

Streamlining access to innovative stroke imagery analysis technology

Matt Roberts, Editor,
National Health Executive

featuring comment by **Darrien Bold**, National Digital and AI Lead for Stroke at NHS England and NHS Improvement (NHSE/I) & **Adam Nickerson**, Senior Category Manager – Digital & IT at NHS Shared Business Services (NHS SBS)

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The use of artificial intelligence in the analysis of stroke imagery can make significant differences in providing rapid treatment where required for patients undergoing an ischaemic or haemorrhagic stroke. But where do healthcare organisations start when looking to procure these innovation AI technologies?

NHS Shared Business Services (NHS SBS) have looked to streamline that process, unveiling their new procurement framework to enable NHS organisations

to have access to this evidence-based, cost-effective technology.

The new 'Provision of AI Software in Neuroscience for Stroke Decision Making Support' framework is the only, one of its kind framework in the UK specifically for the analysis of this type of stroke imagery.

As an emerging marketplace, there can be challenges to contracting with some of the most innovative tech start-ups, with the new procurement framework agreement aiming to remove some of

these barriers and de-risk the process, providing NHS organisations with a more viable commercial solution – and offering the necessary assurances to buyers.

The new framework agreement has been developed alongside expert contributions from NHS England and NHS Improvement (NHSE/I), clinical leaders from the 20 Integrated Stroke Delivery Networks across England, the Academic Health Science Network and with further input from NHSX and the Care Quality Commission (CQC).

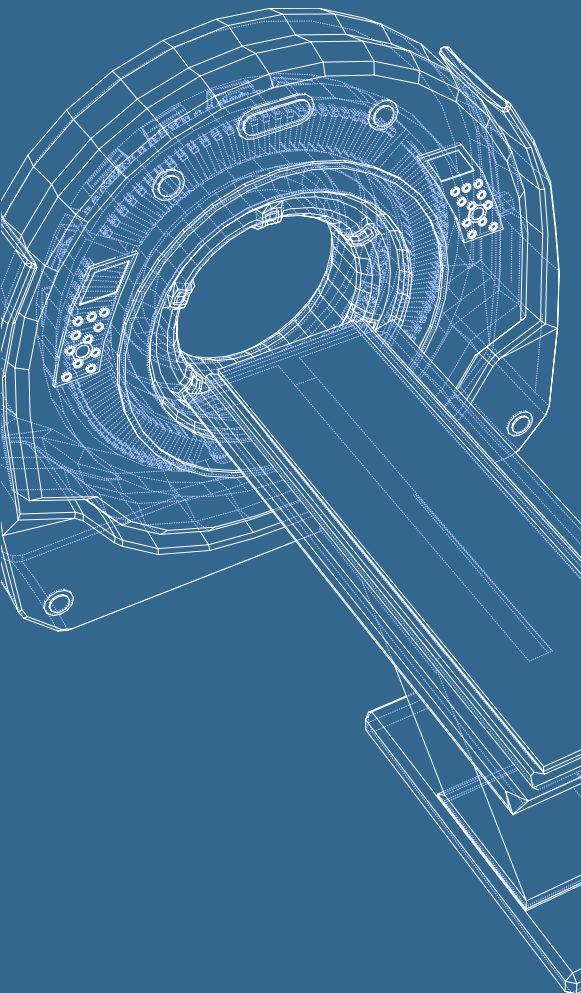
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But why does it matter?

In the UK alone, each year over 100,000 people are affected by stroke, according to research by The Stroke Association.

As a time-sensitive condition, speed and accuracy in interpreting brain scans is critical to the diagnosis and treatment of ischaemic and haemorrhagic stroke. Image analysis software can use AI algorithms to support the clinical decision-making process by providing real-time interpretation of imaging and scans, augmenting the review, diagnosis and delivery of these time-sensitive treatments.



Improving services and outcomes for stroke patients was a key objective outlined in the NHS Long Term Plan.

This included a ten-fold increase in the proportion of patients receiving a thrombectomy after a stroke by 2022. Achieving this increased level is expected to mean 1,600 more people can live independently after their stroke each year.

Under the NHS Long Term Plan ambitions, the NHS also aims to have the best performance in Europe for delivering thrombolysis to all suitable patients by 2025.

The relationship between imagery and AI

The stroke care milestones outlined also include the scaling up of technology to drive expansions in life-saving treatments.

This includes the use of AI interpretation of CT and MRI scans regarding the suitability for thrombolysis and thrombectomy, though always as a supporting tool to clinical decisions.

Using AI solutions can reduce the decision-making time for both thrombolysis and thrombectomy, increasing the



number of patients eligible for both interventions and improving the likely benefit of treatment.

When manual reviewing of brain scan imagery is undertaken remotely by a reporting doctor, it can take up to 30 minutes for a decision – according to data from NHS England’s Diagnostics: Recovery and Renewal Report.

By comparison, an AI tool can provide interpretation of imagery within seconds.

The use of AI software has also been included as an integral part of the National Optimal Stroke Imaging Pathway (NOSIP), where it is designed to guide the efficient use of radiology resources and reduce duplication. Under NOSIP, the need for rapid acquisition and interpretation

of appropriate brain and vessel imaging is prioritised during the initial assessment when a stroke is suspected in a patient.

AI solutions form a key part of achieving this rapid interpretation of the imaging, though being used prominently as a decision support – rather than as a substitute for expert radiological interpretation.

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The NHS England Diagnostics report also highlighted AI as being of a significant benefit to improving access to both thrombolytic therapy and mechanical thrombectomy in England.

The new NHS SBS framework is seen as an important mechanism in supporting NHS trusts and networks to be able to access these AI solutions and deliver optimal pathways for patients where a stroke is suspected.

Darrien Bold, National Digital and AI Lead for Stroke at NHS England and NHS Improvement (NHSE/I) said: “We are already seeing the impact AI decision-support software is having on stroke pathways across the country, and the introduction of this framework will drive forward further progress in delivering best-practice care where rapid assessment and treatment are of the essence.

“Over the past 18 months, the health and care system has been compelled to look to new technologies to continue providing frontline care, and the stroke community has embraced new ways of working in times of unprecedented pressure. This framework agreement will be of great benefit as we implement the NOSIP - driving better outcomes, better patient

experience and better patient safety, using new technology quickly, safely and innovatively.”

Adam Nickerson, Senior Category Manager – Digital & IT at NHS SBS added: “This use of AI is a prime example of how new technologies have the potential to transform NHS patient care, speeding up diagnosis and treatment times by ensuring that expert clinical resource is targeted where it has the greatest impact for the patient. By identifying areas in which technology can be used to help speed up patient pathways, clinicians have more time for providing personalised care and patient waiting lists – exacerbated by the pandemic, are reduced.

“We have been pleased to work alongside some of the country’s leading tech minds, expert stroke clinicians, and policy leaders to develop this unique framework, which will go a long way to enabling more rapid uptake of Stroke AI software across the NHS.

“The suppliers on our framework agreement are working right at the cutting edge of healthcare. Their work is already improving and saving the lives of patients who – as a result of this digital healthcare technology – are given access to the right treatment more quickly.

“We look forward to seeing how the technology evolves and the potential for equally life-saving solutions for patients with other medical conditions.”

The new NHS SBS procurement framework agreement offers a compliant route to market for all NHS and public sector organisations for a range of services around AI software and the analysis of stroke imagery.

It will run across an initial four-year period, from February 18, 2022, through to February 17, 2026.



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ABOUT THE
FRAMEWORK HERE.**

