

Citizen Participation and Public Petitions Committee
Wednesday 9 October 2024
15th Meeting, 2024 (Session 6)

PE2048: Review the FAST stroke awareness campaign

Introduction

Petitioner James Anthony Bundy

Petition summary Calling on the Scottish Parliament to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST stroke campaign, and ensuring that awareness campaigns include all the symptoms of a potential stroke.

Webpage <https://petitions.parliament.scot/petitions/PE2048>

1. [The Committee last considered this petition at its meeting on 6 December 2023](#). At that meeting, the Committee agreed to write to the Minister for Public Health and Women's Health, the Stroke Association, and Chest Heart and Stroke Scotland.
2. The petition summary is included in **Annexe A** and the Official Report of the Committee's last consideration of this petition is at **Annexe B**.
3. The Committee has received new written submissions from the Minister for Public Health and Women's Health, the Petitioner, the Stroke Association, and Chest Heart and Stroke Scotland, which are set out in **Annexe C**.
4. [Written submissions received prior to the Committee's last consideration can be found on the petition's webpage](#).
5. [Further background information about this petition can be found in the SPICe briefing](#) for this petition.
6. [The Scottish Government gave its initial position on this petition on 17 October 2023](#).
7. Every petition collects signatures while it remains under consideration. At the time of writing, 1,527 signatures have been received on this petition.

Action

8. The Committee is invited to consider what action it wishes to take.

Clerks to the Committee
October 2024

Annexe A: Summary of petition

PE2048: Review the FAST stroke awareness campaign

Petitioner

James Anthony Bundy

Date Lodged

19 September 2023

Petition summary

Calling on the Scottish Parliament to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST stroke campaign, and ensuring that awareness campaigns include all the symptoms of a potential stroke.

Previous action

I have contacted Keith Brown MSP and requested a meeting be set up to discuss the petition.

Background information

Anthony (Tony) Bundy tragically lost his life on 29th June 2023 after suffering a Basilar Artery Ischaemic Stroke. When Tony started suffering a stroke, his face and arms were unaffected, and his speech was not slurred. This meant that Tony passed the "FAST" stroke test, and was denied the emergency treatment required to save his life until it was too late.

Tony's family are now raising awareness of all the symptoms of stroke, including the inability to stand, cold sweats, eyes struggling to focus, slowed speech, nausea, and vomiting.

We are calling for a review of the FAST stroke campaign, looking at international examples, in order to ensure stroke awareness campaigns include the wider range of symptoms of stroke. This is intended to maximise knowledge amongst the general public and medical profession.

Increasing awareness will hopefully mean fewer families will have to experience the pain and loss that Tony's family has endured.

Annexe B: Extract from Official Report of last consideration of PE2048 on 6 Decmeber 2023

The Convener: Our penultimate petition this morning is PE2048, on reviewing the FAST—face, arms, speech, time—stroke awareness campaign. The petition, which was lodged by James Anthony Bundy, calls on the Scottish Parliament to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST stroke campaign and ensuring that awareness campaigns include all the symptoms of a potential stroke.

I should say that Mr Bundy is known to members of the Scottish Conservative Party as someone who has worked in our corridor and whose father died because of a stroke. I gather that his mother is with us in the room as we consider the petition.

We are also joined by our MSP colleagues Alexander Stewart and Jackie Baillie for consideration of the petition. Mr Stewart is back for his first visit to us since he withdrew his patronage of our committee, and Jackie Baillie is, of course, a very familiar and regular attendee and campaigner on behalf of constituents who have petitions before us. I should also note that we have received a written submission from Sandesh Gulhane MSP in support of the petition.

James Anthony Bundy lodged the petition after losing his father to a stroke that went undiagnosed, as his symptoms did not fall within the parameters of the FAST assessment. The family are now raising awareness of all the symptoms of stroke, which can also include an inability to stand, cold sweats, vision problems, nausea and vomiting.

