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South West Clinical Senate

Stage 2 Clinical Review Report

Somerset Stroke Hyperacute Services Reconfiguration Proposals

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1 Executive Summary

1.1 Chair's Summary

This report has been produced by the South West Clinical Senate for Somerset Integrated Care System (ICS) and provides recommendations following a Clinical Review Panel (CRP) that convened on 28 September 2022 to review Somerset's proposals for the reconfiguration of the Hyper Acute Stroke Services.

This was an independent clinical review carried out to inform the NHS England stage 2 assurance checkpoint which considers whether proposals for large-scale service change meet the Department of Health's 5 tests for service change before going ahead to public consultation, which in this case is planned for September 2022. The Senate principally considers tests 3 and 5; the evidence base for the clinical model and the 'bed test' to understand whether any significant bed closures can meet one of three conditions around alternative provision, treatment, and bed usage. I would like to thank the clinicians who have contributed to this review process, providing their commitment, time, and advice freely. In addition, I would like to thank the Somerset ICS Team for their organisation and open discussion during the review.

The clinical advice within this report is given by clinicians who share the commitment of colleagues from Somerset, to develop the best services for the population. They have freely shared their knowledge and experience to ensure the proposals are based on clinically sound service models. This report sets out the methodology and findings of the review and is presented to Somerset ICS with the offer of continued support.

Dr. Sally Pearson, Clinical Chair, South West Clinical Senate

1.2 Executive Summary

The Clinical Review Panel (CRP) considered the Somerset proposals to reconfigure Hyper Acute Stroke and Transient Ischaemic Attack services at Musgrove Park Hospital, Somerset NHS FT (SFT) and Yeovil District Hospital (YDH). The Somerset Fit for My Future proposals are designed to increase compliance with national guidelines and standards for the delivery of stroke services.

1.2.1 Current Model

Somerset has two acute hospital-based stroke services: Musgrove Park Hospital, Somerset NHS FT (SFT) based in Taunton, and Yeovil District Hospital NHS Foundation Trust (YDH) based in Yeovil. The *Getting it Right First Time* programme (GIRFT) led a review of both providers to identify examples of high-quality service delivery and look at areas of unwarranted variation in clinical practice. The review identified that the services were performing well clinically and had progressed concerning the stroke community rehabilitation model however, it identified some challenge areas.

At present, the provision of acute stroke services does not meet National Guidance resulting in variable patient outcomes. In addition, there is concern around the levels and sustainability of the existing specialist stroke workforce.

Somerset ICS has developed the Somerset Hyperacute Stroke Services Reconfiguration proposals which seek to address these challenges and proposes a strengthened model for hyperacute stroke services.

1.2.2 The proposed model

The aim of the Somerset Hyperacute Stroke Services Reconfiguration proposals is to establish a new way of delivering specialist stroke care in Somerset that ensures that those most at risk have equitable access to specialist services, and maximises how the available specialist stroke workforce is deployed to achieve the best outcomes possible for patients.

This includes:

- Moving to a 24/7 model will ensure that the clinical workforce is available at the times that strokes present rather than the current in-hours/ out-of-hours variation.
- Utilising the opportunity of the forthcoming merger of Musgrove Park Hospital Somerset NHS FT (SFT) and Yeovil District Hospital (YDH) to create a single stroke delivery team.

- Addressing the shortage of consultant stroke physicians through the optimisation of the advanced nurse practitioner workforce across both hospital sites.

A long list of the potential options for Somerset hyperacute stroke services was developed following Somerset's 2019 Stroke Strategy (See Figure 1).

Figure 1: Longlist of options for the review of Somerset's hyper-acute stroke services

These options were assessed against the Pass/ Fail hurdle criteria and through this process, some were discounted to produce a shortlist of four options. The Somerset ICS team then changed the numbering of the four options to alphabetical order. (See Figure 2) :

- (Option 1 now Option A) Do Nothing – continue with business-as-usual
- (Option 2 now Option B) Do minimal – the current model with a single medical workforce
- (Option 5 now Option C) Centralise the Hyper Acute Stroke Unit (HASU) at one site and an Acute Stroke Unit (ASU) to remain at both sites
- (Option 6 now Option D) Centralise HASU and ASU beds on one site.

Option A	Option B	Option C	Option D
Do Nothing No change to current model	**Do Minimum** As for option A, but with shared medical workforce	**1 HASU** Located at Musgrove Park Hospital in Taunton, no HASU in Yeovil	**1 HASU and ASU** Located at Musgrove Park Hospital in Taunton, no HASU or ASU in Yeovil
There would be **no change** to the current delivery model	There would be **no change** to the current delivery model	SWASFT would take all suspected stroke patients to **nearest HASU**	SWASFT would take all suspected stroke patients to **nearest HASU**
Yeovil emergency department (A&E) would continue to receive suspected stroke patients	Yeovil emergency department (A&E) would continue to receive suspected stroke patients	Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time	Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time
HASU services would continue to be delivered in both Taunton and Yeovil in the same way	HASU services would continue to be delivered in both Taunton and Yeovil in the same way	Most patients who would normally go to Yeovil would go to **Taunton or Dorset for their HASU** care	Most patients who would normally go to Yeovil would go to either **Taunton or Dorset for their HASU** care
Patients would receive their ASU care in the same way they currently do	Patients would receive their ASU care in the same way they currently do	Patients would return to **Yeovil for their ASU** care	Patients would remain in **Taunton or Dorset for their ASU** care
There would be **no change** to the workforce	There would be a **single medical workforce** would be shared across both sites. There would be no change to the nursing, AHP or support staff workforce	There would be **some changes** to the medical, nursing and AHP workforce	There would be **some changes** to the medical, nursing and AHP workforce
Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital
There will be **no impact** on other health systems in this option	There will be **no impact** on other health systems in this option	There will be **an impact on other health systems** in this option, primarily Dorset	There will be an **impact on other health systems** in this option, primarily Dorset

Figure 2: Shortlist of options

These four options were considered by the Review Panel and discussed with the Somerset ICS team, at the Clinical Review Panel meeting.

