REPORT TO:	**NHS SOMERSET INTEGRATED CARE BOARD**	**ENCLOSURE:** **C**
DATE OF MEETING:	**25 January 2024**	
REPORT TITLE:	**Somerset Acute Hospital-Based Stroke Services Reconfiguration – Decision Making Business Case**	
REPORT AUTHOR:	**Maria Heard, Deputy Director Innovation & Transformation** **Julie Jones, Stroke Programme Manager Stroke, Neurorehabilitation and Community Hospitals**	
EXECUTIVE SPONSOR:	**David McClay, Chief Officer of Strategy, Digital and Integration**	
PRESENTED BY:	**Julie Jones, Stroke Programme Manager Stroke Neurorehabilitation and Community Hospitals, Somerset NHS FT** **Dr Rob Whiting, Consultant Stroke Physician, Somerset NHS FT** **David McClay, Chief Officer of Strategy, Digital and Integration**	

PURPOSE	DESCRIPTION	SELECT
Approve	To formally receive a report and approve its recommendations, (authorising body/committee for the final decision)	☒
Endorse	To support the recommendation (not the authorising body/committee for the final decision)	☐
Discuss	To discuss, in depth, a report noting its implications	☐
Note	To note, without the need for discussion	☐
Assurance	To assure the Board/Committee that systems and processes are in place, or to advise of a gap along with mitigations	☐

PREVIOUS CONSIDERATION/ENGAGEMENT

The process to reach this point follows an extensive programme of work, commencing in 2018 to determine how we improve outcomes for people experiencing a stroke in Somerset. This has included the following key considerations:

- A strategy to improve stroke care (2019)
- Development of the Pre Consultation Business Case (January 2023) approved by the ICB Board to commence consultation
- Public consultation which ran from January to April 2023
- Consideration of engagement findings (Autumn 2023)
- Preferred Option approved by the ICB Board (December 2023)
- NHS Somerset Finance Committee (January 2024)

Executive summary and reason for presentation to Committee/Board	The purpose of this report is to seek **approval** for changes to the Somerset hospital based stroke care presented in the DMBC. These changes have been proposed by the Somerset Stroke Project Board.
Recommendation and next steps	It is proposed that the ICB Board **approve** the proposed clinical model:

	• A single Hyper Acute Stroke Unit to be located at Musgrove Park Hospital in Taunton • The retention of Acute Stroke Units at both Musgrove Park Hospital, Taunton and Yeovil District Hospital • One county TIA service operating seven days a week at Musgrove Park Hospital, Taunton and weekday service Yeovil District Hospital

Links to Strategic Objectives
(Please select any which are impacted on / relevant to this paper)

- ☐ Objective 1: Improve the health and wellbeing of the population
- ☒ Objective 2: Reduce inequalities
- ☒ Objective 3: Provide the best care and support to children and adults
- ☐ Objective 4: Strengthen care and support in local communities
- ☐ Objective 5: Respond well to complex needs
- ☐ Objective 6: Enable broader social and economic development
- ☐ Objective 7: Enhance productivity and value for money

Impact Assessments – key issues identified
(please enter 'N/A' where not applicable)

Reducing Inequalities/Equality & Diversity	An Equality Impact Assessment (EIA) has been completed and can be found in the appendices of the DMBC. The EIA has been reviewed and updated throughout the process, supported and enabled by both the public engagement and consultation has been an integral part of the reconfiguration programme and commenced from the outset of developing the Somerset Stroke strategy in 2019, and our ongoing engagement and consultation activities. The EIA identified that in the preferred option, there will be a negative impact on those carers/relatives who are older people or live in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours of care whilst receiving Hyper Acute Stroke Care. It is not possible to mitigate all the negative impacts on protected groups which have been identified in this EIA. The impacts that remain are predominantly: • For patients who will have an increased ambulance travel time following a stroke. This will be mitigated by an improved clinical model of care which will improve outcomes for stroke patients. • On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience an increased travel during the first 72 hours to visit loved ones in a HASU which is different from the current HASU in YDH.

	The programme will reduce health inequalities by delivering equitable access to timely specialist interventions proven to reduce mortality and morbidity and best practice long-term rehabilitation support to optimise the quality of people's lives after stroke, regardless of where they live.
Quality	By centralising our hospital-based stroke services, we will be better placed to follow best practice national guidance and deliver improved outcomes for people who use Somerset services. This will include 24/7 services, address workforce issues and provide treatment in a more timely way.
Safeguarding	Safeguarding has been considered as part of the process of developing the pre consultation business case. It has been considered that safeguarding does not directly impact the shortlist of options but will be an integral part of any future implementation. We are committed to following the Mental Capacity Act and engaging with robust capacity and best interest assessments. As any changes to services are implemented, due regard will be given to ensure the services meets our responsibilities outlined in the MCA including Deprivation of Liberty safeguards and Liberty Protection Safeguards as well as our statutory safeguarding duties.
Financial/Resource/ Value for Money	The cost to the system of implementing these proposals has been estimated at £4.2m per year. This includes a one-off transitional cost to the system of £0.2m to cover the costs of agency premiums whilst recruitment to therapy roles is completed. The estimated cost of capital required to implement these proposals are estimated to be £1.843m, however more work is required to confirm the final requirement. The delivery of benefits relating to a reduction in long term health and care needs relating to stroke care will enhance productivity and value for money
Sustainability	Consideration has been made to increased travel times for carers and family being part of and supporting rehabilitation after having a stroke which is key to recovery and was consistently noted in the consultation feedback.
Governance/Legal/ Privacy	The recommendation in this paper is made by the Stroke Project Board. Previously the ICB Board has approved the recommendation to move to a preferred option on 30 November 2023 and the decision to proceed to consultation on 26 January 2023. The programme is being overseen by NHSE under the service change guidance and is subject to the associated assurance processes[1]. This has included a Clinical Review Panel by the South West Clinical Senate. Legal advice was taken in relation to public consultation, completion of the PCBC, further option assessment and completion of the DMBC.

[1] planning-assuring-delivering-service-change-v6-1.pdf (england.nhs.uk)

	There is a legal duty on NHS organisations to involve patients and the public in the planning of service provision, the development of proposals for change and decisions about how services operate:
	
	• Section 242, of the NHS Act 2006, places a duty on the NHS to make arrangements to involve patients and the public in planning services, developing and considering proposals for changes in the way services are provided and decisions to be made that affect how those services operate.
	• Section 244, of the NHS Act 2006, requires NHS bodies to consult relevant local authority Overview and Scrutiny Committees on any proposals for substantial variations or substantial developments of health services. This duty is additional to the duty of involvement under section 242 (which applies to patients and the public rather than to Overview and Scrutiny Committees).
	• The NHS Act 2012, Section 14Z45 places a duty on ICBs to make arrangements to ensure that individuals to whom the services are being or may be provided are involved (whether by being consulted or provided with information or in other ways):
	  ○ in the planning of the commissioning arrangements by the integrated care board;
	  ○ in the development and consideration or proposals by the integrated care board for changes in the commissioning arrangements where the implementation of the proposals would have an impact on the manner in which the services are delivered to the individuals or the range of health services available to them;
	  ○ in decisions of the integrated care board affecting the operation of the commissioning arrangements where the implementation of the decisions would (if made) have such an impact.
	
	There are no information sharing implications of this report.

Confidentiality	N/A
Risk Description	Somerset holds a corporate risk regarding the risk of reputational damage to organisations from legal challenge brought by members of the public, either a Judicial Review and/or Independent Reconfiguration Panel. **Risk Rating**: Consequence 5; Likelihood 3; RAG Rating 15; GBAF Ref 446 There are a number of risks to implementation which are contained within the DMBC.

Somerset Acute Hospital-based Stroke Services Reconfiguration:

Decision Making Business Case (DMBC)

Including the management of hyperacute and acute stroke care, transient ischaemic attacks and stroke mimics.

18 January 2024

Document version control

Version number	Reason/Summary of Changes	Date	Author
V0.1	Initial draft structure created for comment; sections created for input	23/10/23	R.Watts
V0.1.2	Additions to the structure	27/10/23	R.Watts
V0.1.3.2	Working document for MHeard review	10/11/23	R. Watts
V0.1.3.3	Structure updated	23/11/23	R. Watts
V0.1.3.4	Content added to introduction	26/11/23	R. Watts
V0.1.3.5	Additions made to the structure and story board	28/11/23	M.Heard
V0.1.3.6	Adding detail on option viability process and decision	30/11/23	R.Watts
V0.1.3.7	Adding detail from FAQs	01/12/23	R.Watts
V0.1.3.8	Adding SWASFT evidence	05/12/23	R.Watts
V0.1.3.9	Adding detail from FAQs	06/12/23	R.Watts
V0.1.4	Five tests, implementation and governance sections added	23/12/23	M.Heard
V0.1.5	SRO review and feedback	01/01/24	D.McClay
V0.1.6	Edits to respond to SRO feedback and add finance narrative	03/01/24	R.Watts
V0.1.6.3	Version for early legal consideration	03/01/24	M.Heard
V0.1.6.5	Flow edits and removal of duplicated sections	05/01/24	R.Watts
V0.1.6.6	Additions of Scrutiny Committee details General review and tidy up	06/01/24	M.Heard
V0.1.6.7	Additions from SMEs on consultation summary, implementation, governance updates	09/01/24	R.Watts
V0.1.6.8	Additional clinical inputs incl. SSNAP data summary and commentary	10/01/24	R.Watts
V0.1.6.9	Executive summary drafting, additional comms SME inputs, responding to Bevan Brittan comments	11/01/24	R.Watts
V0.1.7	Updates to addressing the themes from consultation feedback for M. Heard to review	12/01/24	R.Watts
V0.1.7.1	Review of document, resolution of outstanding questions. Circulation to Stroke Project Board.	12/10/24	M Heard
V0.1.8	Edits following Project Board meeting and additional information provided	15/01/24	R.Watts
V0.1.8.1	Additional text added to performance summary and stakeholder engagement	15/01/24	J. Jones
V0.1.8.2	Executive summary updated for review	16/01/24	R.Watts
V0.1.8.3	Stakeholder engagement updates	16/01/24	J.Jones
V0.1.8.4	SRO review and feedback	16/01/24	M.Heard
V2	Final version	18/01/24	

Contents

Purpose of Document

The purpose of this Decision Making Business Case (DMBC) is to present and summarise the extensive work undertaken as part of the Somerset Stroke Programme, and sets out the information required for Somerset Integrated Care Board to make informed decisions about the future configuration of stroke services in Somerset.

This document builds on the Pre-Consultation Business Case (PCBC) for Somerset acute hospital-based stroke services reconfiguration which presented and summarised the work undertaken up to January 2023. Formal public consultation took place between January and April 2023. This Decision-Making Business Case (DMBC) is now presented to Somerset ICB Board in 2024.

This DMBC presents the next phase of evidence assessment and analysis, following formal public consultation which took place between January and April 2023. It draws on the information and evidence collated in the PCBC (published in January 2023) and provides a refresh or deeper analysis of evidence, but does not repeat all of the information presented in the PCBC. A full copy of the PCBC can be found here FINAL-Somerset-Hyperacute-Stroke-PCBC-V4.0.pdf (oursomerset.org.uk)

The DMBC has the following purposes in mind;

- To describe the clinical model for delivery of acute hospital-based stroke services
- To describe the proposals for reconfiguration of existing stroke services
- Enable decision makers to decide if there is a case to implement the changes to stroke services set out in this document
- To demonstrate that the proposals are in line with Somerset system vision and strategy
- To demonstrate that all options, benefits and impact on service users have been considered
- To demonstrate that the proposed changes have taken account of the views of patients, members of the public and key stakeholders who may be impacted
- To provide confirmation that the necessary assurance processes have been met, including providing evidence that the proposals meet the government's four tests of service change, the patient care test (also known as the 'NHS beds test') and other relevant best practice checks for planning service change and consultation

Intended Audiences and their Decision Making Roles

This DMBC is written by the Somerset Stroke Programme Team for the following audiences:

- The Somerset ICB Board which is the organisation that carries the legal responsibilities for public involvement duties and deciding whether to commission the services described in this DMBC

- The Somerset Collaboration Forum which provides strategic oversight of system-wide change programmes to deliver the Integrated Care Strategy within the County

- The Boards of principal Stroke care delivery partners such as Somerset Foundation Trust, South Western Ambulance Service Foundation Trust and Dorset County Hospital NHS Foundation Trust in order that they can confirm organisation level support for the proposed changes to provision of clinical services

- The Local Authorities Health Overview and Scrutiny Committee (HOSC) which will scrutinise the proposals in line with their responsibilities

The DMBC is a published document but it is not intended to be the main mechanism through which Stroke Review is explained to members of the public whose care might be impacted by the proposals. Further information on planned communications and engagement during implementation can be found in Section 14. Further Stroke Review documentation and information can be found on the website at Acute hospital-based stroke services – Our Somerset

Document Status

Until published this is a confidential document for discussion purposes and any application for disclosure under the Freedom of Information Act 2000 should be considered against the potential

exemptions contained in s.22 (Information intended for future publication), s.36 (Prejudice to effective conduct of public affairs) and s.43 (Commercial interests).