The SPICe briefing that we have received refers to a 2021 systematic review of evidence that noted that the less commonly used BE FAST—balance, eyes, face, arms, speech, time—test identified more ischaemic strokes than the FAST test and that that test may play an important role in the diagnosis of strokes.

In responding to the petition, the Minister for Public Health and Women’s Health noted that the Scottish Government published its refreshed stroke improvement plan in June and that, in priority 2 of that plan, the Scottish Government has committed to establishing the current degree of public understanding of the symptoms of stroke and whether certain at-risk groups require different messaging.

We have also received a submission from the petitioner, which provides further detail of his family’s experience and the difference that the use of the BE FAST test might have made. In doing so, he calls for an immediate and urgent review of the existing stroke awareness campaign to help to ensure that every individual who has experienced a stroke receives the timely care that they deserve.

The petition is an important one. Before we as a committee consider it further, would our two parliamentary colleagues wish to comment on it?

Alexander Stewart (Mid Scotland and Fife) (Con): Good morning. It is a pleasure to be back among you but, for the first time, on the other side of the table. In the previous parliamentary session, I was a co-convener of the cross-party group on heart disease and stroke.

I would like to speak in support of James Bundy's petition on the review of the FAST stroke awareness campaign. I commend James and his family for the fantastic work that they have done to date in bringing this petition to the Parliament and highlighting where we are.

The petition calls on the Scottish Parliament

“to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST stroke campaign, and ensuring that awareness campaigns include all the symptoms of a potential stroke”.

There were 11,055 reported strokes in Scotland in 2022, which is an increase on 2021. The latest data from the year ending 31 March 2022 reported 3,836 deaths in which cerebrovascular disease, including stroke, was the underlying cause. The current test that is used to assess patients who are suspected of having suffered a stroke is, as we have heard, the FAST test. Although that test can identify most strokes, patients can also present with other less common symptoms. The crux of the petition is those less common symptoms that can occur in some individuals and which can, unfortunately, mean misdiagnosis or delays in treatment. That was very much the case for Mr Tony Bundy, who died at the age of 53.

As you said, convener, in 2021, a systematic review of evidence found that the FAST test accurately detected 69 to 90 per cent of strokes but that, crucially, the test missed up to 40 per cent of posterior circulation strokes, such as the ischaemic stroke that Mr Bundy suffered.

That issue has also been identified by the national advisory committee for stroke, which stated the importance of education for health professionals, including in circumstances where there is a negative FAST test. That is what we are talking about here: education is required for the professionals who deal with these situations.

I firmly endorse the calls from James Bundy and his family for a review of the FAST test, an evidence session with the Health, Social Care and Sport Committee and a debate in the chamber in the future. That would help the family to see how the process is moving forward, because it is clear that, in this circumstance, the test was not fit to identify a stroke. It is important that we address that for the future.

I commend and congratulate the Bundy family on the petition following their terrible loss. They wish to support others in that situation so that this will not happen to other families. I support the petition and I am delighted to be here.

Jackie Baillie (Dumbarton) (Lab): Convener, you and Mr Stewart have covered most of the detail of what I was going to say, but I will emphasise a couple of points. We would all acknowledge that FAST is a very good awareness programme for stroke, but it could be even better, and that is the essence of the petition. I have to say that the petition is simply common sense, and I am not sure why the Scottish Government is not doing this.

We heard why James Bundy brought the petition to us, and it is a matter of regret that his father died in the way that he did. As we have heard, 40 per cent of

ischaemic strokes are simply not captured, and symptoms such as vomiting, blurred vision, confusion and lack of balance should be included in an extended FAST awareness campaign. Convener, you referred to BE FAST, with BE covering balance and eyes.

Therefore, I ask the committee to urge the Scottish Government to conduct a wider review of the FAST approach. We recognise the good work of the FAST campaign but, if we are missing up to 40 per cent of ischaemic strokes, surely the Government should be open to changing the campaign to include more symptoms.