1.2.3 Panel Recommendations

Overall, the Somerset proposals for hyperacute stroke care were considered well-presented and motivated by a clearly articulated case for change. The Clinical Review Panel ("Panel") observed a level of optimism and enthusiasm within the Somerset team, and the sense of this being a cohesive team that has worked well together, and engaged stakeholders, to develop these proposals.

The business case articulated four options which were presented to the Panel for consideration. The Panel agreed that:

- **Option A:** “do nothing” is not a reasonable option for the reasons described in the Case for change.

- **Option B:** The Panel felt that this did not add much improvement over Option A and concluded that they were unable to provide assurance that this was a sustainable model. The Panel questioned whether this option should remain within the business case.

- The Panel concluded that it could offer assurance that two options that are consistent with a strong clinical evidence base: **Option C** (HASU at SFT, and ASU beds at both sites) and **Option D** (All HASU and ASU beds at a single hospital site - SFT). This assurance is based on the staffing assumptions in the models being fully realised. This is particularly relevant in Option C where it is essential that the standards for specialist stroke skills are met in both ASUs.

These are ready to proceed to public consultation, with the following provisos and observations:

Before public consultation

- Work should be done to describe the rehabilitation model within the business case and the consultation documentation. Whilst there may be no change to the existing rehabilitation model, there is little reference to it within the documentation which makes it difficult to see the impact of the whole pathway. The Panel recognised that Somerset has a strong rehabilitation model, and this should be described within the business case. In addition, the business case should describe what will be done to strengthen the offer in North East Somerset. If this has resourcing implications, it would be important to include these in the business case.

At implementation stage

Workforce

- The Panel noted the enthusiasm of the Somerset ICS team in response to current workforce challenges and the optimism that having a good service will make recruitment much easier.

- Securing the workforce with the required range of specialist skills (including consultants, and therapists) has particular significance for Option C, which proposed that an ASU would be located at Yeovil Hospital. The Panel gave assurance for this model **only** on the assumption that Yeovil is properly staffed with the required workforce. Without this, there is a risk of compromising

outcomes for patients that are transferred to Yeovil. If there is a shortfall in meeting the workforce required to run an ASU at Yeovil, Option C should be removed from the business case.

- The workforce plan for each of the models needs to be made more robust within the business case, including the assumptions, assessment of risk, and risk mitigation.

- The workforce models employed are quite traditional. The system could review models implemented in other areas to explore the potential contribution from emerging roles across professions and the more innovative use of technology to support the workforce in decision making and maintaining patient flow.

Flow

- The Panel recognised that the proposed models would work if patient flows through the pathways are maintained.

- The proposals should consider flow in the context of the urgent care pathway. The stroke pathway is closely linked to the urgent care pathways, and consideration should be given to how delays in urgent care will impact on the flow. Whilst it is recognised that this risk can be mitigated by direct access pathways, there needs to be understanding of the impact of these on the flow for other urgent conditions (e.g. access to scanning).

- The senior leadership commitment to stroke services was recognised and needs to include a commitment to flow through the system for urgent care.

- The beds in both the HASU and ASU(s) should be ringfenced.

- Flow through the pathway relies on robust transportation arrangements. The transportation model needs to be clearly articulated in the business case and any additional resources required reflected. Whilst there is an attraction to the model of a dedicated transport facility, to reduce the demand on the ambulance service there is a risk that this small pool of professionals skilled at specialist transfers, will be diverted away from the ambulance service. This risk must be understood.

Impact on other Providers

- The smooth flow into mechanical thrombectomy and capacity at Southmead Hospital would require for patients to be moved directly to thrombectomy on arrival at Southmead and repatriated directly post-procedure, when stable and without any process delay. This would need to be supported by access to 24/7 CT perfusion scanning capability and a patient transfer service that does not impact on the ambulance service availability. The Panel noted however, that there isn't currently available a patient transfer service (there would be a reliance on SWASFT to undertake patient transfers) and the plan for repatriating patients post-procedure is yet to be identified.

- Whilst there has been good engagement with Dorset, there is concern that Dorset is being impacted by significant service changes in several areas: (Somerset, Poole, and Bournemouth). Both options are likely to increase the presentation of acute strokes to Dorset. Whilst there are plans to increase their capacity the timescale for this is not clear.

- This demonstrates the benefits of planning for specialist services at a regional level, rather than at the system level to mitigate the risk of some populations being left with inequitable services.

Modelling

- The modelling to support the business case appears to be based on the one set of clinical assumptions relating to incidence and presentations and progress through the pathway. Consideration should be given to stress testing within the model to demonstrate the tolerances in the model and how any risks would be mitigated.