Prior to any envisaged disclosure under the Freedom of Information Act the parties should discuss the potential impact of releasing such information as is requested.
The material set out in this document is for decision making purposes.
The involved NHS bodies understand and will comply with their statutory obligations when seeking to make decisions that will have an impact on the provision of care services.

1. Executive summary

This is the executive summary of the Somerset Acute Hospital-based Stroke Services Reconfiguration Decision Making Business Case (DMBC), Including the management of hyperacute and acute stroke care, transient ischaemic attacks and stroke mimics.

It forms a summary of the journey and decisions at hand, and signposts to further information in the Decision Making Business Case document and appendices, as well as other supporting documents such as the Pre-Consultation Business Case (PCBC).

The purpose of this Decision Making Business Case (DMBC) is to present and summarise the work undertaken as part of the Somerset Stroke Programme, and sets out the information required for Somerset Integrated Care Board to make informed decisions about the future configuration of stroke services in Somerset.

The process to reach this point follows an extensive programme of work, commencing in 2018 to determine how we improve outcomes for people experiencing a stroke in Somerset. A strategy to improve stroke care was developed in 2019, this was followed by the publication of a Pre-Consultation Business Case (PCBC) for acute hospital-based stroke services reconfiguration that summarised the work undertaken up to January 2023. The options described within this Executive Summary and in the Decision-Making Business Case itself have been developed with substantial engagement from local clinicians and staff, people with lived experience, community and voluntary sector partners and colleagues from our neighbouring health systems.

In addition, we have sought subject matter expertise throughout from The Consultation Institute to ensure that our engagement processes are meaningful, and the South West Clinical Senate to ensure that our clinical case for change is robust.

1.1. Background and context

Stroke is both a sudden and devastating life event with 100,000 new strokes occurring every year and over a million people living with the consequences of stroke[1]. It is the fourth single leading cause of death in the UK, with 35,000 deaths every year due to stroke, or one death every 17

[1] Patel A, Berdunov V, Quayyum Z, King D, Knapp M, Wittenberg R. Estimated societal costs of stroke in the UK based on a discrete event simulation. Age Ageing. 2020 Feb 27;49(2):270-276. doi: 10.1093/ageing/afz162. PMID: 31846500; PMCID: PMC7047817.

minutes[2]. It is the single largest cause of complex disability.

The good news is that the number of deaths from stroke is declining nationally, with the numbers of deaths from stroke having halved since 2002[3]. This is due to improved prevention and people seeking help and getting treated more quickly. This rapid access to high quality treatment means that more people are surviving stroke, with better outcomes than ever before.

Projections show that the impacts of stroke are going to increase with demographic changes as between 2015 and 2035, the number of strokes in the UK per year is projected to increase by 60% and the number of stroke survivors is projected to more than double[4].

National Context and Recommendations
Stroke is a high priority on the national agenda and is identified in the NHS Long Term Plan[5] as a clinical priority over the next ten years.

Areas that have centralised hyperacute stroke care into a smaller number of well-equipped and well-staffed hospitals, that includes acute stroke units of a sufficient size to ensure expertise, efficiency, and a sustainable workforce[6] have seen the greatest improvements. When stroke care is centralised in larger units, patients have a greater likelihood of being treated more quickly and effectively so what may be lost in travel time can be more than made up by better process after arrival[7].

Whilst these changes do mean a reduction in the overall number of emergency stroke-receiving units, the result is an increase in the number of patients receiving high-quality specialist care and an improvement in clinical outcomes.

1.2. Vision for stroke care in Somerset

Our vision for adult stroke care in Somerset is that:

"Stroke patients in Somerset will receive timely acute interventions and receive access to world-class services, regardless of where they live."

Our vision for adult stroke care will ensure the provision of acute hospital-based stroke services that are timely, easy to access, high quality and efficient, with stroke experts available 24 hours a day, 7 days a week, 365 days a year.

This will lead to a quicker diagnosis and faster treatment, resulting in the best possible outcomes for the patient. This includes increased access to thrombectomy services and best use of thrombolysis.

Integrated, joined up services will support patients and their families through the hyperacute and acute phase of care, along the pathway to rehabilitation or supported discharge home.

[2] Stroke – Neurological condition (brainresearchuk.org.uk)
[3] Stroke statistics | Stroke Association
[4] Derek King, Raphael Wittenberg, Anita Patel, Zahid Quayyum, Vladislav Berdunov, Martin Knapp, The future incidence, prevalence and costs of stroke in the UK, *Age and Ageing*, Volume 49, Issue 2, March 2020, Pages 277–282, https://doi.org/10.1093/ageing/afz163
[5] NHS Long Term Plan
[6] Access to and delivery of acute ischaemic stroke treatments: A survey of national scientific societies and stroke experts in44 European countries (2018)
[7] Microsoft Word - Annual Report 1718.docx (strokeaudit.org)

1.3. Somerset stroke care

There is one provider of stroke services in Somerset, Somerset Foundation Trust, who provide hyperacute and acute stroke care at both Yeovil District Hospital and Musgrove Park Hospital in Taunton.

There were 1,148 stroke admissions to Somerset hospitals in 2022/23:

- 735 admissions to Musgrove Park Hospital, Taunton
- 413 admissions to Yeovil District Hospital

It is nationally accepted that to provide sufficient patient volumes to make a hyperacute stroke service clinically sustainable, to maintain expertise and to ensure good clinical outcomes, **600** stroke patient admissions per year are required[8][9]. Whilst this is achieved in Musgrove Park Hospital, Yeovil District Hospital consistently falls below this level and modelling over the next ten years suggests this threshold will not be met.

Admission routes are mainly by ambulance but a proportion of patients self-present at hospital, with a total of 25% of Somerset stroke patients self-presenting at hospital in 2022, and ambulance handovers show minimal variation over the days of the week which indicates the need for consistent 24/7 services.

Stroke projections in Somerset

The need for change in Somerset is more imperative than ever – and with an ageing population, the prevalence of strokes in Somerset is higher than the national average of 2.4% in 22/23, compared to an England-wide prevalence rate of 1.81%. Half the Somerset population lives in rural areas, where access to services can be difficult.

Somerset Stroke admissions are projected to grow by 26% over the next 10 years. Not all stroke patients are currently admitted to a dedicated stroke bed, showing there is a current shortfall in required numbers of stroke beds.

Somerset Stroke bed requirements are projected to increase by 47% in the next 10 years. This means that the current numbers of hyperacute and acute stroke beds within Somerset is insufficient to meet demand now and in the future – within 10 years an additional 20 stroke beds will be required across both providers.

1.4. Case for Change

The Case for Change is clear. The main reasons for needing to reconfigure acute hospital-based stroke services within Somerset are ever more pressing and include:

Workforce sustainability
This is a significant national issue, with significant risks causing ongoing challenges with recruitment and retention of specialist staff. There are currently sub-optimal levels of specialist stroke workforce, neither provider has the number of specialist staff needed to provide the hyper acute stroke units with 24/7 consultant cover.

Clinical outcomes

[8] https://basp.ac.uk/wp-content/uploads/2017/02/BASP-Meeting-the-Future-Challenge-of-Stroke-2011-15.pdf
[9] Frontiers | Planning and Providing Acute Stroke Care in England: The Effect of Planning Footprint Size (frontiersin.org)

We are failing to meet several national performance targets in relation to hyperacute and acute stroke care which have a negative impact on clinical outcomes including rates of thrombolysis and thrombectomy, time taken to receive thrombolysis, TIA assessments falling outside of 24 hours and access to MDT assessments.

Equity of service
There is currently variation and inequitable provision of hyperacute and acute stroke care across the county, especially over weekends and out of hours where it takes significantly longer for patients to receive treatments such as thrombolysis. Patients admitted to Yeovil District Hospital at weekends are much less likely to see a consultant stroke specialist until after the weekend. There is no weekend outpatient service for patients suffering a TIA in the Yeovil area.

Financial sustainability
There is currently a poor correlation between the money spent on stroke and the outcomes achieved. Whilst additional investment in the hyperacute and acute phase will still be required, there is opportunity to reduce the long-term care costs associated with stroke by improving the outcomes in the hyperacute phase.

1.5. Clinical model for Somerset Stroke services

The Somerset Stroke programme have reviewed the national evidence and recommendations, and worked with experts in stroke care, patients and carers with lived experience of stroke to develop proposals for the future configuration of Stroke services in Somerset.

A significant amount of work has been undertaken by the Somerset stroke steering group (a partnership of clinicians, people with lived experience of stroke and other health and social care staff from across Somerset as well as colleagues from Dorset) to design a new model for acute hospital-based stroke services that meets both clinical best practice and one that is grounded in what matters most to people and delivers the best outcomes for patients.

The desired characteristics of the model of care in Somerset were established as;

- Provide high quality emergency stroke care 24 hours a day, 7 days per week
- Minimise the number of handovers in care for patients
- Consolidate the workforce to provide optimum care, operational flexibility and an integrated service
- Improve the affordability of the proposals
- Enhance transient ischaemic attack (TIA) services, ensuring equity of access for rapid assessment in all areas of Somerset with digital links to the HASU for advice and support
- Optimise the use of digital technology and learning from COVID-19 to enhance the “reach” that specialist clinicians achieve beyond their immediate vicinity, supporting community services, primary care and ambulance crews in a way not currently seen
- To deliver the model and operate effectively, these dedicated units will need to be supported by other services, including acute medicine, urgent diagnostics, vascular surgery, critical care, and therapies. The Somerset Stroke clinical and workforce model is set out in detail in the appendices.

1.6. Development of the options

The PCBC outlines the process undertaken for developing and considering the options for change and reconfiguration of Somerset Stroke and TIA Services. This process is summarised below.

More information is available in section 12 and section 13 of the PCBC[10].

The options for configuration of stroke services in Somerset were developed in collaboration with local clinicians and staff, people with lived experience, community and voluntary sector partners and colleagues from neighbouring health systems. The process for developing and appraising the options is set out in the image below.

Image: Process for developing and appraising the options

At the start of the process a long-list of 9 options was developed. This long-list was based on all the possible ways we could change the hyperacute stroke service, including an option to not change it at all.

A set of Hurdle Criteria were developed to test each option against. The Hurdle Criteria were scored with a Pass or Fail. A range of expert groups were then asked to review the long list, and options with more passes than fails were added to the shortlist, along with the Do Nothing option.

From this, a shortlist of 6 options was developed which were reviewed by the Stroke Steering Group and reduced to 4 options based on clinical safety. A final shortlist of 4 options was agreed and the shortlisted options were reviewed by the Stroke Steering Group and Public and Patient Stakeholder Reference Group and each option was ranked based on the outcomes of the hurdle criteria assessment, stakeholder assessment of the shortlist and outputs from the modelling.

The four shortlisted options were assessed by a Clinical Review panel of the South West Clinical Senate in September 2022. The panel deemed that the first two options would not address the reasons set out in the Case for Change and provided assurance for two options that were 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). The South West Clinical Senate also set out a number of recommendations which have been considered throughout the process – more information can be found in section 13.

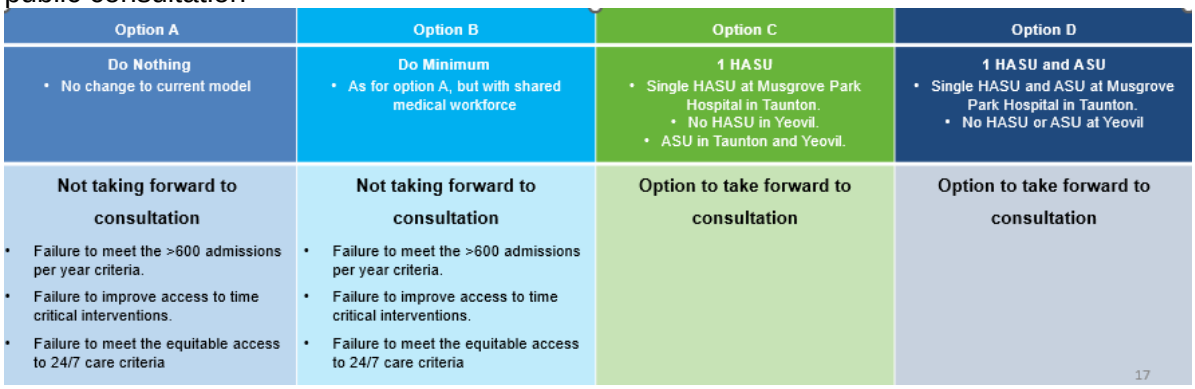
At this point, a decision was made to discount Options A & B on a clinical basis and no option was retained to keep a HASU at YDH. Because there was no clinical assurance, no detailed financial modelling was undertaken. There are a number of reasons why there were concerns with the deliverability of Option B:

- The Clinical Senate could not provide clinical assurance of this model of care

[10] FINAL-Somerset-Hyperacute-Stroke-PCBC-V4.0.pdf (oursomerset.org.uk)

- A HASU at YDH would not meet the recommended minimum of 600 patients per year
- Ability to recruit sufficient stroke consultant staff to deliver the required standards on 2 separate HASUs and ASUs
- Trying to make consultants work across two sites, seven days a week may risk them resigning and taking up employment elsewhere, potentially worsening the situation

Image: Summary of the shortlist of 4 options and the options identified to form the basis of formal public consultation



Following the review of the shortlisted options and the clinical senate review, two preferred options were identified to take forward and they formed the basis of formal public consultation between 30 January and 24 April 2023.