The minister's response misunderstands that point, but I ask the committee to encourage her to build on the solid foundations of FAST but extend it to include more symptoms so that we can save more lives. I am sure that everybody would sign up to that objective.

The Convener: Thank you.

The petition is important, and I applaud James Anthony Bundy and his family for the work that they have done in lodging it. As Jackie Baillie was, I was struck by the fact that the taking and promoting of the fairly straightforward action that is proposed could make a material difference. I think that we will certainly want to go back to the minister, but I wonder whether members have suggestions about action that we might take in the interim period.

David Torrance: I wonder whether the committee would consider writing to the Stroke Association and Chest Heart & Stroke Scotland to seek their views on the action that the petition calls for. The committee could also write to the Scottish Government to seek clarification on what consideration has been given to using the BE FAST model to help to raise awareness of the symptoms of strokes.

The Convener: I would very much like us to pursue that with the minister. In many respects, I would like to think that we could embrace the language of Jackie Baillie, in that what is being called for seems to be common sense. If the Government has considered adopting the BE FAST model and has chosen not to, I would like to know what reasons it had for coming to that conclusion, because I think that that would further assist us in considering how we might pursue the issues raised in the petition.

I thank James Anthony Bundy for lodging his important petition. We will keep the petition open and will return to our consideration of it at a subsequent date once we have received the information that we have requested. I thank our parliamentary colleagues for joining us.

Annexe C: Written submissions

Minister for Public Health and Women's Health submission of 21 December 2023

PE2048/D: Review the FAST stroke awareness campaign

Thank you for the response of the Citizen Participation and Public Petitions Committee following its consideration of PE2048 at its meeting of 6 December. The Committee asks if the Scottish Government has considered using the BE FAST model to help raise awareness of the symptoms of strokes and, if the Scottish Government does not intend to base its awareness raising work around the BE FAST test, what the reason for this is.

I mentioned in my previous reply that in addition to FAST campaigns, we will also consider how awareness of the less common symptoms of stroke can be increased. We are currently working to establish the existing levels of awareness of stroke symptoms and FAST through polling research. More detailed research exploring awareness of stroke symptoms and FAST is planned following the conclusion of this work and this will help inform future public awareness campaign content.

The 2023 edition of [The National Clinical Guideline for Stroke](#) states that more research into improving public awareness, and the appropriate action upon suspecting a stroke, is needed. Regarding pre-hospital identification of stroke, the Guideline also states that further evidence is required before a recommendation regarding the use of other screening tools that screen for non-FAST stroke symptoms could be made.

In this context, we do not currently plan to deviate from supporting the use of FAST, although we will of course regularly review this position based on the best available evidence. The National Advisory Committee for Stroke will be asked to review any emerging evidence regarding public awareness and stroke screening tools and provide advice to the Scottish Government regarding the most appropriate action.

We will continue to work with our third sector partners and wider stakeholders to consider the most effective way of raising public awareness of stroke symptoms, including support for the delivery of FAST campaigns and consideration of how awareness of less common symptoms of stroke can be raised.

Yours sincerely,
Jenni Minto MSP

Petitioner submission of 4 January 2024

PE2048/E: Review the FAST stroke awareness campaign

I am writing in response to the [Minister for Public Health and Women's Health submission of 21 December](#). My family and I were deeply disappointed to read that the Scottish Government "*do not currently plan to deviate from supporting the use of FAST.*"

My family and I acknowledge the conclusion of the National Clinical Guideline for Stroke that the Minister references, *“that further evidence is required before a recommendation regarding the use of other screening tools that screen for non-FAST stroke symptoms could be made”*, but we believe it is also important for the Committee to be given the full context of the considerations undertaken by the National Clinical Guideline for Stroke before giving this recommendation.