- There appeared to be an assumption that if the modelling resulted in small changes in numbers then this would be manageable, but the panel observed that small changes can create inefficiencies in already stressed systems. Further work is to be done to look at this.

- The modelling assumptions and pathways for stroke mimics need to be clarified within the proposals. i.e. If the FAST pathway is used, this has a 50% specificity[1] and so 50% of patients starting in the pathway are not stroke patients. The pathways need to clarify how these patients are rapidly transferred to other pathways to ensure flow is maintained.

- The model should include more details on the pathway for stroke patients who self-present at Yeovil or develop a stroke whilst an inpatient.

- Whilst the aspiration is for a 24/7 service the model assumes access to specialist stroke skills 12 hours a day. Clarification is required on the Out-Of-Hours[2] pathway in terms of the staffing cover, particularly to understand the implications of non-stroke specialist staff.

[1] Specificity: the ability of a test to correctly identify people without the disease (ref. What are sensitivity and specificity? | Evidence-Based Nursing (bmj.com))
[2] Out-Of-Hours is outside of the proposed 08:00 – 20:00hrs window (which is supported by access to senior clinical decision makers.

2 Background

The proposals for hyper acute stroke service reconfiguration that are the subject of this review, form part of Somerset's Fit for My Future Programme which focuses on healthcare across the Somerset geographical footprint.

The Pre-Consultation Business Case that has informed the clinical review focuses specifically on changes required to the model of how hyperacute stroke and transient ischaemic attack (TIA) services are currently provided in the Somerset ICS area. It highlighted some issues around the workforce and quality of care:

- Sub-optimal levels of specialist stroke workforce, no 24/7 consultant cover
- An inequitable TIA weekend service
- Workforce sustainability issues - with the impending retirement of the current medical consultant
- Acute stroke services do not meet National Guidance resulting in variable patient outcomes
- Rates of thrombolysis and thrombectomy are below national standards
- TIA assessments are falling outside of 24 hours

The proposals are to agree on hyper acute and acute provision for the Somerset geographical area. A shortlist of four options is presented by Somerset for discussion at the Clinical Review.

- **Option A** (Do Nothing)
- **Option B** (Do minimal- the current model with a single medical workforce)
- **Option C** (Centralise the HASU at SFT, and ASU beds at both sites)
- **Option D** (All HASU and ASU beds at a single hospital site - SFT).

One of the options has been identified where the clinical benefits are likely to be greater but it is noted that other options are preferred by different stakeholders. It would be important that these options are explored to understand the acceptable areas of compromise.

3 Senate Engagement to date

Somerset ICS has engaged with the South West Clinical Senate since early 2022 regarding the reconfiguration of hyper acute stroke services.

In May 2022, the Clinical Senate undertook a desktop review of Somerset's developing PCBC documentation for the Hyper Acute Stroke proposals. This desktop review was undertaken by the Clinical Review Panel (See Appendix 8.5)

The Clinical Senate feedback from the Clinical Review can be summarised as:

- The business case needs to include the acceptable compromise for the options that may not provide the greater clinical benefit but are preferred by the different stakeholders.

- Further details should be included in the business case on the rehabilitation model and particularly what will be done to strengthen the offer in North East Somerset.

- The workforce plans for each of the models needs to be made more robust within the business case including the assumptions, assessment of risk and risk mitigation. This needs to include stress testing, to demonstrate the tolerances in the model and risk mitigation.

- The success of the proposed models is dependent on flow being maintained. The proposals should consider flow in the context of how the stroke pathway interacts with the wider urgent care pathway, mitigating for any potential impact of delays in urgent care.

- The beds in the HASU and ASU should be ringfenced to ensure that patients can be stepped down, as required to prevent bottleneck in the pathway.

- Whilst there has been good engagement with Dorset, Dorset is being impacted by significant service changes in Somerset, Poole and Bournemouth which are likely to impact on acute stroke presentation in Dorset, which will impact on capacity. Their timeline to increase capacity is currently unclear which is a concern.

- A discussion was held as to whether a Stroke Recovery Unit should be located at Yeovil rather than an ASU. This could enhance the number of patients able to access rehabilitation closer to home in Option D. This had been considered but there is a stroke recovery unit at South Petherton which is not far from Yeovil.

The Senate were represented at NHSE assurance meetings.

4 The Review Process

The Clinical Senate Review Process is used across England to provide an independent clinical review of large-scale service change to ensure there is a clear clinical basis underpinning any proposals for reconfiguration. Reviews are undertaken to inform the NHS England assurance process which signs off proposals for change before public consultation.

On 08 September 2022, Somerset ICS submitted a suite of documents and a video presentation to the South West Clinical Senate, to be reviewed by the Clinical Review Panel in preparation for the Somerset Hyperacute Stroke Services Reconfiguration Clinical Senate Review Panel meeting scheduled on 28 September 2022.

These documents include

(i) Somerset Hyperacute Stroke Pre-Consultation Business Case (PCBC) V1.0,
(ii) PCBC Appendices
(iii) Clinical Senate PCBC Summary which includes
    a. the Navigation Table – where in the PCBC are the answers to the standard Key Lines of Enquiry (KLOEs)
    b. the Action Plan Checklist – where issues raised in the Desktop Review are addressed in the PCBC.