1.7. Public consultation

The purpose of the public consultation was to consult with stakeholders and local people and communities on the proposed model options of the transformation of acute hospital based stroke services to inform the Decision Making Business Case and the final proposals to NHS Somerset's Board.

n.b. for clarity of communication, the options which formed the basis of consultation were subsequently re-titled to option A and option B, noting that this had previously been option C and option D in the appraisal process.

During the 12 week public consultation on acute hospital based stroke services in Somerset, people and communities living and accessing health and care in Somerset were asked to share their feedback on two options:

- **Option A**: A single hyperacute stroke unit at Musgrove Park Hospital, Taunton and an acute stroke unit at both Musgrove Park and Yeovil District Hospital.
- **Option B**: A single hyperacute stroke unit and a single acute stroke unit at Musgrove Park Hospital, Taunton.

Participants were asked to respond to questions on:
- If they agreed or disagreed that stroke services needed to change,
- To what extent they agreed with the proposal to deliver hyperacute stroke services from only one hospital and if this should be Musgrove Park Hospital.
- If acute stroke care should be provided at one of two hospitals.
- To highlight any groups or communities that they believed might be particularly affected by any of the changes proposed.

It was explained to people and communities that the proposed changes would mean:

Both options would create one centralised hyper acute stroke unit in Somerset at Musgrove Park Hospital, Taunton.

In the consultation we asked for views on providing hyperacute stroke services at one hyperacute stroke unit in Somerset and, if that is the right way forward, whether the unit be located at Musgrove Park Hospital in Taunton.

This would mean most people in Somerset would receive their first 72 hours of stroke care at Musgrove Park Hospital. People who live closer to hyperacute stroke units out of Somerset would be taken to their closest unit, for example at Dorset County Hospital, Dorchester.

To provide acute stroke services at either:
• Two acute stroke units one at Musgrove Park Hospital, Taunton and one at Yeovil District Hospital; or
• One acute stroke unit, which would need to be located at the same hospital as the hyperacute stroke unit proposed to be Musgrove Park Hospital, Taunton.

As set out in our consultation communication and engagement plan, we sought to raise awareness and promote the consultation through activities that would maximise local networks and reach people in their local neighbourhoods, taking into account the geography, demography and diversity of Somerset and surrounding areas impacted including Dorset.

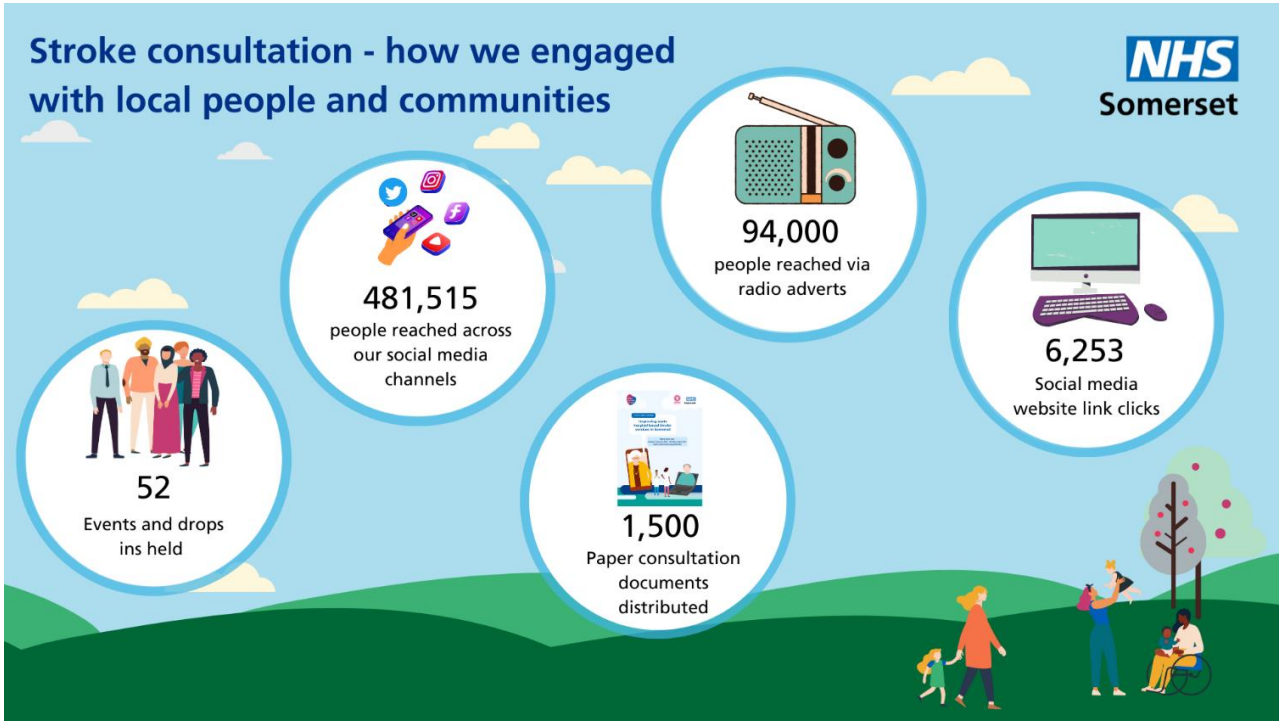


Image: Summary of stroke consultation - how we engaged with local people and communities

Public consultation activity – gathering responses

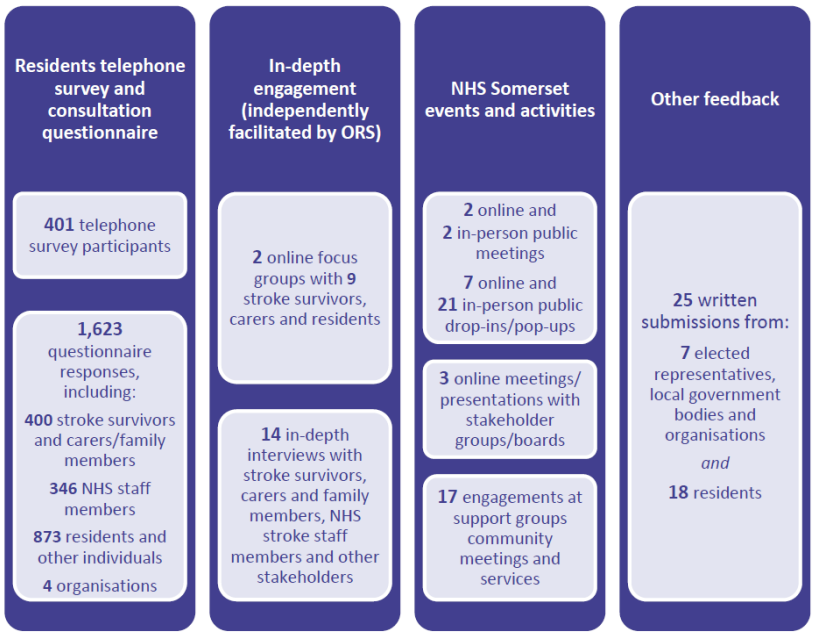


Image: Stroke consultation responses gathered

Opinion Research Services (ORS) independently analysed all the feedback received. The insights and themed report have informed the development of this decision-making business case (DMBC).

Public consultation findings – what did the consultation tell us
In its report, ORS included an executive summary which summarised the consultation outcomes to highlight the overall balance of opinions. The full ORS report is available in the appendices

Consultation feedback
ORSs insights report has been considered by a number of groups, including the Stroke Steering Group, Public and Patient Stakeholder Reference Group, the Stroke Project Board, and ICB Board.

The consultation feedback raised a number of topics and questions. Summary of feedback:

- There was broad recognition of the need for change to address challenges in delivering acute stroke services in Somerset. Moreover, many respondents said they had not previously been aware that 24/7 consultant-led stroke care is not already in place at both current stroke units
- Overall views on the proposal to deliver hyper acute stroke services from a single hyper acute stroke unit (HASU) at one Somerset hospital were more negative, with a majority of residents (via the representative telephone survey) and respondents to the open consultation questionnaire disagreeing. Agreement varied based on geography, questionnaire respondents living nearest to Musgrove Park Hospital in Taunton were much more likely to agree with the proposal than those living nearest to Yeovil District Hospital.
- When asked if hyper acute stroke services were to be delivered from one hospital in future, whether this should be from Musgrove Park hospital, agreement was stronger among residents (via the representative telephone survey) than it was among respondents to the consultation questionnaire. Similar geographical variations to those outlined above were observed via both methodologies.
- Overall, focus group participants, interview participants, some written submissions and many attendees at the NHS Somerset-run events were more positive about the proposed

model for hyper acute stroke services, seeing it as having potential to improve efficiency and quality of care, and make the service more attractive to new recruits. There were, though, concerns about ambulance waiting times, the impact of having to travel further to hospital on patient journey times and outcomes, and the possibility that consolidating hyper acute services would impact visiting.

- Most questionnaire respondents and residents thought acute stroke care should be provided at both Musgrove Park Hospital and Yeovil District Hospital if hyper acute stroke services were to be delivered from only one hospital. This was also echoed across the other consultation strands. The reasoning for most people was wanting to keep services local and the potential impacts of increased journey times to reach an acute stroke unit on patients, visitors and staff members.

The Stroke Programme has considered the feedback on both options and undertook additional analysis and considered and taken account of a range of evidence. Key themes and concerns raised from the consultation are;

Key themes	Key areas and concerns raised	Considerations and responses
Travel and Transport - Travel Times	• Concerns around increased travel times to other hospitals for stroke, especially in the context of the time-critical nature of stroke. • Risk of worse patient outcomes and recovery due to delayed treatment for patients who have to travel further to access hyper acute stroke care • The current ambulance waiting times adding to the delay in getting treatment.	• Travel impacts have been analysed in detail. • Modelling indicates that travel to a HASU by ambulance in the proposed changes will increase • Ambulance wait times have been reviewed, along with initiatives which are underway to improve response time performance. • Travel time to a HASU by driving will also increase. • For option A, this travel time will to a HASU impact travel for the first 72 hours of inpatient care for example to visit a family or friend whilst in a HASU before repatriation to an ASU which may be closer to home. • For option B, this travel time impact is more significant as it will impact travel for the HASU and ASU stages of care – up to two weeks. • Travel to a Hyperacute Unit will be longer for some people but there is strong clinical evidence that longer travel times will be offset by improved clinical outcomes through being admitted to a specialist stroke centre with access to stroke expertise 24 hours a day, seven days a week results, rather than being managed without these resources.
Travel and transport - Transport issues for	• Suggestions were made around making travel easier for visiting family, helping with car parking	• Family and friends play a really important part in a patient's recovery. • As some patients would have to travel further if these changes went ahead,

Key themes	Key areas and concerns raised	Considerations and responses
visiting family and friends	costs and having available accommodation nearby. • The importance of easy access for visitors was stressed, as visits from loved ones are crucial to stroke patients' recovery.	travel times for some visitors would also increase, making it more difficult for some people to travel to visit hospital. • Travel time to an ASU in option A by driving is the same as in the current configuration of services • Travel time to an ASU in option B by driving will increase • Travel access to a HASU by public transport for both options will be reduced. • Travel access to an ASU by public transport will reduce in option B, but be the same as the current configuration in option A • By retaining an ASU in Yeovil in option A, we reduce the impact of travel access to an ASU as it will be the same as the current configuration. • There are mitigations which could potentially support friends and family during this period
Clinical risk / quality of care	• An under resourced workforce could impact the quality of care received. • An increase in the number of patients at one hospital could impact the quality of care received. • Concerns around the impact on other hospitals if Yeovil District Hospital did not have a hyper acute or acute stroke unit. • Concern expressed by some that proposals may be driven by cost savings and the need to address internal challenges, rather than being in the best interests of patients.	• Activity, demand and capacity planning was reviewed in detail and projected bed numbers for the options were assessed in more detail • Impact on other hospitals of the proposed changes was considered – with a large proportion of HASU activity projected to shift from YDH to Dorset County Hospital in Dorchester as a result of the proposed changes. • This means consideration of the impact of proposed changes extends beyond Somerset borders and planning for any proposed changes needs to consider this. • Dorset County Hospital have been active members of our review and are supportive of the changes these proposals would bring to Dorset County Hospital. • The impact on other providers such as SWASFT was considered • The proposed clinical model was developed in more detail and the workforce model was built around the clinical model • Workforce resourcing was considered in detail and a workforce plan developed. Workforce analysis was based on the bed numbers using the