Just before giving their recommendations, the National Clinical Guideline for Stroke state that [“some people with symptoms of stroke will not be identified by the FAST test and thus stroke may not be detected.”](#) This is an admission that the FAST test is not infallible, and [aligns with the findings within the SPICe briefing](#) which shows that up to 40% of posterior circulation strokes are missed by the FAST test. As highlighted by [my previous submission](#), this has the potential to be as high as 1,125 strokes per year in Scotland. [Independent academic research](#) shows that there is a greater identification of ischaemic strokes with a BE FAST test, compared to with a FAST test. With an admission that “some people with symptoms of stroke will not be identified by the FAST test”, and initial evidence suggesting that a BE FAST test can identify more ischaemic strokes, surely this should be an area where the Scottish Government are urgently encouraging and undertaking further research?

The National Clinical Guideline for Stroke also state that [“\[t\]he Working Party considers that community-based clinicians should continue to treat a person as having a suspected stroke if they are suspicious of the diagnosis despite a negative FAST test.”](#) When my father’s FAST test was negative, he was left in a hospital corridor for over five hours before his fatal stroke struck. When being examined by the triage nurse, my mum stated that she believed that my father was possibly having a stroke. She did this not because she had knowledge about strokes that extended beyond the FAST campaign, but because my father had visited the GP two weeks earlier, suspecting he had suffered a TIA (transient ischaemic attack). Despite these fears being directly raised by my mum, the medical professional’s reliance on the FAST test resulted in my father not getting the ‘fast’ treatment that was required to save his life.

It greatly upsets me and my family that my dad was not treated as having a suspected stroke despite suspicions being raised, and whilst this appears to be a potential infringement of existing guidelines, it also highlights a flaw within them: the emphasis on the FAST test. Why should emphasis be placed upon a test which is known not to identify all strokes? Why should emphasis be placed upon a test which independent research shows misses 40% of ischaemic strokes? Why should emphasis be placed upon a test which academic research shows is not as effective as a BE FAST test?

In her letter, the Minister stated that the National Clinical Guideline for Stroke believe that *“more research into improving public awareness and the appropriate action upon suspecting a stroke is needed”*. My family and I support these calls for more research, but also want to put on the record that existing academic research demonstrates the benefits of a BE FAST test compared to a FAST test. We hope that the Committee will support the National Clinical Guideline for Stroke acknowledgment that more research is needed, especially within the context of evidence that highlights the fact that the FAST test does not detect all strokes; my father’s story which shows that a negative FAST test can result in inadequate

treatment for stroke; and independent academic research detailing the benefits of a BE FAST test in comparison to a FAST test.

Supporting calls for more research, my family and I are supportive of the idea to ask the Health, Social Care, and Sport Committee of the Scottish Parliament to hear evidence from different stakeholders regarding the effectiveness of the FAST campaign/test and consideration of potential improvements, including a BE FAST campaign/test, and after due reflection, their presenting recommendations to the Scottish Government.

Stroke Association submission of 12 January 2024

PE2048/F: Review the FAST stroke awareness campaign

Thank you for your invitation for the Stroke Association to give views in response to PE2048: review the FAST stroke awareness campaign. I am happy to do so.

I would like to repeat here our condolences to the family of Anthony Bundy. We applaud the admirable work the family have been doing to increase awareness of stroke, and to raise funds to support those affected by stroke, since this tragedy occurred.

Stroke is a huge part of the health and social care environment in Scotland - being the fourth biggest killer, and the largest cause of adult disability. Stroke is designated a “clinical priority” in Scotland, but the reality often feels quite different.

Stroke is always a medical emergency. A stroke happens when the blood supply to part of the brain is cut off, which quickly leads to brain cells dying. Stroke patients have the best chance of surviving and making a good recovery when they receive specialist medical treatment as soon as possible.

Early recognition of a stroke, whether by the public or by health professionals, is a crucial part of a speedy response. As stroke can strike anyone at any time, broad public awareness of the symptoms of stroke saves time and therefore saves lives, shortens hospital stays and reduces ongoing support needs (and thus saves NHS resources). We, along with most public health agencies, have focused on the FAST (Face, Arms, Speech, Time) campaign to achieve this.