The Desktop Review Report was included with the suite of documents that were forwarded to the Review Panel as background reading, for the benefit of panel members that joined the process after the completion of the Desktop Review.

On 20 September 2022, a pre-Clinical Review Panel session was held with panel members, chaired by the South West Clinical Senate Chair (who is also the Review Chair for the Somerset Hyperacute Stroke Services Reconfiguration Clinical Review Panel). This meeting was held for the Panel to give comments and feedback on the Somerset Hyperacute Stroke Services Reconfiguration Proposals and identify additional areas of enquiry that would be explored with Somerset ICS, in addition to the standard Key Lines of Enquiry (KLOEs). Panel members who were unable to attend the meeting had been invited to submit their comments the day before.

At the meeting, the Clinical Review Panel identified the following KLOEs from the review of the PCBC that they wanted to explore further with the Somerset ICS clinicians in the Clinical Review Panel meeting:

- Clarification of Somerset ICS's definition of a Hyper Acute Stroke Unit (HASU) and an Acute Stroke Unit (ASU), and the differences between the two.

- The patient pathway from presentation to discharge with emphasis on rehabilitation: Describe the quality of the rehabilitation services across the pathway including ASU and the community.

- Workforce

    - The staffing model includes clarification on the pragmatic and realistic approaches to addressing workforce and staffing requirements and the associated timeline.

    - How will workforce issues be addressed if the ASU is based at Yeovil?

- Patient Transport and Repatriation

    - How will patient repatriation work for the clinical model with 2 ASUs?

    - What is the impact on the Ambulance Service for transfers and mechanical thrombectomies?

- Describe how diagnostics services will change, as a result of the proposals.

- Patient Involvement and Co-design of services.

- Describe how the co-design of services with patients has been undertaken, and how this has influenced the choices and decisions made.

- Describe the impact of the proposed changes, on other Providers

On 21 September 2022, the South West Clinical Senate Chair (who is also the Review Chair) and the Head of the Clinical Senate met with representatives from Somerset ICS in a pre-meeting before the CRP, to share the additional KLOEs that were identified by the Panel. The aim was to allow Somerset to prepare to address these enquiries ahead of and at the CRP meeting.

On 22 September 2022, the Clinical Senate sent Somerset the additional KLOES and the agenda for the Clinical Review Panel meeting.

Somerset discussed its proposals for change formally at the CRP meeting held on 31 March 2022. The meeting provided the opportunity for the Panel to discuss the proposals and ask further questions, raise concerns, and for Somerset to respond. The meeting agenda can be found in Appendix 8.3.

At the review panel, the Clinical Chair emphasised to the ICS Team that the Clinical Senate regards its role as being a supportive one, raising legitimate clinical concerns aimed at strengthening the clinical case for change, identifying potential gaps, and ensuring that the model is as robust and well thought-out as possible through frank and open clinician to clinician discussion.

5 Somerset ICS Hyperacute Stroke Services Reconfiguration Proposal

The Somerset Hyperacute Stroke Services Reconfiguration proposals seek to address the challenges to the delivery of specialist stroke care that ensures that those most at risk have equitable access to specialist services and maximises how the specialist workforce is deployed to achieve the best outcomes possible for patients.

5.1.1 The Current Model

Somerset has two acute hospital-based stroke services: Musgrove Park Hospital, Somerset NHS FT (SFT) based in Taunton, and Yeovil District Hospital NHS Foundation Trust (YDH) based in Yeovil. The *Getting it Right First Time* programme (GIRFT) led a review of both providers to identify examples of high-quality service

delivery and look at areas of unwarranted variation in clinical practice. The review identified that the services were performing well clinically and had progressed regarding the stroke community rehabilitation model however, it identified some challenge areas.

At present, the provision of acute stroke services does not meet National Guidance resulting in variable patient outcomes. In addition, there is concern around the levels and sustainability of the existing specialist stroke workforce.

Somerset ICS has developed the Somerset Hyperacute Stroke Services Reconfiguration proposals which seek to address these challenges and proposes a strengthened model for hyperacute stroke services.

5.1.2 The proposed model

The aim of the Somerset Hyperacute Stroke Services Reconfiguration proposals is to establish a new way of delivering specialist stroke care in Somerset that ensures that those most at risk have equitable access to specialist services, and maximises how the available specialist stroke workforce is deployed to achieve the best outcomes possible for patients.

This includes:

- Moving to a 24/7 model will ensure that the clinical workforce is available at the times that strokes present rather than the current in-hours/ out-of-hours variation.
- Utilising the opportunity of the forthcoming merger of Musgrove Park Hospital Somerset NHS FT (SFT) and Yeovil District Hospital (YDH) to create a single stroke delivery team.
- Addressing the shortage of consultant stroke physicians through the optimisation of the advanced nurse practitioner workforce across both hospital sites.

A long list of the potential options for Somerset hyperacute stroke services was developed following Somerset's 2019 Stroke Strategy (See Figure 1).

Figure 1: Longlist of options for the review of Somerset's hyper-acute stroke services

These options were assessed against the Pass/ Fail hurdle criteria and through this process, some were discounted to produce a shortlist of four options. (See Figure 2) :

- (Option A) Do Nothing – continue with business-as-usual.
- (Option B) Do minimal – the current model with a single medical workforce.
- (Option C) Centralise the HASU at one site and ASU beds to remain at both sites.
- (Option D) Centralise HASU and ASU beds on one site.