Key themes	Key areas and concerns raised	Considerations and responses
		staffing recommendations and the estate reviewed to ensure that the bed numbers could be accommodated. • This builds confidence that increasing the number of patients at one site would not impact on the quality of care received.
Equality of access	• The need for loved ones to travel via public transport was a concern particularly for **older people, people living in rural areas**, and people who **rely on public transport.** • Concerns were raised about potential difficulties faced by people on **low incomes** who need to visit loved ones in hospital, particularly those with **young children and without access to private transport.** • People with **learning disabilities** and other special needs were identified as potentially being put further at risk if their carers are unable to visit or be with them due to distance, traffic or access issues. • Potential impact on people on **probation** who are not able to travel out of county. • Potential impact on people who experience **domestic violence.**	• In addition to the public transport travel modelling, analysis was undertaken to test the potential impacts both of deprivation for those would be modelled to lose public transport access, and to assess the rates of private car access in areas where public transport access has been modelled to be lost. Impacts for specific groups identified during the consultation was considered The EIA found that; • both option A and option B would improve equity for patients receiving hyperacute stroke care, as they would all be transported to the nearest HASU where outcomes are likely to be improved. This would ensure consistent timely access to specialist assessment, diagnosis, and intervention in the hyperacute phase. • In option A there would be a negative impact on those carers/relatives who are older people, or in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours. • In option B, there would be a negative impact on carers and relatives, especially those who are older, live in rural areas or are in areas of deprivation, as there would be an increased distance to travel to visit loved ones. This would potentially be for up to 10 days, rather than the 72 hours in Option A. As such, this has a much more significant impact. • Both option A and option B mean that people will have to travel further for hyperacute care to provide an equitable access to 24/7 hyperacute care however under Option A people will have a choice to return to an ASU in Yeovil to be closer to home.

Key themes	Key areas and concerns raised	Considerations and responses
Inpatient environment	• Visits from family and friends were consistently noted as a key aspect of stroke recovery, the hospital environment needs to support and enable this. • Suggestions were made to make it easier for patients to stay in touch with family and loved ones, including better use of technology.	• The development of the inpatient environment will form a core part of the transition planning • the key principle of environment being appropriate and effective in supporting a patient to stay in contact with their friends and family will be considered throughout the planning and implementation of any changes, and particularly any estates works
Workforce	• Concerns were raised about the impact on staff in rural areas and on low incomes who may need to travel further to work. • Concerns stroke staff at Yeovil District Hospital could become deskilled if they are not seeing hyper acute stroke patients. • Risk losing skilled staff thereby creating more of a recruitment problem. • The impact on the work life balance of staff if they have to travel further to work. • Concerns around the recruitment of the specialist workforce needed at Musgrove Park Hospital and at Dorset County Hospital.	• Workforce impacts and implications of the options were considered in detail • The existing workforce position was analysed and a workforce plan has been developed • An essential part of the workforce plan is to move to a one service two sites model of care through a 'skills and capabilities' workforce model • Staff feedback during the public consultation has been considered and potential mitigations set out • There is an interdependency on workforce at Musgrove Park Hospital, Yeovil District Hospital and Dorset County Hospital which will require implementation alignment to ensure safe transition of service • Staff will be involved in the implementation planning

A number of alternative models were proposed in the consultation feedback. These alternative models are considered and responses set out. We are satisfied that the alternative models suggested would not meet the case for change and deliver the services required for stroke care in Somerset.

1.8. Appraisal of the options following consultation

Feedback from the consultation was gathered and analysed, and additional modelling and analysis of the two shortlisted options identified several areas of additional information which were not available at the time of commencing the consultation.

This additional information can be summarised under two main themes:

- There was significant concern heard during the consultation that family and loved ones play an important role in a patient's recovery and the impact of not being able to see loved ones could have on the wellbeing of patients

- It is not possible to deliver the entirety of Option B at the Dorchester County Hospital site and even a partly implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorchester County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set

Reviewing the viability of the two remaining options
To assess these findings, we used the same process which was originally undertaken to move from a long list of options to a short list of options which involved the application of a series of "pass/fail" criteria.

A summary of these hurdle criteria are shown below.

- Quality of Care – impact on outcomes
    - Clinical Effectiveness / Patient Safety / Access to care
- Quality of Care – impact on patient and carer experience
- Deliverability
    - Expected time to deliver / Co-dependencies
- Workforce sustainability
    - Scale of Impact for Current staff / Future staff
- Travel times for patients, carers and their visitors
    - Distance, cost, and time to access services
- Impact on equalities

The reapplication of the hurdle criteria demonstrated that Option B was no longer viable, with more fails than passes, particularly within the deliverability element and travel times for carers.

Since the reapplication of the hurdle criteria, it has emerged that it is not possible to deliver the entirety of bed requirements for Option B at Dorset County Hospital site and even a partly implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorset County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set.

The appraisal process assessed that the implementation of the bed requirements under Option B is not deliverable on the Dorchester County Hospital site. Even a part implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorchester County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set.

Put alongside the strong public opinion heard through the public consultation around the adverse impact on families and carers if stroke services were completely removed from Yeovil a recommendation was made to the ICB Board to discount Option B (a single hyper acute stroke unit and a single acute stroke unit at Musgrove Park Hospital, Taunton), and to work with Option A as a preferred option (Option A: A single hyper acute stroke unit at Musgrove Park Hospital, Taunton and an acute stroke unit at both Musgrove Park and Yeovil District Hospital). This decision was approved by the ICB Board at their meeting on 30th November 2023[11].

[11] Board papers and meetings - NHS Somerset ICB

1.9. The preferred option

The preferred recommended option would ensure that anyone who has a stroke is taken to the nearest hospital with a hyperacute stroke unit, ensuring they had access to the best care and treatment immediately. This may be Musgrove Park Hospital in Taunton, or an out of county provider (primarily Dorset County Hospital in Dorchester).

Preferred option **Hyperacute and acute stroke care and TIA services**
Single HASU at Musgrove Park Hospital in Taunton. **No HASU in Yeovil.** **ASU at Taunton and Yeovil**
SWASFT would take all suspected stroke patients to **nearest HASU**
Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time unless patient walks in or has a stroke as an inpatient
Patients who would normally go to Yeovil would go to **Taunton or Dorchester for their HASU** care
Any Somerset people and those people who live nearer to Yeovil even though they have a Dorset postcode i.e., Sherbourne and other surrounding villages that have had their HASU care at Dorchester will be repatriated back to Yeovil following their HASU care.
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
There will be **an impact on other health systems** in this option, primarily Dorset
TIA service would be delivered 5 days a week in Yeovil and at weekends patients would be directed to Taunton service.

Principles

- People with stroke will be treated in a specialist stroke unit throughout their hospital stay unless their stroke is not the predominant clinical problem.
- All people with suspected strokes are conveyed to the nearest site with a HASU.
- In Somerset, there will be a single county-wide HASU based in Taunton.
- People would be repatriated from Taunton to an ASU in Yeovil following their HASU care and within 24 hours.
- Any Somerset people and those people who live nearer to Yeovil even though they have a Dorset postcode i.e., Sherbourne and other surrounding villages that have had their HASU care at Dorchester will be repatriated back to Yeovil following their HASU care.
- ASU care will continue to be provided in both Taunton and Yeovil.
- People would be either transferred into a Community Stroke Rehabilitation Unit (SRU) following their acute stroke care or be discharged home or with Early Supported Discharge service support at home which could be in Somerset or Dorset. .

Clinical Model of Care in the preferred recommended option

The clinical model has been developed by the clinicians involved in the stroke steering group using best practice guidance. The clinical model maps the journey from the pre alert by the ambulance service through the hyperacute and acute stroke phases and incorporates the standards required at each part of the pathway including the pathway for those who may walk into Yeovil emergency department or who may have a stroke as an inpatient.

The stroke steering group were clear that anyone having a suspected stroke should be taken to their nearest HASU.

HASU
A single, centralised hyperacute stroke unit would be developed in Musgrove Park Hospital in Taunton. This unit would provide all the hyperacute care following stroke and refer appropriate patients onward to Bristol Southmead Hospital for mechanical thrombectomy or neurosurgical management. This would provide a larger and more sustainable specialist stroke workforce, which would enable faster decision making and improved continuity of care 24/7, leading to improved equity of service and improved outcomes.

Some patients who may have gone to Yeovil for their stroke care would be taken to Dorchester as the nearest HASU for their hyperacute care and refer appropriate patients onward to Southampton for mechanical thrombectomy or neurosurgical management.

ASU
Acute stroke care would be provided by dedicated stroke teams in Taunton, Dorchester and at Yeovil, with dedicated acute stroke beds at each site and staffed as per the 2016 National Stroke Clinical Guideline. Somerset patients and those patients who live nearer to Yeovil but may have a Dorset postcode would be repatriated back to Yeovil so they are closer to family.

Principles for a standalone ASU at Yeovil The Clinical Senate Review was very clear that to deliver Option A the ASU beds at Yeovil would need to be within a dedicated unit as specified in the NICE guidance with the associated staffing recommendations.

TIA services have **been reviewed following the proposal of a preferred option for acute stroke services and** propose that a clinically safe TIA service under Option A would require an ambulatory approach and to have access to a stroke consultant on site and 7-day access to the appropriate diagnostics. Therefore, Yeovil would have a 5-day service with Taunton providing a 7 day service.

1.10. Impact assessment of the preferred recommended option

The implications and impact of the preferred recommended option has been considered and incorporated review of;

- **Capacity impacts and bed requirements** – 12 HASU beds will be provided at MPH, 4 HASU beds at DCH, and 24 ASU beds at MPH and 16 ASU beds at YDH and will be sufficient to manage access to a HASU the majority of the time.

- **Workforce model –**The workforce model follows the guidance in the 2016 National Stroke Clinical Guideline and the BASP Stroke Medicine Consultant Workforce Requirements 2019 – 2022.

- **Workforce impacts** – the workforce model and requirements have been reviewed, and recruitment and retention actions planned to enable delivery of the preferred recommended

option, within the implementation timescales. The gap between the current and future workforce models is approximately 50 WTEs spread across all professional groups.

- **Quality impacts** – the outcomes of the changes to the service model that would greatly enable all the units to deliver an improvement in SSNAP performance is set out below. Musgrove and Dorchester would have a dedicated HASU with the associated recommended staffing. Yeovil would have a dedicated ASU and associated recommended staffing levels.

Comparison of proposed service at Dorchester, Taunton and Yeovil on implementation of the proposed recommended option

	DCH	YDH	MPH
Dedicated HASU with dedicated staffing as per national guidance	Yes		Yes
7/7 ward round of HASU	Yes		Yes
Assessed by stroke skilled specialist clinician within 1 hour	Yes		Yes
Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face.	Yes		Yes
24/7 specialist stroke service	Yes		Yes
A pre-alert system is needed to communicate patient characteristics and ensure all patients are met by the stroke team on arrival at the ASC or CSC.	Yes		Yes
Patient conveyed straight to the CT scanner on arrival	Yes		Yes
Access to consultant advice out-of-hours by telephone or telemedicine where appropriate	Yes	Yes	
Clearly defined ASU with dedicated staffing as per national guidance	Yes	Yes	Yes
5/7 ASU ward round by specialist stroke team	Yes	Yes	Yes
ESD and community service	Yes	Yes	Yes

- **Interdependencies of the option** – have been considered and assurance of the impact of the proposed changes either confirmed as minimal impact, or costed in the business case

- **Repatriation from HASU at a hospital not local to the patient -** To support the clinical model of care, a clinical model repatriation statement of intent has been agreed by the Somerset Stroke Programme Board as; To enable prompt repatriation back to the nearest ASU, repatriation will happen within 24 hours of being identified as suitable for transfer.

- **Neighbouring system impacts** – Any changes to the provision of stroke services in Somerset will have an impact on neighbouring health and care systems, and as such we have identified these implications and sought to understand the interdependencies.

  The biggest impact is predominantly on Dorchester County Hospital NHS FT and for patients who reside in Dorset, but currently use YDH for their acute hospital based stroke care, as well as SWAST who provide ambulance services. Key partners from Dorset and SWASFT have been present on the Stroke Steering Group, Clinical Reference Group and Stroke Project Board.

Support has been given from SWAST and RUH and letters of support can be found in the appendices.

