke.



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The Impact of Stroke

Stroke can have a devastating impact on people’s lives; both patients and their loved ones. It is the fourth largest cause of death, and two thirds of those who survive stroke have a life changing disability. It is key to listen to experiences that patients and families have had to learn how we can improve.



I had a stroke... I was terrified/unsure on what my future would be.



I’m frustrated due to the loss of my independence, though I am coming to terms with this.

The number of complaints related to stroke are increasing. Common themes are concerns about **care and treatment** and **communication** from healthcare professionals.

Health and Social Care Trust	April 2020 - March 2021	April 2021 - March 2022
Belfast	2	5
Northern	1	5
South Eastern	2	3
Southern	1	4
Western	2	3
NIAS	0	8
Total number of stroke-related complaints	8	28

Complaints case study: At around 9pm Patient X experienced dizziness, double vision and vomiting. Family members called 999 and paramedics arrived within 15 minutes. Patient X was FAST negative when assessed and the working diagnosis was felt to be vertigo. Patient X arrived at ED at around 10pm, however, as they were not pre-alerted or triaged as a possible stroke patient, they waited until 4am to be seen. At this stage CT imaging was performed and the patient was subsequently diagnosed with a Posterior Inferior Cerebellar Artery Stroke and was admitted to the stroke unit.

Key learning:

- ✓ FAST test does not include vertigo as a possible indicator of posterior stroke
- ✓ Improving the recognition of posterior strokes has been highlighted as a learning need nationally



My husband had took a stroke and I rushed him in to hospital... but when I got him in to A&E we still had to wait in a long queue to speak to the receptionist, especially when a stroke is an illness which must be treated as soon as possible.

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Specialist Stroke Teams

The stroke team are a specialist team with expertise in the diagnosis and management of stroke. Early involvement can help identify patients who are suitable for thrombolysis and thrombectomy. The stroke team can also support patients to receive prompt brain imaging and advise where further imaging is appropriate.

Key Learning:

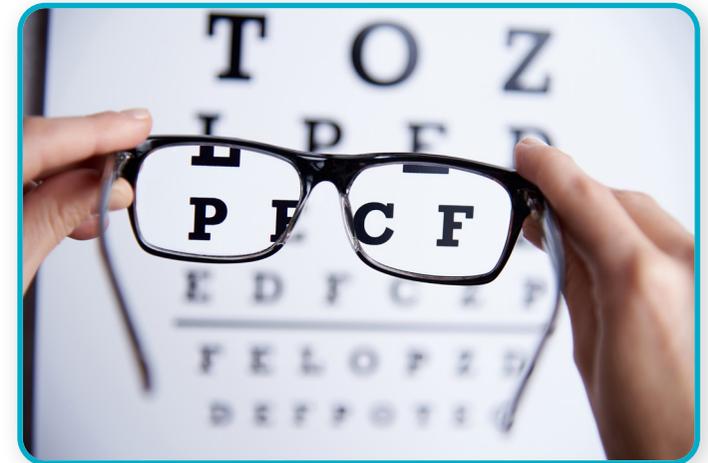
- ✓ Patients with suspected stroke should be seen immediately on arrival to hospital by a specialist stroke team for structured assessment.



The staff here are excellent. Their quick action and diagnosis have saved my life. I am so lucky to be here.



Visual Changes



SAI Case study: Patient A presented to the emergency department reporting blurred vision for 90 minutes and neck pain radiating down into the shoulder. The patient was triaged as priority 3 and, due to pressures in the department, waited three hours to be seen by a doctor. On assessment, the patient was found to have a right sided hemianopia (visual loss) and CT imaging showed an occipital lobe stroke. At this stage, Patient A was referred to the stroke team. In view of the established stroke on the CT scan, patient A was not felt to be a suitable candidate for thrombolysis. Following further imaging, a diagnosis of vertebral artery occlusion secondary to dissection was made. Whilst an inpatient, Patient A suffered a further stroke, deteriorated and sadly died in intensive care.

Key Learning:

- ✓ Patients presenting with new changes in vision should have a Recognition of Stroke In the Emergency Room (ROSIER) score completed at triage.

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Dizziness



SAI case study: Patient B presented to the Emergency Department with confusion, dizziness and slurred speech. The initial impression was that this was not stroke and patient B was treated for meningitis and encephalitis. A CT scan was performed which reported a possible meningioma and recommended an MRI scan. Patient B deteriorated over the next 12 hours with fluctuating consciousness so had repeat imaging. Further scans showed a basilar artery thrombus. Despite undergoing clot retrieval, Patient B sustained a catastrophic stroke and sadly died.

Complaint case study: Patient Y presented to the Emergency Department with dizziness, vomiting and neck pain. Due to pressures in the department, the patient waited six hours to be seen and was assessed in a non-clinical area. Following medical assessment, the patient was discharged with a diagnosis of vertigo.

The dizziness persisted for five days and patient Y contacted their GP who prescribed medication for vertigo. This did not help and, following contact with an out-of-hours GP, an ambulance was arranged to take patient Y to hospital.

A CT imaging was performed on arrival and confirmed a vertebral artery dissection. Patient Y was admitted under the neurosurgical team.

Key Learning:

- ✓ The assessment of patients with dizziness or unsteadiness should be structured to look for red flags symptoms of stroke.
- ✓ Timing, Triggers and Targeted Examinations (TiTrATE) is a methodical approach to the dizzy patient.