Option A	Option B	Option C	Option D
Do Nothing No change to current model	**Do Minimum** As for option A, but with shared medical workforce	**1 HASU** Located at Musgrove Park Hospital in Taunton, no HASU in Yeovil	**1 HASU and ASU** Located at Musgrove Park Hospital in Taunton, no HASU or ASU in Yeovil
There would be **no change** to the current delivery model	There would be **no change** to the current delivery model	SWASFT would take all suspected stroke patients to **nearest HASU**	SWASFT would take all suspected stroke patients to **nearest HASU**
Yeovil emergency department (A&E) would continue to receive suspected stroke patients	Yeovil emergency department (A&E) would continue to receive suspected stroke patients	Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time	Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time
HASU services would continue to be delivered in both Taunton and Yeovil in the same way	HASU services would continue to be delivered in both Taunton and Yeovil in the same way	Most patients who would normally go to Yeovil would go to **Taunton or Dorset for their HASU** care	Most patients who would normally go to Yeovil would go to either **Taunton or Dorset for their HASU** care
Patients would receive their ASU care in the same way they currently do	Patients would receive their ASU care in the same way they currently do	Patients would return to **Yeovil for their ASU** care	Patients would remain in **Taunton or Dorset for their ASU** care
There would be **no change** to the workforce	There would be a **single medical workforce** would be shared across both sites. There would be no change to the nursing, AHP or support staff workforce	There would be **some changes** to the medical, nursing and AHP workforce	There would be **some changes** to the medical, nursing and AHP workforce
Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital	Once ready for rehabilitation, patients would ideally be **discharged closer to home** following their acute care – either home or to a community hospital
There will be **no impact** on other health systems in this option	There will be **no impact** on other health systems in this option	There will be **an impact on other health systems** in this option, primarily Dorset	There will be an **impact on other health systems** in this option, primarily Dorset

Figure 2: Shortlist of options

These four options were considered by the Review Panel and discussed with the Somerset ICS team, at the Clinical Review Panel meeting.

6 Panel Discussion and KLOES

6.1 Panel Q&A

As part of this process, the Panel asked several follow-up exploratory questions based on the key lines of enquiry previously shared with the Somerset team. These can be grouped under the following headings:

6.1.1 Clinical Areas: Hyperacute Stroke unit, Acute Stroke Unit

The Panel explored with the Somerset team its definition of the Hyper Acute Stroke Unit (HASU) and the Acute Stroke Unit (ASU), and the differences between the two models.

In Option C, the Panel sought to clarify whether stroke patients would be directly admitted onto the HASU (and repatriated to the ASU afterward, as appropriate). This is an important consideration given the distance between the two hospitals and the geographical footprint of Somerset.

The Panel questioned the patient flow from the HASU and the expectations about the ASUs on both sites. The proposals describe ringfencing stroke beds at the HASU. The panel observed that it is also important for patient flow, that stroke beds at the ASU(s) are ringfenced so that patients at the HASU can be stepped down to the ASU. If the ASU is intended to part of a ward with general medical beds it is vital that the ASU beds comprise more than 50% of the total bed complement.

The Panel stated that consideration should be given to expanding the number of ASU beds, which will enable early repatriation back to Somerset of stroke patients who are initially admitted to HASUs out -of-County (e.g. Dorset, Bath, etc).

Given the proposal for a single HASU, further clarification is required on the stroke mimic pathway and how patients presenting with stroke mimics in the different locations will be managed. To maintain flow through the stroke pathway , there should be clear arrangements for these patients to transfer to other pathways and facilities.

The proposals acknowledge that 20-25% of stroke patients will experience neurological deteriorations in the acute phase. In Option C, the Panel questioned the plan to manage patients in the Yeovil ASU who have further neurological deterioration and what this would include e.g. transferring the patient onsite, care for the patient in the offsite ASU, utilising technology such as video conferencing facilities, etc.

The Panel sought clarification on the pathway for mechanical thrombectomies and where these would be undertaken. The panel were satisfied with the proposed pathway to Southmead hospital in BRI and recognised that the move of the HASU to Taunton would increase the number of patients able to access this intervention within the prescribed time period.

Consideration should be given to the benefit to patient experience if stroke care (particularly outside of the hyperacute phase) is carried out close to the patient's home. This would be achievable in Option C. However, given the concerns around the staffing model for Option C- this should be pursued only if it can be demonstrated that the staffing plans to support the ASU in Yeovil are achieved.

The panel explored whether consideration had been given to locating a Stroke Recovery Unit at Yeovil rather than an ASU. This model could enhance the number of patients able to access rehabilitation closer to home in Option D. This had been considered

but there is already a stroke recovery unit located in South Petherton which is not far from Yeovil.

6.1.2 The patient pathway from presentation to discharge with emphasis on Rehabilitation

Further detail is required in the business case on the provision of rehabilitation support, across the pathway both within the HASU and ASU environments and in the community to support initiatives such as Early Supported Discharge (ESD) [3] for adult stroke patients, where this is deemed appropriate. This is important for flow as it enables patient care to be transferred from a hospital inpatient environment to a community setting.