- **Pathways** have been developed to support smooth flows of patients across sites, including for emergency assessment & management of suspected stroke patients who walk into ED or have a stroke as an inpatient in Yeovil.

- **Estates and equipment impacts** have been considered and capital and revenue costings incorporated into the business case to enable delivery of estates works to deliver the preferred recommended option.

- **Equalities impacts have been considered** in an Equalities Impact Assessment (EIA) and the EIA identified that in the preferred option, there will be a negative impact on those carers/relatives who are older people or live in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours of care whilst receiving Hyper Acute Stroke Care.

  It is not possible to mitigate all the negative impacts on protected groups which have been identified in the EIA.

  The impacts that remain are predominantly:

  - For patients who will have an increased ambulance travel time following a stroke. This will be mitigated by an improved clinical model of care which will improve outcomes for stroke patients.

  - On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience increased travel during the first 72 hours to visit loved ones in a HASU which is different from the current HASU in YDH.

  - The impacts set out have been mitigated in part through the preferred option maintaining the ASU at YDH and plans to reduce impact for patients and their carers in the first 72 hours of care, alongside plans to swiftly repatriate patients back to an ASU once they are medically fit to do so.

  In considering this negative impact which remains, we have sought to balance this against the improvement to patient outcomes by implementing the clinical model which is contained within the DMBC. The new clinical model will ensure compliance with 2016 best practice guidelines, enable greater equity of access to specialist treatment, help address the existing workforce issues and create a service which is sustainable over the long term.

  During the implementation phase of this project, we will continue to look for ways to mitigate the negative impacts of this change.

- **Environmental impact assessment** was undertaken and concluded that overall, improved patient outcomes and reduced length of stay in acute hospital setting will reduce carbon emissions from the proposed changes compared to the increase in emissions from increased travel distances by ambulance or for visitors. A number of concluding actions and recommendations following actions were recommended as a result of this impact assessment document which will be incorporated into implementation planning and delivery:

- **Digital** – enablers to delivery of a reconfigured stroke service in Somerset – a range of digital opportunities have been reviewed by clinicians in more detail, including consideration of how

digital enables can best support the 'digital must dos' in the clinical model.

- **Finance** – The cost to the system of implementing these proposals has been estimated at £4.2m per year. This includes a one-off transitional cost to the system of £0.2m to cover the costs of agency premiums whilst recruitment to therapy roles is completed.

  The estimated cost of capital required to implement these proposals are estimated to be £1.843m, however more work is required to confirm the final requirement.

  The delivery of benefits relating to a reduction in long term health and care needs relating to stroke care will enhance productivity and value for money.

1.11. Benefits of the proposed change

The preferred recommended option responds to the Case for Change and delivers the following under each of the headings:

Workforce sustainability

- Gives greater opportunity to explore more innovative and creative ways to recruit and retain specialist stroke staff
- Creating a more attractive place to work, which will lead to improved recruitment and retention levels and lower vacancy rates
- Future-proofs the stroke service against single point of failure risk with regards to senior specialist stroke consultant staffing and leadership
- Allows greater flexibility in the range of workforce solutions available for an existing workforce.
- Meets the appropriate standards as set out in the relevant guidance documentation (e.g., British Association of Stroke Physicians and the National Stroke Clinical Guideline 2016).
- Bringing together the stroke service into one service two sites model

Clinical Outcomes

- Ensures and responds to the key standards set out in the clinical model.
- Ensures delivery of the recommended number of > 600 strokes per year.
- Delivers time critical interventions more quickly i.e., brain scan, within 1 hour, time to see a stroke specialist within I hour, door-to-needle time for stroke thrombolysis, proportion of patients receiving thrombolysis within 1 hour of hospital arrival, and proportion of patients admitted to the hyperacute stroke unit within 4 hours
- Delivers a standalone ASU at Yeovil as recommended and with recommended staffing level (2016)
- Enables access to a safe and equitable service 24/7.
- Ability to use videotelemedicine across both sites 24/7, facilitating greater access to stroke specialist input, particularly out-of-hours.
- Improvement in length of hospital stay

Inequalities

- Delivers a 24/7 clinically sustainable service to the population of Somerset rather that the current in hours and out of hours variation.
- Improvement in door-to-needle times for stroke thrombolysis; this will mitigate the longer pre-hospital travel times experienced by some patients
- Provides equity of patient outcomes.
- Delivers a Somerset TIA service to national standards.
- A stroke is a medical emergency and urgent treatment is essential. Urgent care is excluded from patient choice rules and as stroke care is considered to be urgent, patient

choice does not apply to this service. Patients will be conveyed to the location of their nearest HASU.

- If the patient self presents, or has a stroke whilst an inpatient, they will be transferred (if appropriate) to the nearest HASU. For thrombolysis, direct transfer for thrombectomy or where transfer to a HASU is not deemed to be in the best interest of the patient the HASU consultant would support the formulation of a management plan involving the local ASU.
- Our proposals allow for a degree of patient choice for the post HASU care, both for Acute Stroke Care and Rehabilitation.
- For patients who have a TIA, patients are required to be seen urgently for specialist assessment and investigation within 24 hours of onset of symptoms. As this remains urgent care, patient choice does not apply to this service.
- There would be a risk to continuity of care because of repatriation between HASU and ASU which can be mitigated by ensuring that there is good handover of care and using trusted assessments fostered by the one team, two site approach in Somerset.

Financial sustainability

- Reconfiguration of hospital services can provide a powerful means of improving quality in an environment where money and skilled health care workers are scarce.
- The Option has been modelled over 10 years to consider the demographic growth, changes in age specific stroke incidence, and activity projections.
- There is an opportunity to reduce the reliance on agency staff reducing cost.
- The benefits of delivering time critical interventions in the hyperacute phase more quickly means that outcomes are improved and support the opportunity to reduce long term care costs

1.12. Assurance

A number of assurance mechanisms have been utilised through the process;

Clinical Senate recommendations have been assessed to ensure that all the recommendations have been taken into account in delivering the preferred option. The recommendations are all complete, and include many of the recommendations being included in the clinical model.

NHS England assurance - NHS England has issued a range of guidance in relation to service change which is designed to ensure compliance with the relevant legal framework and good practice.

The five tests of service change Incorporating the government's four tests of service change and NHS England's test for proposed bed closures, alongside other best practice tests – the five tests have all been met.

Local Authority Health Scrutiny Committee Engagement
We have engaged with the Somerset Council Adults and Health Scrutiny Committee throughout the stroke programme of work and at key points in the reconfiguration process, we have also engaged with the Dorset Council People and Health Scrutiny Committee as the changes impact the Dorset population who use YDH services.

Somerset Health Adults and Health Scrutiny Committee Engagement We have maintained an ongoing dialogue with the committee throughout the stroke programme of work and kept them informed of the consultation and various options under discussion throughout the process.

The committee provided their agreement to start the formal public consultation on the Hyper Acute and Acute stroke service options as set out in the consultation.

Following the closure of the consultation, the committee considered a report which presented the preferred model and included a summary of the feedback received from the consultation. The councillors discussed the report and asked questions about the impact of the preferred option. The committee expressed their concerns and subsequently wrote to us. A key extract of the letter is shown below:

> *Extract of letter from Scrutiny*
> *"The Committee feel very strongly that they have concerns that the proposal as it stands is not in the best interests of all the residents of Somerset. In particular there is a concern for those living in the rural parts of our County.*
>
> *Please on behalf of the Scrutiny Committee and Somerset residents make it clear to the Somerset NHS board this decision needs to be delayed and other options considered to safeguard the welfare of residents living in the south west part of the County".*

On receipt of this letter, we considered their concerns and wrote back, highlighting the work we have undertaken over a number of years to appraise viable options and identify a preferred option, the approach we had taken during consultation to reach isolated and rural areas, the work we were doing to consider key areas such as increased travel times and access to public transport alongside the completion of an EIA to consider who would be impacted by the proposed change and this was used to understand both the impact and who we needed speak to as part of a formal consultation.

A meeting was held with councillors on 17 January 2024 to provide the opportunity to answer questions regarding the proposals and to try and alleviate the concerns Scrutiny had. Not all councillors were fully satisfied with the proposal and it was stressed that the Scrutiny Committee would take an active role in scrutinising the implementation of the proposal to ensure it resulted in improved outcomes for the people of Somerset.

Dorset Council People and Health Scrutiny Committee have also been engaged with at key points in the reconfiguration process we as the changes impact the Dorset population who use YDH services, including prior to and at the conclusion of the consultation. "The Committee was content with the consultation and the work completed and thought the consultation was robust".

Stakeholders

A range of stakeholders have been engaged with during the process including;

Stakeholders in the Somerset system - Staff engagement has taken place throughout the options development and appraisal process, and staff were able to take part in the public consultation and their feedback has been analysed. Following the consultation, Dr Rashed, Consultant Stroke Physician at YDH proposed an alternative option to maintain stroke services at YDH. A meeting was held on 17 January with Dr Rashed to understand the proposal for an alternative model and his concerns on the proposed clinical model.

Neighbouring system partners – neighbouring system partners have been regularly engaged with, particularly Dorset County Hospital, NHS Dorset, and SWASFT, as well as the Royal United Hospital Bath. Formal letters were sent at the PCBC stage and support received from all parties. Subsequent letters have been sent to confirm any impacts of the DMBC and gain support.

Wider external stakeholders - The Integrated Stroke Delivery Networks (ISDNs) are the key vehicle for transforming stroke care across the country. The West of England ISDN has supported the Somerset work and has given advice when required particularly around their views

of how organisations implement the updated 2023 National Stroke Clinical Guideline and the introduction of 24/7 thrombectomy in the West of England and Wessex

Somerset ICB has legal duties for the ICB Governing Body to satisfy itself that the ICB has met its legal duties. These duties are set out in more detail in the ICB Board paper but it is considered that the legal duties have been met.

Legal advice has been sought throughout the process and specifically in relation to reviewing the PCBC, consultation materials, reaching a preferred option and this DMBC. We have worked with the Consultation Institute who have provided best practice advice and support throughout the process. The Consultation Institute is a global leader in consultation best practice and training.

1.13. Implementation

Oversight and assurance of implementation and go-live will actively include milestones and go/no-go gateways before any decision is made for the proposed changes to go-live.

Implementation of the preferred recommended option is planned to take place over an 18-month timescale. Coordination between SFT and DCH, along with SWASFT is key to enable successful implementation and will be key to the detailed implementation planning following a decision.

Implementation risks and governance

A number of risks have been identified for implementation of the preferred recommended option. Key risks to be managed and mitigated throughout implementation are clinical safety, workforce, transition/go-live decisions, and communications and engagement for staff, patients and the public. Potential mitigations for these key risks are identified and will be developed further during implementation planning.

1.14. Proposed recommendation

It is proposed that the ICB Board **approve** the proposed clinical model which comprises of:

- A single Hyperacute Stroke Unit to be located at Musgrove Park Hospital in Taunton
- Two Acute Stroke Units located at Musgrove Park Hospital, Taunton and Yeovil District Hospital
- One county TIA service operating seven days a week at Musgrove Park Hospital, Taunton and weekday service Yeovil District Hospital

2. Introduction

2.1. Background

Stroke is both a sudden and devastating life event with 100,000 new strokes occurring every year and over a million people living with the consequences of stroke[12]. It is the fourth single leading cause of death in the UK, with 35,000 deaths every year due to stroke, or one death every 17 minutes[13]. It is the single largest cause of complex disability. It therefore has a significant impact

[12] Patel A, Berdunov V, Quayyum Z, King D, Knapp M, Wittenberg R. Estimated societal costs of stroke in the UK based on a discrete event simulation. Age Ageing. 2020 Feb 27;49(2):270-276. doi: 10.1093/ageing/afz162. PMID: 31846500; PMCID: PMC7047817.

[13] Stroke – Neurological condition (brainresearchuk.org.uk)

on health and social care, unpaid carers, and lost productivity. The combined health and social care costs of stroke are rapidly increasing, with social care costs projected to more than triple by 2035[14].
Stroke is a leading cause of death and disability, causing around 38,000 deaths each year in the UK, and there are approximately 1.3 million people living with stroke in the UK[15]

The good news is that the number of deaths from stroke is declining, with the numbers of deaths from stroke having halved since 2002[16]. This is due to improved prevention and people seeking help and getting treated more quickly. This rapid access to treatment means that more people are surviving stroke, with better outcomes than ever before.

