

Briefing for the Petitions Committee

Petition number: [P-05-0763](#)

Petition title: **Introduce updated stroke advice – B.E.F.A.S.T. – and help save lives and livelihoods**

Text of petition: We the undersigned request the Welsh Assembly to review the stroke advice currently given to healthcare professionals and in other marketing literature. At the moment this follows FAST – Face, Arms, Speech, Time. Some parts of the brain affected by stroke don't deal with any of those functions, so adding Balance and Eyes to create BEFAST will cover much more.

My brain lesion indicating a cerebellar stroke was found incidentally during an MRI for a different reason. This explains the sudden vertigo I experienced over a year previously. Had this been recognised by the multiple medical professionals I saw I could have received stroke treatment immediately and the extent of brain damage may have been avoided. Had I known about it as a member of the public I would have been aware of the risks of my symptoms. Stanford University has been advising BEFAST for years: <http://scopeblog.stanford.edu/2014/05/02/be-fast-learn-to-recognize-the-signs-of-stroke/>

Background

A stroke occurs when the blood supply to part of a person's brain is cut off. This can be due to a blockage (known as an ischaemic stroke, about 85% of cases) or by bleeding in or around the brain (a haemorrhagic stroke, about 15% of cases).

A TIA (transient ischaemic attack, sometimes referred to as a 'mini-stroke') happens when the blood supply to the brain is interrupted for a very brief time. Symptoms of a TIA are very similar to those of a stroke, but are only temporary, lasting less than 24 hours. However, a TIA is a warning sign that there are problems with the blood supply to the brain, and is associated with a very high risk of stroke in the first month and up to a year after the event.

Each year around 7,400 people in Wales will have a stroke (including TIAs). The likelihood of a patient making a successful recovery following a stroke greatly depends upon the time taken between the first sign of symptoms and the patient receiving treatment. Since 95% of those with acute stroke will have their first symptoms outside hospital, ensuring that the

public and healthcare professionals can quickly recognise stroke symptoms is crucial to improving patient outcomes.

The [Stroke Association](#) lists common symptoms of a stroke as including:

- Numbness, weakness or paralysis on one side of your body (for example, a limp arm or leg, or a drooping lower eyelid or mouth);
- Slurred speech, or difficulty finding words or understanding speech;
- Sudden blurred vision or loss of sight;
- Confusion or unsteadiness; and
- A sudden, severe headache.

FAST (Face–Arms–Speech–Time)

The [Act FAST campaign](#) has been running in England and Wales since 2009, promoted by several organisations including NHS Wales and the Stroke Association. The aim of the campaign is to increase public awareness of stroke symptoms, and of the importance of calling 999 immediately if any of these symptoms are observed. The campaign does this by promoting the FAST acronym:

- **Face** – has the person’s face fallen on one side? Can they smile?
- **Arms** – can the person raise both arms and keep them there?
- **Speech** – can the person speak clearly? Is their speech slurred?
- **Time** to call 999 if you see any of these signs of a stroke.

FAST was developed in the UK in 1998 as a simple stroke identification instrument, to be used primarily by ambulance staff. The test doesn’t check for visual field defects or problems with perception, balance and coordination, and therefore may be relatively insensitive to lesions in certain parts of the brain. During the development of FAST however, it was felt that increasing the complexity of the test would “lengthen paramedic assessment time and could increase the proportion of false–positive diagnoses without greatly increasing the sensitivity of the instrument”¹.

This fact that some people with stroke symptoms won’t be identified by FAST was recognised by the Royal College of Physicians in their [2016 National clinical guideline for stroke](#). However, the guideline goes on to say that further evidence would be required before the

¹ J. Harbison *et al.*, [Diagnostic Accuracy of Stroke Referrals From Primary Care, Emergency Room Physicians, and Ambulance Staff Using the Face Arm Speech Test](#), *Stroke*. 2003;34:71–76.

authors could recommend the use of other screening tools² that detect non-FAST symptoms in the pre-hospital phase. They advise that if community-based clinicians are suspicious of the diagnosis following a negative FAST test, they should continue to treat the person as having a suspected stroke until a stroke diagnosis has been excluded by a specialist stroke clinician.

BEFAST (Balance–Eyes–Face–Arms–Speech–Time)

This petition seeks to replace FAST as the standard advice for stroke identification with BEFAST (or BE FAST), to include two other stroke symptoms:

- **Balance** – does the person have a sudden loss of balance?
- **Eye** – has the person lost vision in one or both eyes?

As the petitioner highlighted, [Stanford University](#) currently promotes the BEFAST acronym for recognising stroke symptoms. Other US institutions have also moved to using BEFAST rather than FAST, such as [Pennsylvania State University](#) and [University of Texas Southwestern Medical Center](#).

On the other hand, the [American Heart Association/American Stroke Association](#) concurs with the [Stroke Association \(UK\)](#) in advising the use of FAST, listing problems with balance and eyesight among additional stroke symptoms.

Additional Information

A [similar petition](#) was started on the UK Parliament's petition service, but was closed early due to the 2017 General Election (and will not reopen after the election, although a new petition could be set up).

The Fourth Assembly's Health and Social Care Committee carried out an [inquiry into Stroke Risk Reduction](#) in 2011/12. As this inquiry was focused on risk reduction rather than identification of strokes, the final report only mentions FAST as an example of a successful public awareness campaign, and doesn't consider the merits or shortcomings of the FAST system itself.

² Two examples of other such screening tools are given: (i) forms of the National Institutes of Health Stroke Scale (NIHSS); and (ii) Recognition of Stroke in the Emergency Room (ROSIER); BEFAST is not specifically mentioned.