The Somerset team stated that they are in the process of bidding for NHS regional funding for the stroke community service provision. The Panel questioned whether this would include funding for the voluntary and 3rd sector organisations.

The Panel sought clarification on the provision of stroke care in the community for the north-eastern corner of Somerset, as those communities have tended to fall between Somerset and Bath provision and encouraged the system to include a solution to this in their proposals

6.1.3 Workforce

The challenge of recruiting and retaining the necessary specialist workforce has been one of the main drivers in this service reconfiguration.

The Panel scrutinised the calculations for the number of consultants required against the demand. According to the British Irish Association of Stroke Physicians[4] (BIASP) Report: *Meeting the Future Consultant Workforce Challenges: Stroke Medicine*[5], "a hospital admitting 600 stroke patients per year requires 40 Direct Clinical Care programmed activities [DCC PAs]" to deliver care at the level of national care quality indicators and standards. The calculations for the number of PAs for Somerset would need to be based on the estimated annual total number of stroke patients (circa 1400). This number would need to increase if the specialist service is delivered on more than one site.

The Panel were not satisfied that Option B, simply rotating the workforce, would allow the system to deliver the outcomes required.

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[3] Quality statement 4: Early supported discharge | Stroke in adults | Quality standards | NICE

[4] Who We Are - BIASP - The British Irish Association of Stroke Physicians

[5] Hart, S., Lowe, D., Hargroves, D., Doubal, F. (2019) *Meeting the Future Consultant Workforce Challenges: Stroke Medicine Stroke Medicine Consultant Workforce:* British Association of Stroke Physicians BASP/ NHS Improvement GIRFT, p5 -6.

In the options where stroke care is continuing to be delivered at Yeovil,(Options B and C) the panel did not share the optimism of the system around the willingness of staff to travel between hospital sites. This could be challenging for workforce recruitment and retention, in an already challenging recruitment market.

The workforce model in the business case was not sufficiently well developed for the panel to comment on the adequacy of the broader workforce plan or the impact on the non-stroke specialist staff supporting the urgent care pathway of the increased workload associated with a single HASU (e.g. ED staff, imaging staff)

The panel were given assurances that the direct clinical care sessions in the job plans of the consultants included in the case would be exclusively for stroke care.

The panel recommended that more work is done on the workforce model to clearly delineate the requirements of both Options C and D across all staff groups

The Panel recognised that a robust Training and Development Programme will be attractive to existing and new staff and recommended that more work be done on how this activity will be coordinated and who will provide leadership (i.e. Workforce Education Lead).

6.1.4 Patient Transport and Repatriation

The Panel questioned how patient repatriation would work for the clinical model with the second ASU (Option C). There are positive discussions with FAST ambulance to explore whether they will undertake patient repatriations back to the ASU. If this goes ahead specific criteria and detailed plans will need to be developed to support this – however there is good precedence as FAST Ambulance is currently used for cardiology patient repatriations.

The Panel made a point of accuracy for the Pre-Consultation Business Case (pages 180 -181, 206) which mentioned that for Options C & D, SWASFT would undertake patient repatriation, following thrombectomy. This needs to be amended, as SWASFT is currently not expected to undertake repatriation back to the HASU.

The Panel questioned whether consideration had been given to the impact of patient transfers, mechanical thrombectomies, and handover delays on the Ambulance Service, and how this is reflected in the modelling. The Panel were informed that work had already been done to mitigate handover delays on the pathway by the introduction of “Straight to CT” pathways where if a patient is confirmed to have had a stroke, they are taken directly for CT scan(if available) and then onto the Stroke Unit. Consideration will be given to other potential impacts in the modelling.

The Panel noted that the modelling is based on journey times at 03:00hrs on a Tuesday to reflect a blue light journey and questioned the realism of this benchmark, given that ambulances will be travelling further distances albeit blue lights can be used but

questioned whether applicable roads would be subject to traffic and whether these roads will have physical space to move, to allow ambulances move quickly through the traffic. This could have a significant impact on estimated journey times. The Panel was informed that the geospatial team had undertaken the travel time mapping and had used 03.00hrs as a proxy for blue light travel time, and that further work would be undertaken to understand the impact of the condition of roads in Somerset, on journey & travel times and whether a specific approach (and/or mitigation) would be required.

The Panel probed how the Somerset team had taken into account any concern around the potential extension of journey times from the patient's home to the HASU, given the current level of demand and activity balanced against the enhanced level of care and intervention available to patients at the HASU.

The Panel sought clarification on the numbers used for the modelling, estimating that the number of stroke mimics alone per day would take the numbers beyond what was used in the modelling. An important point to note is that Sentinel Stroke National Audit Programme (SNAPP[6]) data may be an underrepresentation of the number of stroke mimics, as these are only captured when the SSNAP process is initiated.

The Panel sought clarification on how the inter-facility transfers would be managed (i.e. transfers from Yeovil to Taunton) and whether this has been accounted for in the modelling. It was clarified that the inter-facility transfers would not be deprioritised by the ambulance service however, it could be impacted by the levels of demand. The modelling is based on SSNAP data which includes stroke numbers for inpatients and walk-ins.

The Panel sought clarification as to how the business case would mitigate the environmental impact of increased journey times and increased journeys by patients and their families, given the ambition toward becoming a carbon neutral system over the next couple of decades. It is confirmed that further work is being done working with Somerset ICS and linking into SFT's Green Plan, to explore the mitigation around the carbon footprint associated with patient transfers and increased travel for patients, their families, and staff.