There are three different types of stroke:

1) **Ischaemic stroke** is caused by a blockage cutting off the blood supply to the brain. This is the most common type of stroke, accounting for approximately 85% of all strokes[17]. This type of stroke is treated with:
   a) thrombolysis – clot-busting medication, that must be given within 4 hours, and/or
   b) thrombectomy – mechanical clot removal, that needs to be undertaken within 24 hours

2) **Haemorrhagic stroke** is caused by bleeding in or around the brain. This accounts for around 15% of all strokes[18]. This type of stroke is treated with medication to reduce blood pressure and may require surgery, called a craniotomy, to remove any blood from the brain and repair any burst blood vessels[19]. There are two types of haemorrhagic stroke:
   a) Bleeding within the brain – intracerebral haemorrhage (ICH) is the most common type of haemorrhagic stroke, accounting for around 60%
   b) Bleeding on the surface of the brain – subarachnoid haemorrhage (SAH). SAH is the least common type of stroke, accounting for 30% of haemorrhagic strokes and 1 in 20 of all strokes

3) **Transient ischaemic attack** or TIA (also known as a mini stroke). It is the same as an ischaemic stroke, except that the symptoms only last for a short amount of time. This is because the blockage that stops the blood getting to your brain is temporary[20]. TIA symptoms resolve without specific treatment, but treatment to help prevent future stroke may be required[21].

4) **Stroke mimics** are not actually a stroke but are caused by other conditions that "mimic" a stroke. Some of the most common stroke mimics are seizures or migraine. The initial emergency medical care is like stroke until a diagnosis is confirmed. Once the person is diagnosed, they can have treatment or support to manage their symptoms.

Projections show that the impacts of stroke are going to increase with demographic changes as between 2015 and 2035, the number of strokes in the UK per year is projected to increase by

[14] Current, future and avoidable costs of stroke in the UK – Stroke association https://www.stroke.org.uk/sites/default/files/costs_of_stroke_in_the_uk_report_- executive_summary_part_2.pdf
[15] Prevalence | Background information | Stroke and TIA | CKS | NICE
[16] Stroke statistics | Stroke Association
[17] Ischaemic stroke | Stroke Association
[18] Haemorrhagic stroke | Stroke Association
[19] Stroke - Treatment - NHS (www.nhs.uk)
[20] Transient ischaemic attack (TIA) | Stroke Association
[21] Transient ischaemic attack (TIA) - Treatment - NHS (www.nhs.uk)

60% and the number of stroke survivors is projected to more than double[22].

These factors have prompted the development of national guidance and clinical standards on the delivery of the acute phase of stroke care to ensure that outcomes are improved, demand is managed in the most clinically effective way possible and that networked models of care delivery are developed and matured to ensure the finite range of skills, knowledge and infrastructure and are available across the country.

2.2. National Context and Recommendations

We have referred to a number of documents to develop and consider our proposals, including;

NHS Long Term Plan - Stroke is a high priority on the national agenda and is identified in the NHS Long Term Plan[23] as a clinical priority over the next ten years. The Long Term Plan outlines how the NHS should work with partners to improve stroke care along the entire pathway, from prevention to rehabilitation.

National Stroke Service Model[24] published in May 2021 to support delivery of the ambition set out in the Long Term Plan. The National Stroke Service Model confirmed that a networked approach based on patient flows is essential to delivering the NHS Long Term Plan commitments for stroke: reducing stroke mortality and disability, as well as the burden stroke places on families and carers, on the health and social care system and on wider society. This is in keeping with service models for pathways such as Trauma, Vascular, Interventional Radiology, and Burns Care as examples.

National Clinical Guidelines[25] incorporate significant advances in evidence based, proven, highly effective methods of stroke treatment and care, established in both National clinical guidelines 2016 (partially refreshed in 2023)

NICE quality statements and standards – The NICE quality statements and guidelines highlighted below are especially pertinent to the hyperacute and acute care that is being focused on within this programme (and are also reflected within SSNAP):

Statement 1 Adults presenting at an accident and emergency (A&E) department with suspected stroke are admitted to a specialist acute stroke unit within 4 hours of arrival [2010, updated 2016] [26]. The rationale for this is that specialist acute stroke units are associated with improved patient safety due to better outcomes, such as reduced disability and mortality, because of the range of specialist treatments they provide.

Admission to these units should be within 4 hours of arrival at A&E, so that treatment can begin as quickly as possible, and to help prevent complications. Some adults with acute stroke may need treatment in higher-level units, such as high dependency or intensive care units.

Other relevant quality statements and guidelines include;

- People seen by ambulance staff outside hospital, who have sudden onset of neurological

[22] Derek King, Raphael Wittenberg, Anita Patel, Zahid Quayyum, Vladislav Berdunov, Martin Knapp, The future incidence, prevalence and costs of stroke in the UK, *Age and Ageing*, Volume 49, Issue 2, March 2020, Pages 277–282, https://doi.org/10.1093/ageing/afz163

[23] NHS Long Term Plan

[24] NHS England » National Stroke Service Model

[25] National Clinical Guideline for Stroke for the UK and Ireland. London: Intercollegiate Stroke Working Party; 2023 May 4. Available at: www.strokeguideline.org.

[26] Quality statement 1: Prompt admission to specialist acute stroke units | Stroke in adults | Quality standards | NICE

symptoms, are screened using a validated tool to diagnose stroke or transient ischaemic attack (TIA). Those people with persisting neurological symptoms who screen positive using a validated tool, in whom hypoglycaemia has been excluded, and who have a possible diagnosis of stroke, are transferred to a specialist acute stroke unit within 1 hour

- Patients with acute stroke receive brain imaging within 1 hour of arrival at the hospital if they meet any of the indications for immediate imaging
- Patients with acute stroke have their swallowing screened by a specially trained healthcare professional within 4 hours of admission to hospital, before being given any oral food, fluid, or medication, and they have an ongoing management plan for the provision of adequate nutrition
- Patients who need ongoing inpatient rehabilitation after completion of their acute diagnosis and treatment are treated in a specialist stroke rehabilitation unit
- Carers of patients with stroke are provided with a named point of contact for stroke information, written information about the patient's diagnosis and management plan, and sufficient practical training to enable them to provide care

Stroke Configuration Support Guide[27] – this guide sets out a suite of guidance documents, templates and analytical models based upon work undertaken in areas of England where stroke reconfiguration has already progressed.

2.2.1. Organising and optimising stroke services

The NHS Long Term Plan aims to identify and support those at the highest risk and helping them to manage their conditions, and to improve the quality of care and treatment available for those people who do have a stroke through ensuring that high quality, specialist care and treatments, such as thrombolysis (clot-busting drugs) and mechanical thrombectomy (clot extraction), are increasingly available to more patients as part of Integrated Stroke Delivery Networks. These networks will lead a smaller number of more specialist stroke units, that are able to provide a higher quality of care.

Areas that have centralised hyperacute stroke care into a smaller number of well-equipped and well-staffed hospitals, that includes acute stroke units of a sufficient size to ensure expertise, efficiency, and a sustainable workforce[28] have seen the greatest improvements.

When stroke care is centralised in larger units, patients have a greater likelihood of being treated more quickly and effectively so what may be lost in travel time can be more than made up by better process after arrival[29].

Hyper acute interventions such as brain scanning, and thrombolysis are best delivered as part of a networked 24/7 service. These networked structures have led to better patient outcomes, including a 5% relative reduction in mortality at 90 days and reduced length of stay[30], this has

[27] stroke-services-configuration-decision-support-guide.pdf (england.nhs.uk)

[28] Access to and delivery of acute ischaemic stroke treatments: A survey of national scientific societies and stroke experts in 44 European countries (2018)

[29] Microsoft Word - Annual Report 1718.docx (strokeaudit.org)

[30] Hunter RM (2013) Impact on clinical and cost outcomes of a centralized approach to acute stroke care in London: A comparative effectiveness before and after model. and Morris S, Hunter RM, Ramsay A, Boaden R, McKevitt C, Perry C, Pursani N, et al (2014) Impact of centralising acute stroke services in English metropolitan areas on mortality and length of hospital stay: difference-in-differences analysis. BMJ 349: 4757.

been found to be especially valuable in rural areas[31] .

This means a reduction in the number of stroke-receiving units, and an increase in the number of patients receiving high-quality specialist care. Integrated Stroke Delivery Networks (ISDNs) involving relevant agencies including ambulance services through to early supported discharge will ensure that all stroke units will, over the next five years, meet the NHS seven-day standards for stroke care and the National Clinical Guidelines for Stroke.

Whilst these changes do mean a reduction in the overall number of stroke-receiving units, the consequence is an increase in the number of patients receiving high-quality specialist care and an improvement in clinical outcomes.

The stroke configuration support guide goes on to set out that the total number of strokes each year, per unit, to ensure that a hyperacute stroke unit should see no less than 600 patients per year. Less than 600 strokes per year would not be sufficient to ensure staff would have enough clinical experience and institutional learning experience to maintain their experience. The minimum of 600 strokes per year was also a threshold endorsed by the Midlands and East stroke review[32].

A very strong evidence base is growing on models and reconfiguration that supports organising and optimising stroke services to deliver high quality stroke treatment and care. The national clinical guidelines state "*If services for people with stroke are poorly organised, outcomes will also be poor despite the evidence-based practice and best endeavours of individual clinicians. Furthermore, if clinical teams do not have sufficient knowledge and skills, and are not consistent in their clinical practice, many people will receive sub-optimal care*".

People who have had a stroke need access to high quality acute care as quickly as possible. The time from symptom onset to definitive treatment such as thrombolysis is the most important determinant of outcome. Safe access to consistently reliable and continually available expertise and investigations is vital to shorten this door to needle time following arrival at hospital.

Development of 'higher volume' Centres

As stroke care has developed and become increasingly complex over the years, not all hospitals can be equipped with specialist staff and equipment to provide the best evidence-based care 24 hours a day, 7 days a week[33] [34].

Centralisation of HASUs has been associated with the following improvements in clinical outcomes and benefits for patients and their families[35]:

- Reduced time from admission to thrombolysis
- Improved time from admission to brain imaging for thrombolysed patients
- Reduced total length of inpatient stay[36]

Reduced mortality

[31] Elameer M, Price C, Flynnn C, Rodgers H (2018) The impact of acute stroke service centralisation: a time series evaluation.
[32] stroke-services-configuration-decision-support-guide.pdf (england.nhs.uk)
[33] King's College London, Stroke pathway – Evidence Base Commissioning, An Evidence Review (2020), p.45
[34] The impact of acute stroke service centralisation: a time series evaluation - PMC (nih.gov)
[35] psp_-_reorganising_acute_stroke_services_0.pdf
[36] Impact of centralising acute stroke services in English metropolitan areas on mortality and length of hospital stay: difference-in-differences analysis | The BMJ and Effects of centralizing acute stroke services | Neurology

Whilst there are concerns regarding longer ambulance journey times because of centralisation, especially in rural areas, these have been shown to be offset by the improved speed of thrombolysis delivery[37]

Stroke services need to focus on maximising the likelihood that the local population can receive the best stroke care at the right time, even if it may slightly disadvantage a very small number of people. Not reconfiguring acute stroke services because of this would potentially disadvantage all their residents, by preventing access to best quality stroke care.
Stroke Association, Transforming and reorganising acute stroke services[38]

2.2.2. Prevention

Whilst prevention is not directly within the scope of this work, it is essential to acknowledge that reducing the incidence of stroke through better prevention is critical to helping us to manage the growth in demand for stroke services which is linked to our increasing aging population.
See the PCBC for further information

2.2.3.Rehabilitation

Whilst rehabilitation services are not directly in scope for this work, we need to acknowledge how the acute aspects of care align with the rehabilitation services, to ensure that people have seamless access to high quality, clinically effective interventions to optimise their outcomes following a stroke and to ensure that the flow between services is smooth and timely. See the PCBC for further information.

2.3. Somerset vision for stroke care

Our vision for adult stroke care in Somerset is that:

"Stroke patients in Somerset will receive timely acute interventions and receive access to world-class services, regardless of where they live."

Our vision for stroke complements the wider ambitions of the Integrated Health and Care Strategy for Somerset[39] and our previous strategy Fit For my Future, as well as national guidelines.

We recognise our duties under the Health and Care Act 2022 to have regard to the wider effect of our decisions on;

- the health and wellbeing of people,
- the quality of services provided, and
- efficient and sustainable use of resources

Our vision for adult stroke care will ensure the provision of acute hospital-based stroke services that are timely, easy to access, high quality and efficient, with stroke experts available 24 hours a day, 7 days a week, 365 days a year.

[37] The impact of acute stroke service centralisation: a time series evaluation - PMC (nih.gov) and psp_-_reorganising_acute_stroke_services_0.pdf
[38] psp_-_reorganising_acute_stroke_services_0.pdf
[39] Our Somerset Strategy - NHS Somerset ICB

This will lead to a quicker diagnosis and faster treatment, resulting in the best possible outcomes for the patient. This includes increased access to thrombectomy services and best use of thrombolysis.

Integrated, joined up services will support patients and their families through the hyperacute and acute phase of care, along the pathway to rehabilitation or supported discharge home.