The need for such campaigns is particularly urgent in Scotland, where the incidence of stroke is 20% higher than in Northern Ireland, and 40% higher than in England, and so we welcome and strongly encourage recent progress by Scottish Government towards resumption of public campaigns to raise awareness of stroke symptoms.

There is strong evidence that FAST is effective, both in terms of health outcomes and return on funds invested. However the evidence comparing the relative impact of FAST and BEFAST formulations is limited and at this time does not clearly favour one over the other. With regard to any preference between FAST or BEFAST (which adds Balance and Eyesight symptoms), the Stroke Association does not take an ideological position on this and we will be led by the available evidence. If further

research suggests BEFAST, or any other formulation, leads to better outcomes then we will of course support it.

While we are aware that some countries use BEFAST, with the aim of capturing a higher proportion of strokes, the impact of these messages has not been researched in practical situations in the UK and could potentially have detrimental consequences to individual patients and to health systems that are already overloaded. For example, we already know that too many people don't understand that you need to call 999 when you see any single symptom, and wait for all of the FAST symptoms. Adding further symptoms into the campaign could exacerbate this, and BEFAST has not been tested to see whether this would increase the delay suspected stroke patients make in calling 999. There is a genuine concern that extending the range of identified symptoms will lead to an increase in "false alarm" calls, which can draw resources away from treating actual stroke patients. Poor balance and double vision are very common, and usually not due to stroke.

We note that Scotland's Progressive Stroke Pathway includes the recommendation to "support the use of FAST, and work to embed other pre-hospital stroke tools", but it will take time to properly explore and test these. In the meantime, we are aware that a significant proportion of strokes do not exhibit the FAST symptoms, and share the concern of the petitioners over the resultant harm caused, the lives lost and the cost to health and social system in longer hospital stays and increased ongoing support needs.

While we do not currently have the evidence to support a switch of public messaging to a BEFAST formulation, we do strongly support the idea of further Committee scrutiny of how we can improve early diagnosis and treatment of stroke. Amongst the issues that warrant such attention we would include:

- The chance to hear from research professionals as to what we do and do not know about FAST and BEFAST comparisons
- How we could clarify the situation, and make better informed decisions, by funding research into comparing FAST and BEFAST approaches in a practical setting in Scotland
- Exploration of the information and training provided to health care professionals, who could reasonably be expected to hold more nuanced and detailed formulations than the general public
- This to include consideration of referral pathways to TIA (Transient Ischaemic Attack) clinics, where the warning signs of impending stroke can be investigated and stroke prevention measures agreed
- A review of the categorisation used by the ambulance service, so that the time-urgent nature of stroke is reflected in an "amber-plus" category, sitting in between the current amber and red designations. This would reflect a recent, successful pilot carried out by NHS England, now being rolled out in England.

- Increased efforts to equip ambulance crews with the ability to make video calls with stroke specialists from the scene, enabling more expert and nuanced diagnoses at the earliest stage of the process.
- In the meantime, a commitment to regular, appropriately funded public-facing FAST campaigns. There is strong evidence in support of running campaigns every two years.
- This to be accompanied by enhanced messaging to clarify that any one symptom should be taken as a trigger to call emergency services.

We would be happy to provide further details of campaigns evaluations or research evidence if the Committee would find this useful, and look forward to any opportunities to further explore this important and urgent topic.

Chest Heart and Stroke Scotland submission of 26 February 2024

PE2048/G: Review the FAST stroke awareness campaign

Chest Heart & Stroke Scotland (CHSS) is Scotland's largest organisation supporting people with chest, heart, and stroke conditions, including Long Covid. Our amazing nurses, support workers and volunteers are here to make sure no one has to recover alone. With our Community Healthcare Support Service, we ensure that people across Scotland get the support they need to live full lives with life changing health conditions. As well as providing life changing services, we campaign for the care that people with our conditions need.