The Panel questioned whether consideration had been given to having a bespoke transport service – given the numbers of stroke patients that will be moved around the geographical footprint regularly, considering the current pressure and demand on the ambulance service. The option of having a dedicated stroke transport service has not been fully explored as part of the business case, and if this was to be an option, consideration would need to be given as to how this could work alongside SWASFT provision. Nevertheless, there are plans to have a separate transport system for patient repatriations to the ASU and Yeovil for Option C.

[6] SSNAP - About SSNAP (strokeaudit.org)

6.1.5 Diagnostic Services

The Panel sought clarification on the changes to the diagnostic services because of the centralisation of the HASU to a single site. The team confirmed that there is currently a “straight-to-CT” stroke service at Musgrove Park Hospital which manages a great proportion of the CT scans required for inpatients. The current provision of Yeovil is slightly different. However, with the proposals, all the CT activity would go to Musgrove Park Hospital as part of the wider plans to increase capacity for emergency care.

The Panel questioned whether the additional demand would outstrip the capacity of the single front door scanner. The Somerset team confirmed that there is a new community diagnostic centre in Taunton and plans for a further community diagnostic centre in the east of the county, where some of the acute work will be moved to and this will create additional capacity.

The Panel questioned the availability of a radiographer at Musgrove Hospital for acute imaging and was reassured by the response that there are residential CT radiographers available on site, radiography is available 24/7 and SSNAP performance is good.

The Panel questioned whether services are offered as part of a protocol-driven pathway or would require an initial discussion (at the front door) before proceeding with a CT Angiography (CTA), and was reassured that this is part of the pathway and available 24/7.

The Panel questioned whether there are plans in place for the rapid reporting of CTA and whether these would be by inhouse or outsourced radiologists, considering the plans to move towards 24/7 thrombectomy service provided at North Bristol NHS Trust. The Panel was reassured that this reporting already happens. The inhouse radiographers report during the daytime whilst the out-of-hours radiology provider does the reporting at night.

The Panel questioned whether the radiology department will work across both hospital sites, (Yeovil, Musgrove) with access to high-quality acute imaging. The Panel probed whether both hospital sites had the same Picture Archiving and Communications System (PACS) and more importantly, whether a consultant at one site would be able to access images taken at another site. The team responded that there are two separate instances of the software and the interoperability required for cross-trust reporting isn’t currently available, however there are plans to address this in the future

The Panel questioned whether patients coming into Southmead Hospital Bristol for thrombectomy are rescanned on arrival and have new perfusion scanning despite this already being carried out at the base site. They were provided with assurances that this should not happen as protocols between the sites have been agreed.

6.1.6 Patient Involvement/ Co-design of Services

The Panel sought to explore with the Somerset team how patients have been involved in the co-design of the stroke services, and what impact this has had on the choices and decisions made.

The Panel's impression was that there has been good engagement with stakeholders including patients in the development of the proposals.

6.1.7 Impact on other providers

The Panel commended the Somerset team for inviting the wider audience - representatives from Dorset and Wiltshire ICS onto the formal business case committee.

Option C and D will both result in increased workload at Royal United Hospital Bath and Dorset County Hospital. The increase in activity in Bath has been reflected in their proposals for stroke services. The position in Dorset is made more challenging by proposals for changes to the stroke services in Poole and Bournemouth. Whilst there are plans to expand the stroke facilities in Dorset, these require capital investment. This has the support of their board but the timelines for delivery are unclear.

6.1.8 Modelling assumptions

- The modelling to support the business case appears to be based on the one set of clinical assumptions relating to incidence and presentations and progress through the pathway. Consideration should be given to stress testing within the model to demonstrate the tolerances in the model and how any risks would be mitigated.

- There appeared to be an assumption that if the modelling resulted in small changes in numbers then this would be manageable, but the panel observed that small changes can create inefficiencies in already stressed systems. Further work is to be done to look at this.

- The modelling assumptions and pathways for stroke mimics need to be clarified within the proposals. i.e. If the FAST pathway is used, this has a 50% specificity[7] and so 50% of patients starting in the pathway are not stroke patients. The pathways need to clarify how these patients are rapidly transferred to other pathways to ensure flow is maintained.

- The model should include more details on the pathway for stroke patients who self-present at Yeovil or develop a stroke whilst an inpatient.

[7] Specificity: the ability of a test to correctly identify people without the disease (ref. What are sensitivity and specificity? | Evidence-Based Nursing (bmj.com))

- Whilst the aspiration is for a 24/7 service the model assumes access to specialist stroke skills 12 hours a day. Clarification is required on the Out-Of-Hours[8] pathway in terms of the staffing cover, particularly to understand the implications of non-stroke specialist staff .

7 Conclusion

The Panel acknowledged that there has been a significant amount of work undertaken by Somerset to develop the Hyperacute Stroke Services Reconfiguration proposals to articulate the case for change and as part of the Clinical Review process. This enabled the Panel to get a better understanding of the proposed clinical models.

The proposals provided a shortlist of four options:

- **Option A** (Do Nothing)
- **Option B** (Do minimal- the current model with a single medical workforce)
- **Option C** (centralise the HASU at SFT, and ASU beds at both sites)
- **Option D** (All HASU and ASU beds at a single hospital site - SFT).