The aims of taking forward this vision for stroke services is to develop services in Somerset which are:

- **Equitable** – everyone will be able to access the same high level of care regardless of the day of the week or time of the day, 365 days a year
- **High quality** – every patient will receive expert care, maximising their chances of a full recovery
- **Efficient** – the stroke pathway will be streamlined to help timely access to the best possible care, including getting patients more timely access to the scanner, the development of a direct hyperacute stroke unit (HASU) to early supported discharge (ESD) pathway, and harnessing of technology to provide remote care and expert input where necessary
- **Well led** – there will be high quality clinical leadership of the whole patient pathway, ensuring consistency across providers and settings of care, and enhanced partnership working at managerial and clinical levels including emergency services, tertiary services, and cross-border services
- **Sustainable** – through improvements to prevention, treatment, efficiency, and secondary prevention the resources available to stroke care will be used effectively and will result in overall system savings when compared with continuing to do more of what we currently do in line with prevalence growth
- **Attractive** – for the Somerset stroke service to be a great system to work in, where staff are supported to do their jobs and deliver an exemplar service which attracts and retains a high-quality workforce
- **Innovative** – increased use of technology to assist within increased thrombolysis rates such as CT perfusion software

2.4. Scope of this DMBC

This DMBC is part of a wider programme to improve stroke care and outcomes within Somerset.

This DMBC sets out the future configuration of acute hospital based stroke services element, which includes hyperacute stroke and acute stroke services, including transient ischaemic attacks and stroke mimics. Acute Hospital-based Stroke Services. This is the specialist hospital care people receive in the first few days and weeks after a stroke. It takes account of general population growth and specifically the expected population growth in over 50s and therefore the expected rise in the number of strokes in Somerset over the next ten years. The management of is also considered.

The National Stroke Clinical Guideline 2016 was updated in 2023 reflecting new evidence that will improve the quality of care to anyone having a stroke. The guideline is intended to be used alongside other standards and are statements that inform and guide clinical practice.

The Integrated Stroke Delivery Network has said that they would not expect organisations to be able to deliver the 2023 guidance straight away but should have an aspiration to work towards the 2023 guidance. It is the intention that both SFT and DCH would aspire to meet the 2023 guidance under the transformation work they will undertake over the next few years.

The preferred option has been modelled using the 2016 guidance as currently Somerset does not meet the staffing recommendations in the 2016 guideline particularly in Yeovil. This forms a robust baseline which the transformation work can build on.

The DMBC does not include the support and rehabilitation that is provided when patients are discharged from an acute hospital following a stroke. Patients will continue to receive community rehabilitation stroke care, provided in the local community as they would do now.

No changes are being proposed to the stroke rehabilitation services provided at South Petherton Community Hospital or Williton Community Hospital. The early supported discharge at home scheme where rehabilitation is provided in people's home would continue to be offered.

3. Somerset stroke care

Somerset Health and Care Strategy sets out Somerset context; Somerset lies within the South West of England and is home to 572,000 people that live within 250,000 households. The population within the county is older than the national average, with the number of people aged 75+ set to double over the next 25 years. The county spans an area of over 4,000 square kilometres. It is characterised by large expanses of rurality, provincial towns and coastal communities along the Bristol channel. Half the Somerset population lives in rural areas, where access to services can be difficult[40].

In terms of stroke care, there is one provider of stroke services in Somerset, following the merger to create Somerset Foundation Trust, who provide all community, mental health and learning disability services across Somerset, provide acute care at both Yeovil District Hospital and Musgrove Park Hospital in Taunton, and manage a proportion of the GP practices in Somerset.

The image below shows the current sites providing HASU care. The sites coloured green are in Somerset, the ones in blue are out of area.

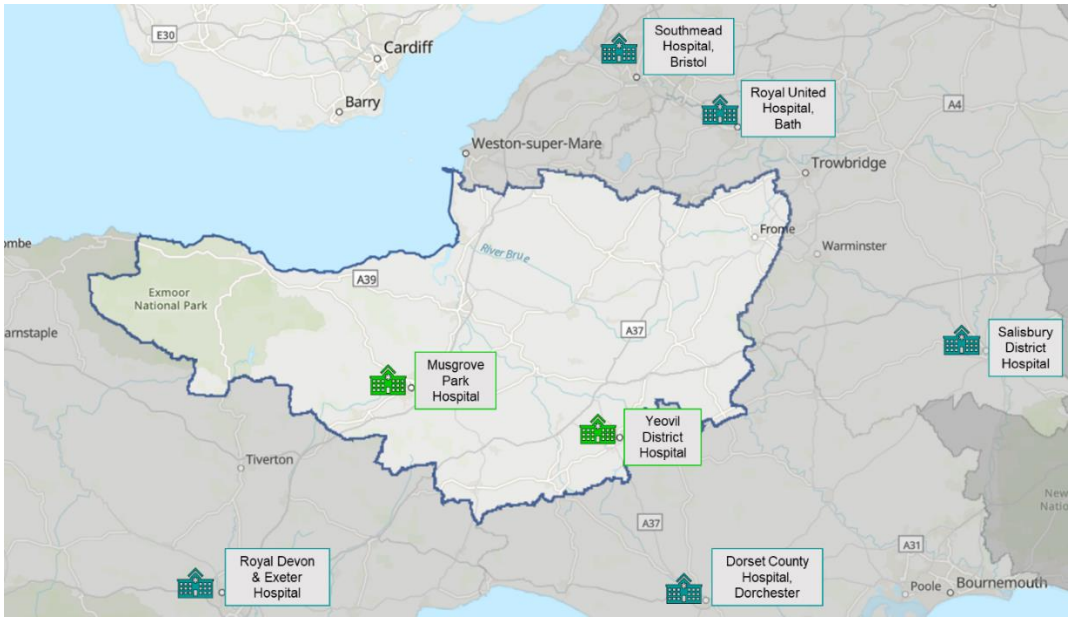


Image: Map of sites providing HASU case

The current configuration of hyperacute and acute stroke beds within Somerset is as follows:

Provider	Capacity
Musgrove Park Hospital, Taunton	HASU 4 beds n.b. 8 HASU beds from Feb 2024 ASU 19 beds
Yeovil District Hospital, Yeovil	HASU 4 beds (co-located with cardiology) ASU 12 beds

[40] Somerset-Health-and-Care-Strategy-compressed.pdf (nhssomerset.nhs.uk)

In 2022 SFT wrote a business case to ensure that they could maintain the existing service at SFT as well as absorb the UHBW activity from the changes BNSSG were making to their stroke service. They proposed an increase in the HASU bed base from 4 to 8 beds with associated staffing.

This business case was approved by the ICB and SFT are in the process of implementing the increased HASU bed base and recruiting staff.

TIA
TIA services are currently provided at Taunton 7 days and Yeovil 5 days on a clinic base service with fixed diagnostic slots.

Those patients who may require TIA services within Yeovil at the weekend currently wait until Monday to be seen and therefore do not meet the national standard of a suspected TIA being seen within 24 hours.

3.1. Stroke activity

The current prevalence of stroke in Somerset is higher than the national average at 2.4% in 2022/23, compared to an England-wide prevalence rate of 1.81%.

The table below shows the number of stroke admissions to both YDH and MPH between 2018 and 2022[41].

Table: Somerset Stroke admissions 2018-2023

Stroke admissions	2018	2019	2020[42]	2021	2022	2022/23
Musgrove Park Hospital (MPH)	657	708	536	705	693	735
Yeovil District Hospital (YDH)	429	468	412	454	422	413

It is nationally accepted that to provide sufficient patient volumes to make a hyperacute stroke service clinically sustainable, to maintain expertise and to ensure good clinical outcomes, 600 stroke patient admissions per year are required[43][44].

Whilst this is achieved in Musgrove Park Hospital, Yeovil District Hospital consistently falls below this level.

Stroke admissions were increasing year on year at both providers prior to the COVID-19 pandemic, but in 2020/2021 there was a reduction in stroke admissions due to the impact of COVID-19, which continued into 2022. More recent data shows that admission rates at MPH may be increasing again, but recent increases are not apparent at YDH.

3.1.1. Stroke admission routes

Most suspected strokes are admitted via a 999 ambulance call out to the nearest Emergency

[41] SSNAP data - Number of admissions for stroke to both YDH and MPH between 2018 and 2022
[42] In the period running from April 1st 2020 to June 30th 2020, no SSNAP submissions were entered by Musgrove Park Hospital which will affect 2020 figures
[43] https://basp.ac.uk/wp-content/uploads/2017/02/BASP-Meeting-the-Future-Challenge-of-Stroke-2011-15.pdf
[44] Frontiers | Planning and Providing Acute Stroke Care in England: The Effect of Planning Footprint Size (frontiersin.org)

Department with onsite hyperacute stroke provision.

The below table details the percentage (and number) of patients admitted via each route between 2018 and 2022[4546].

	Brought in by ambulance	Self-presentation	Onset whilst an inpatient
Musgrove Park Hospital (MPH)	74.9% (2470)	19.4% (639)	5.8% (190)
Yeovil District Hospital (YDH)	74.4% (1626)	18.5% (405)	7.0% (154)

There is little variation in the percentage split of admission route between MPH and YDH, and prior to 2022 there was little variation between years, but in 2022 there is a notable increase in the percentage of self-presenters, most likely related to increased category 2 ambulance response times – across both hospitals the percentage of stroke admissions which self-presented was 17% for the period 2018-2021, but this increased to 25% in 2022.

As well as the people who self-present (often termed a "walk-in") a proportion of people experience a stroke whilst already in hospital, for example whilst an in-patient.

3.1.2. Times of stroke presentation

Time of day of presentation of a stroke is an important factor in considering the proposed changes.

Activity data for 2022-23 for the hour of the day when a patient arrives at hospital by ambulance shows much less activity overnight than during the day, with a slight trend in late afternoon/early evening pattern handovers particularly at YDH. This is very similar pattern of activity to the 2019 data from the PCBC. Broadly there is minimal variation over the days of the week which again indicates the need for consistent 24/7 services.

Image: SWASFT Patient at First Hospital Handover - by hour of day of week in 22/23

SWASFT Patient at First Hospital Handover by Hour of Day of Week in 2022/23 (Somerset Registered Patients)

MUSHGROVE PARK HOSPITAL

MPH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Unk
Mon	1	4	2	1	1		4	4	4	8	8	14	9	9	10	6	9	10	7	4	5	5	7	3	1
Tue	3	2	1		1		2	1	6	7	12	8	12	7	8	9	4	8	8	10	6	5	5	10	
Wed	5	4	1	2	3	2	3	1	4	5	9	8	6	9	10	7	7	9	5	5	10	8	5	3	
Thu	5	1	1		1		2		2	5	8	9	9	10	3	12	7	12	8	3	8	7	8	3	
Fri	6	3	1	2	1	2	4	3	5	8	13	10	2	5	15	6	5	6	11	2	6	5	2	11	
Sat	2	2	2	1	1	2	3		3	4	12	10	10	10	1	14	8	7	10	11	7	7	7	3	1
Sun	7	3	2	2	3	1	3	2	5	3	3	5	12	7	14	13	8	5	8	4	4	7	5	6	

YEOVIL DISTRICT HOSPITAL

YDH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Unk
Mon		1	1	1		1	1		2	3	5	2	5	5	4	4	6	2	6	1	3	7	4	3	
Tue	1	3	1		1	1	2	1	2	5	2	2	5	3	3	2	7	7	7	8	2	4	3	4	
Wed	1			1	2		3		3	4	4	7	7	2	7	1	4	2	8	4	5	6	3	2	
Thu	3	3	1		1		2	3	1	4	2	8	5	4	5	4	4	4	7	5	1	2	3	2	1
Fri	4				1	1				4	6	7	6	5	6	2	2	4	10	3	6	9	3	3	
Sat	1	2				1	1			3	7	5	4	3	4	1	7	4		4	2	1	7	3	
Sun	1		1					2		4	5	5	3	5	6	2	7	7	6	1	9	4	2	2	1

[45] SSNAP data - Number of admissions for stroke to both YDH and MPH between 2018 and 2022

[46] This indicator will exclude any patients discharged directly from A&E or who died within A&E as they were not formally admitted to the hospital and are therefore excluded from SSNAP.

Regional impacts

Several out of area patients are treated for stroke each year across both hospital sites, and this is most significant in YDH:

- Around 22% of stroke patients treated at Yeovil District Hospital reside outside Somerset, the majority of which are Dorset residents (19%).[47]
- 6% of stroke patients treated at Musgrove Park Hospital reside outside Somerset, with around half of these being Devon residents. [48]

Thrombectomy

If patients from Somerset are identified as eligible for requiring a thrombectomy[116] as the result of an ischaemic stroke, they are transferred out of county to Southmead Hospital, North Bristol NHS Trust to receive treatment.

The table below shows that the % of all stroke cases in Somerset who received thrombectomy has been broadly consistent since 2019.