CHSS thanks the Committee for the opportunity to respond to PE2048: Review the FAST stroke awareness campaign. Firstly, we send our sincere condolences to the family of Anthony Bundy. The family's crucial work to raise awareness of stroke detection and prevention following their tragic loss has positively challenged those working in Scotland's health sector to ensure everyone who experiences a stroke receives timely and appropriate care.

Early detection of stroke both saves lives and allows for the greatest chance to access successful treatment that reduces disability, including thrombectomy. As such, Chest Heart & Stroke Scotland (CHSS) wants to ensure that Scotland has an impactful, effective stroke awareness campaign that reaches as many people as possible.

CHSS has been heavily involved in implementing previous iterations of FAST stroke awareness campaigns in Scotland and we remain committed to collaborating with partners, including Scottish Government and NHS Scotland, to develop and adapt future campaigns which will further improve public understanding of stroke signs and symptoms.

We are pleased to see the Scottish Government's commitment to regularly reviewing the available evidence to ensure an effective campaign, and to hear that research on levels of stroke awareness is already underway. It is crucial that further research is undertaken to understand the most effective action that can be taken to prevent stroke deaths.

FAST is an established campaign with proven effectiveness. However, we are of course concerned that up to 40% of posterior circulation strokes are missed using FAST screening, as noted in the SPICe briefing provided to the Committee.

While there is a lot of interest in the alternative 'BEFAST' (Balance, Eyes, Face, Arm, Speech, Time) screening method, there is not extensive research which directly compares it with FAST. The Cochrane Review on prehospital screening tools for stroke (Zhelev et al., 2019) did not look at the effectiveness of BEFAST but did consider several other scales. Retrospective studies suggest that BEFAST could catch more strokes than FAST (Aroor et al., 2017) and that while BEFAST improves the sensitivity of identification of ischemic strokes in adults, it does not identify additional strokes beyond FAST in the paediatric population (O' Connor et al., 2021).

Another retrospective study found that BEFAST was a sensitive screening tool – albeit not specific – for acute ischaemic stroke in hospitalised patients, with results comparable to community-onset stroke (El Ammar et al., 2020). Research from Tan et al. (2019) found that BEFAST is more sensitive for identifying strokes, although 'at the cost of specificity'. A systematic review and meta-analysis, which incorporates the studies listed here, indicated that FAST and BEFAST might be useful in the diagnosis of acute ischemic stroke, with the diagnostic value of BEFAST higher than in FAST (Chen et al., 2022).

There is, then, some evidence to suggest that BEFAST may have greater sensitivity and diagnostic value. However, it is important to stress that available evidence is limited and frequently based on retrospective analysis rather than use in the field. One study which applied BEFAST and FAST to patients in 'real time' found that adding coordination and diplopia assessments did not improve stroke detection in the prehospital setting (Pickham et al., 2018).

While the BEFAST screening scale could offer a way to identify more strokes, more evidence is needed before committing to roll this out as part of a nationwide campaign. In particular, there is a pressing need for robust research which specifically analyses the use of BEFAST compared to FAST in public awareness campaigns, where there is little evidence to support its use.

We are cautious about the use of BEFAST adding complexity to public health messaging which may in turn overload hospital emergency units and stroke teams, with additional tests potentially slowing down assessments and increasing overall time to hospital.

Risks that may be associated with expanding symptoms beyond FAST messaging should be given careful consideration and it is essential that any learning from local stroke awareness pilots is taken on board. For example, we are aware of a BEFAST trial which took place in NHS Fife which was associated with a high level of false positives due to higher sensitivity, making it harder to identify who was experiencing a stroke.

This highlights the importance of gathering further information from health boards on pilot study results and investing in future research of practical, local applications of FAST and BEFAST in Scotland to identify potential benefits and risks. We hope that

the Committee will also seek the input of local health boards and the Scottish Ambulance Service when considering this petition.

CHSS is committed to improving stroke prevention and detection in Scotland, and we believe that further research in practical settings is required before committing to the use of BEFAST as part of a national campaign. We are open to adapting our position in line with future evidence.

We are very happy to engage further with the Committee on this important issue and discuss in greater detail.