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/F: 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.