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Headache



SAI Case study: Patient C attended the Emergency Department with a four-day history of headache and dizziness. Patient C also experienced vomiting, neck stiffness and photophobia. After medical review, Patient C was diagnosed with migraine and discharged home. Five days later, following contact with GP, the patient was referred to the assessment unit with ongoing headache. On this occasion, Patient C was discharged with a diagnosis of sinusitis. Two days after the second attendance, Patient C experienced their worst headache to date and visited the optician due to developing double vision. The optician referred to the emergency department and, on assessment, Patient C was also found to be unsteady. A CT brain showed an acute bleed. Following advice from the neurosurgeons, the patient was managed conservatively.

Key Learning:

- ✓ Vomiting, neck stiffness and patients reporting 'worst headache ever' are red flags for headache and further investigation should be considered.
- ✓ It is good practice for patients presenting on a second occasion at hospital with the same complaint to be seen and assessed by a senior doctor.
- ✓ Patients presenting with headaches should have Central Nervous System observations performed and recorded to identify any changes or deterioration.

Complaints case study: Patient Z presented to the Emergency Department with a severe occipital headache, vomiting and dizziness. Patient Z was reviewed by the stroke team and subsequently had a CT and CT angiogram which were reported as normal. The stroke team felt that this was unlikely to be stroke and advised admission under the acute medical team with a working diagnosis of subarachnoid haemorrhage. A lumbar puncture was performed and was negative for subarachnoid haemorrhage. Following neurology review, a CT venogram was performed to rule out venous sinus thrombosis. This was reported as negative and Patient Z was discharged home with a diagnosis of thunderclap headache.

Six months later, Patient Z was admitted with speech disturbance. A CT was performed and showed an old infarction in the left cerebellar hemisphere and an MRI showed multiple small acute infarcts. Following a review, it was concluded that the initial admission was probably due to the left sided cerebellar infarct. The initial imaging was reviewed and a new left sided cerebellar infarct could be seen on the CT venogram which was not reported at the time.



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Reduced Conscious Level

SAI case study: Patient D was brought to the emergency department via ambulance following a collapse in the community. The patient had a reduced conscious level (GCS 8) and left sided weakness. The patient was pre-alerted due to the low consciousness but the left sided weakness was not communicated. The patient was not initially triaged as stroke and the stroke team were not alerted. Patient D was reviewed on arrival and the anaesthetic team was in attendance. There was a delay in obtaining a CT brain; when performed it showed a stroke in the right frontal lobe and early changes on the left side of the brain. Patient D had a stroke affecting both hemispheres which was the cause of the reduced consciousness. The stroke team were contacted and the patient received thrombolysis. Patient D deteriorated following thrombolysis and a repeat CT showed stroke progression in both hemispheres. The patient was admitted to the intensive care unit where they sadly died.

Key Learning:

- ✓ Stroke can cause patients to present with reduced consciousness.
- ✓ Handover and communication about changes in neurology and concern of stroke is essential.
- ✓ Patients with suspected stroke and reduced level of consciousness (GCS <13) should have CT brain imaging within an hour.

Thrombectomy Transfer Delay



SAI Case study: Patient E arrived at the emergency department at 15:19. They had been pre-alerted due to a new neurological deficit (FAST+). A CT brain was ordered at 15.43 and performed at 16.15. A CT angiogram was performed at 16.40. Patient E was discussed with a senior stroke physician and a diagnosis of Left Total Anterior Circulation Stroke was made. The patient was deemed outside the window for thrombolysis but a potential candidate for thrombectomy. The patient was accepted for transfer for potential clot retrieval. NIAS were contacted at 17.15 and a '999 blue light ambulance for urgent transfer' was requested. The patient did not leave the Emergency Department until 19.00 and arrived at RVH Stroke Unit at 20.05. Thrombectomy treatment was unable to proceed as the service was unavailable at the time of the patient's arrival. The patient was transferred back to the original hospital the following day.

Key Learning:

- ✓ Ambulance transfers for urgent thrombectomy are time critical. When phoning to request an urgent transfer, the phrase '**Immediate Time Critical Blue Light Transfer**' should specifically be used.
- ✓ If thrombectomy might be indicated, imaging with contrast angiography (CTA) should be performed promptly after the initial CT brain.



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Quality Improvement

Learning from complaints, SAls and patient experience is important to ensure patients receive the right care at the right time. These case studies highlight the different ways that patients with stroke can present and identify the key learning points.



SSNAP

Sentinel Stroke National
Audit Programme

All stroke cases in Northern Ireland are entered into the Sentinel Stroke National Audit Programme (SSNAP). This is a quality improvement programme that looks at how well stroke care is being delivered. Case entries, pre COVID, have shown improvements in the audits from all five Trusts.

Further information on results of the audit are available at SSNAP - Home (strokeaudit.org)



Recently, the Department of Health have completed a consultation on Reshaping Stroke Care in Northern Ireland to seek views on how to make stroke care better in Northern Ireland.

Care Opinion is an online user feedback platform whereby service users, families & carers can share their experience of services across Health & Social Care Northern Ireland.

Care Opinion is a public platform which can be accessed at www.careopinion.org.uk.



If you have any comments or questions related to this Edition of Learning From please get in contact by email at learningmatters@hscni.net

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