The Panel assessed the four options and concluded that it could give NHS England assurance for two options that are consistent with a strong clinical evidence base: **Option C** (HASU at SFT only) and **Option D** (All HASU and ASU beds at a single hospital site - SFT), with the caveat that this is only **if** staffing levels described within the proposals are achieved and subject to several provisos and observations which are presented in this report.

The Panel dismissed Option A as it was deemed not a reasonable option for the reasons set out in the Case for Change. Similarly, the Panel felt that Option B did not add much improvement over Option1 and concluded that they were unable to provide assurance. The Panel questioned whether this option should remain within the business case and was clear that if it was the sole option presented, it would not have been assured.

In respect of the clinical evidence base, Option D is the strongest, and it would be the easiest in terms of securing the specialist workforce. It is, however, recognised the impact having stroke care centralised in one location, will have on other providers and patients.

If the requirement for a specialist workforce is met, Option C has legitimacy and should be kept within the business case

[8] Out-Of-Hours is outside of the proposed 08:00 – 20:00hrs window (which is supported by access to senior clinical decision makers.

7.1 Next Steps

The summary recommendations were shared verbally with Somerset ICS at the end of the panel meeting for them to start work immediately to address the recommendations of the Panel before public consultation.

7.2 Reporting Arrangements

The Clinical Review Panel team will report to the Clinical Senate Council which will sign off the final report and be accountable for the advice contained therein. The report will be shared with Somerset ICS and NHS England Assurance Team. Somerset ICS will own the report and be expected to make it publicly available via its governing body or otherwise, after which point it will also become available on the Clinical Senate website.

8 Appendices

8.1 The Somerset ICS Presenting Team

Name	Job title
Robert Whiting	Medical Director
Maria Heard	Programme Director – Fit for my Future
James Gagg	Associate Medical Director and ED Physician
Adam Turner	Head of Radiology
Andy Miller	Divisional Manager for Urgent and Integrated Care, Dorset County Hospital
Wendy Longley	Consultant Stroke Nurse, DCH
Caroline Smith	Consultant Stroke Nurse, Yeovil
Alex Sharp	Head of Clinical Development, SWASFT
John Sonke	BI Consultancy Lead NHS South, Central & West
Julie Jones	Programme Director Stroke and Neuro Rehab Community Hospitals
Bernie Marden	NHS Somerset ICB – Medical Director
Richard Hein	Patient Representative
Caroline Greaves	Observer
Simone Rooks	Observer
Sophie Wickins	Observer

8.2 The Review Panel

The review panel comprised members of the Clinical Senate Council, Assembly and clinicians brought in specifically for this panel.

Panel Role	Name	Job Title & Organisation
Review Chair	Sally Pearson	Chair, South West Clinical Senate
Community Rehab Lead	Rachel Botell	Rehabilitation Medicine Consultant and Clinical Lead, Mardon Neuro-Rehabilitation Centre, Royal Devon University Healthcare NHS Foundation Trust
Care of the Elderly	Genevieve Robson	Consultant Geriatrician, Royal United Hospital
Cardiologist	Mark Turner	Consultant Cardiologist - Congenital Heart Disease, University Hospitals Bristol NHS Foundation Trust
Emergency Medicine	Dominic Williamson	Emergency Medicine Consultant, North Bristol NHS Trust
Patient Representative	Kevin Dixon	Member, South West Clinical Senate Citizens Assembly
Patient Representative	Pam Prior	Member, South West Clinical Senate Citizens Assembly
Clinical Network Lead/ Stroke Consultant	Louise Shaw	Consultant Stroke Physician and Clinical Lead, Royal United Hospital Bath & West of England ISDN Clinical Lead
GP	Holly Paris	GP, Frailty Service Lead, Weston General Hospital
Therapies	Craig Tucker	Therapy Lead for Stroke Inpatients and Acute Neuro-medicine, university Hospitals Plymouth NHS Trust
Ambulance services	Amy Sainsbury	Senior Clinical Lead, Cornwall, and Isle of Scilly, South Western Ambulance Service NHS Foundation Trust
Vascular Surgery	Marcus Brooks	Consultant Vascular Surgeon, North Bristol NHS Trust
Interventional neuroradiologist	Anthony Cox	Consultant Interventional Neuro-Radiologist, North Bristol NHS Trust
Interventional neuroradiologist	Alex Mortimer	Clinical Lead Neuro intervention, North Bristol NHS Trust

Stroke Nurse	Donna Berry	Stroke Clinical Nurse & Specialist/Interim Ward Manager, University Hospitals Plymouth
Professor Stroke Physician	Kausik Chatterjee	Consultant Physician in Care of the Elderly and Stroke Medicine & Acute Internal Medicine, Countess of Chester Hospital NHS FT
Managerial Lead	Ajike Alli-Ameh	Head of South West Clinical Senate

Review panel biographies are available upon request. COIs were declared.

The following appendices are available by email upon request from ajike.alliameh@nhs.net

8.3 Clinical Review Panel Agenda

8.4 Pre-Consultation Business Case

8.5 Desktop Review Report

8.6 KLOEs

8.7 Link to Somerset ICS Video presentation

8.8 Terms of Reference for Clinical Review Panel