Table: Rates of mechanical thrombectomy in Somerset

	2019/2020		2020/2021		2021/2022		2022/2023		Dec'22 – Dec '23 (12 months of Southmead services being 24/7)	
	MPH	YDH	MPH	YDH	MPH	YDH	MPH	YDH	MPH	YDH
Numbers of thrombectomy	15	8	5	6	8	7	11	6	25	17
% of all stroke cases	1.5%	1.8%	0.6%	1.5%	1.1%	1.5%	1.5%	1.4%	3.67%	3.75%

Since 5th December 2022, the mechanical thrombectomy service at Southmead has been available 24 hours a day, 7 days a week. In the 12 months since this service changed (i.e. 05 December 2022 - 04 December 2023) the mechanical thrombectomy rate for patients from SFT has more than doubled to 3.67%.

As such thrombectomy rates in Somerset are in line with national expectations.

3.1.3. Performance outcomes

The Sentinel Stroke National Audit Programme (SSNAP), assesses the care provided for patients during and after they receive inpatient care following a stroke. SSNAP measures the process of care (clinical audit) against evidence-based quality standards referring to the interventions that any patient may be expected to receive.

SSNAP scores are reported quarterly and the SSNAP scores for the clinical performance at Musgrove Park Hospital and at Yeovil District Hospital for July-September 2023 are set out below. Further information about the scoring model is available here[49];

[47] SSNAP data - Number of admissions for stroke to both YDH and MPH between 1/1/22 and 31/3/23
[48] SSNAP data - Number of admissions for stroke to both YDH and MPH between 1/1/22 and 31/3/23
[49] How are SSNAP scores calculated? – SSNAP (zendesk.com)

Figure: SSNAP scores July-September 2023 (n.b. A is top level rating)

SSNAP PERIOD:	Oct-Dec 2022	Jan - March 2023	Apr - June 2023	July - Sept 2023
Musgrove Park Hospital SSNAP level	C	B	B	B
Yeovil District Hospital SSNAP level	D	D	C	C
Dorset County Hospital SSNAP level	C	C	C	C

Overall SSNAP clinical performance at Musgrove Park Hospital was the top Level A rating from July 2019 until June 2021. There was a deterioration in the SSNAP performance score from Level A to Level C which reflected increased difficulty in patients accessing the stroke unit in a timely fashion. (SSNAP Domain 2 – Stroke Unit). This reflected overall high bed occupancy in the hospital due increasing Covid admissions. Regional and national stroke data demonstrated similar difficulties in admitting stroke patients directly to the stroke unit.

Early access to a stroke unit is one of the most important interventions in ensuring that stroke patients receive all the components of stroke care that optimise their recovery.

SSNAP data for the past year shows a steady improvement in SSNAP performance in Musgrove Park Hospital (overall score improving from 67 to 77 and moving from Level C to B which has been maintained for the past 9 months). This likely reflects some improvements in bed occupancy and ability to admit stroke patients directly to the stroke unit. Yeovil District Hospital also shown some improvement in SSNAP overall performance over the past year (SSNAP score improved from 49.4 to 62). YDH SSNAP score has improved from D to C, which has been maintained for the past 6 months. There are still difficulties in stroke patients accessing the stroke unit (score has remained Level E for this domain).

Thrombolysis performance reflected in SSNAP based mainly on the number of patients receiving thrombolysis and how quickly this is performed (the door-to-needle time). The SSNAP thrombolysis performance has shown some improvement at Musgrove Park Hospital (from Level D to Level C). Yeovil District Hospital has maintained a Level D performance for the past year. Analysis of thrombolysis SSNAP performance shows often an inverse relationship between the number of patients thrombolysed and the speed of thrombolysis. This is likely to reflect the fact that thrombolysis delivered out-of-hours (by medical registrar supported by the AGWS network) is slower than when patients are assessed and managed in person by the stroke physicians.

DCH have remained consistently at a level C and suffers from the same issues around accessing the stroke unit within 4 hours due to the bed occupancy of the hospital.

3.2. Somerset stroke projections

Stroke activity is projected to increase in the next 10 years. The tables below set out the current and predicted activity levels for stroke services, based on the current site configuration (see Demand and Capacity Approach appendix for the approach and assumptions underpinning these figures). The increases in activity resultant from the BNSSG stroke services reconfiguration which was implemented in May 2023 are also included.

Table: Projected Somerset stroke activity figures

This table relates to stroke admissions only i.e. excludes estimated stroke mimics:

Hospital	Current (2022/23)	Year05 (+13%)	Year10 (+26%)
MPH	787	886	985
YDH	413	469	524
Total	**1,200**	**1,354**	**1,508**

This table relates to stroke admissions and estimated stroke mimics:

Hospital	Current (2022/23)	Year05 (+13%)	Year10 (+26%)
MPH	1,182	1,326	1,473
YDH	611	693	776
Total	**1,792**	**2,019**	**2,249**

Somerset stroke projections - beds

In the current configuration of services, not all patients who have a stroke are admitted to a stroke bed. As such, there is a shortfall in the number of stroke beds currently provided.

The modelling of projected bed requirements assumes that all patients will require admission to a stroke unit, even if not all patients were indicated as having been admitted to a stroke unit bed in the baseline data from 2022/23.

The table below shows the number of current and predicted beds required for stroke services, assuming no changes to current average length of stay; the bed numbers in this table were derived using an average-based methodology i.e. based on average stroke arrivals and average length of stay, and include estimated stroke mimic patients (see Demand and Capacity Approach appendix for the approach and assumptions underpinning these figures):

Table: Current and predicted beds required for Somerset stroke services

Hospital	Setting	Current	Year00 (+16%)	Difference	Year05 (+30%)	Difference	Year10 (+47%)	Difference
MPH	HASU	8	9	+1	10	+2	11	+3
	ASU	19	22	+3	25	+6	28	+9
YDH	HASU	4	5	+1	5	+1	6	+2
	ASU	12	14	+2	16	+4	18	+6
Total		**43**	**50**	**+7**	**56**	**+13**	**63**	**+20**

The table above shows that the number of beds currently available is insufficient to manage current (year 0) levels of demand, and that this shortfall will increase as the projected number of strokes increases in the coming years - within 10 years an additional 20 beds will be required across both providers (assuming current average length of stay).

4. Case for Change

In 2019 a review of the Somerset configuration of stroke services was carried out as part of the Fit For my Future Programme. A key recommendation from this strategy was to review the way Hyperacute Stroke Unit (HASU) and Transient Ischaemic Attack (TIA) services are provided in Somerset in line with national guidance.

The Case for Change established through this process still stands and is more imperative than ever, with an ageing population, and a prevalence of stroke of 2.4% in 22/23, compared to an England-wide prevalence rate of 1.81%.

The Somerset Stroke programme has reviewed the national evidence and recommendations, and worked with experts in stroke care, patients and carers with lived experience of stroke to develop proposals for the future configuration of Stroke services in Somerset.

The main reasons for needing to reconfigure acute hospital-based stroke services within Somerset are ever more pressing and include:

4.1.1. Workforce sustainability

- This is a burning platform, with significant risks caused by ongoing challenges with recruitment and retention of specialist staff.
- There are not enough specialist stroke staff to deliver 24/7 consultant cover
- There are not enough specialist nursing staff or therapists to meet the national standards for stroke care
- From a senior medical perspective, the service at Yeovil District Hospital is single consultant-dependent and although this has been bolstered through recent recruitment the service is likely to be reduced to a single clinician within the foreseeable future.

4.1.2. Clinical outcomes

We are failing to meet several national performance targets in relation to hyperacute and acute care in both Taunton and Yeovil which have a negative impact on clinical outcomes, including:

- Being quickly seen by a consultant stroke specialist
- Getting a timely brain scan
- Timely access to treatment, including thrombolysis and thrombectomy
- Getting timely TIA assessment and management
- Getting a multidisciplinary team assessment, including swallow screening
- Spending most of the time following a stroke on a stroke ward

4.1.3. Inequalities

There is currently variation and inequitable provision of acute stroke care across the county, especially over weekends and out of hours.

The table below shows a comparison of current service at Taunton and Yeovil for hyperacute and acute stroke care.

Table: Comparison of current HASU and ASU service at Taunton and Yeovil

	YDH	MPH	Comments
Dedicated HASU with dedicated staffing as per national guidance	No within CCU	Yes	
7/7 ward round of HASU	No	Yes	
Assessed by stroke skilled specialist clinician within 1 hour	No	No	Not 24/7
Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face.	No	Yes	

24/7 specialist stroke service	No	No	
A pre-alert system is needed to communicate patient characteristics and ensure all patients are met by the stroke team on arrival at the ASC or CSC.	Yes	Yes	
Patient conveyed straight to the CT scanner on arrival	No	Yes	
Assessed by a suitably skilled stroke specialist within 1 hour of arrival	No	No	Not 24/7
Access to consultant advice out-of-hours by telephone or telemedicine where appropriate	No	No	Not 24/7
Clearly defined ASU with dedicated staffing as per national guidance	No	Yes	
5/7 ASU ward round by specialist stroke team	Yes	Yes	For YDH those stroke patients on 8B
ESD and community service	Yes	Yes	

4.1.4. Financial sustainability

There is currently a poor correlation between the money spent on stroke and the outcomes achieved. Whilst additional investment in the acute phase will still be required, there is opportunity to reduce the long-term care costs associated with stroke by improving the outcomes in the hyperacute phase.

5. Work so far on proposed changes in Somerset

In January 2023 the Pre-Consultation Business Case[50] was presented to the ICB Board who gave approval to go to public consultation with two options.

OPTION A	OPTION B
A single **hyper acute unit** in Somerset at Musgrove Park Hospital, Taunton Patients will be taken to their nearest Hyper Acute Stroke Unit (this could be Dorchester, Bath, Salisbury or Taunton)	
An **acute stroke unit** at **both** Musgrove Park Hospital and Yeovil District Hospital.	A **single acute stroke unit** at Musgrove Park Hospital, Taunton.

[50] FINAL-Somerset-Hyperacute-Stroke-PCBC-V4.0.pdf (oursomerset.org.uk)

A summary of the impact of these options is shown below.

Option A Hyperacute and acute stroke care and TIA services	**Option B** Hyperacute and acute stroke care and TIA services
Single HASU at Musgrove Park Hospital in Taunton. No HASU in Yeovil. ASU at Taunton and Yeovil.	Single HASU at Musgrove Park Hospital in Taunton. No HASU in Yeovil. No HASU or ASU at Yeovil
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 not** receive suspected stroke patients at any time unless patient walks in	Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time unless patient walks in
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 Dorchester for their HASU** care
Somerset patients would return to **Yeovil for their ASU** care	Patients would remain in **Taunton or Dorchester for their ASU** care
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
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
TIA service would be delivered 7 days a week in Taunton and 5 days a week in Yeovil. At weekends patients would be directed to Taunton service.	**TIA** services would be delivered 7 days a week in Taunton. There would be no TIA service at Yeovil.

Somerset ICB undertook a twelve-week period of consultation[51], from January to April 2023, which gathered feedback on the future of acute hospital-based stroke services in Somerset, from people living in Somerset, people who use Somerset hospitals and partner organisations who are impacted by these proposals.

Changing stroke services in Somerset would also have a significant impact on the Dorset system. We have engaged with and involved our neighbouring health systems and organisations throughout the development of our case for change and PCBC. Key partners from Dorset and SWASFT have been members of our Steering Group and Clinical Reference Group.

The next sections of the DMBC set out the updated and new information from the consultation and the additional work undertaken by the stroke programme team during 2023.

[51] Documents, information sheets and videos - Our Somerset

5.1.1. Governance of the Somerset Stroke programme

The proposal for the improving stroke services was developed by the Somerset Stroke Steering Group, a multi-organisational group across Somerset and Dorset. This was supported by a strong governance process comprising of a number of key groups.

Stakeholders involved in the Somerset Stroke Programme are listed in the Stakeholder Log appendix.

Patient and Public Stakeholder Reference Group consists of key voluntary sector organisations and people with lived experience. The group provided feedback on our developing solutions and offered their perspectives and insights on how we can inform and engage local people in the hyper acute stroke public consultation. The group informed the development of the proposals and supported us to plan the consultation activity and materials.

Somerset Stroke Steering Group is a partnership of clinicians, people with lived experience of stroke and other health and social care staff from across Somerset as well as colleagues from Dorset. They were responsible to design a new clinical model of acute hospital-based stroke services that meets both clinical best practice and one that is grounded in what matters most to people, through consideration of public consultation feedback and delivers the best outcomes for patients.

The steering group were supported by a clinical reference group (comprised of stroke clinicians, clinicians from services impacted by the change, VCFSE, and an expert by experience) which was established to consider the clinical evidence and develop best practice pathways for the stroke service.

Stroke Project Board is a cross organisational group comprising of partners from organisations which are impacted by the proposed changes to stroke service and includes representatives from Somerset ICB, SFT, DCH, Dorset ICB, SWAST and Health Watch. Its purpose is to ensure that feedback received during the consultation is considered, new clinical evidence and guidelines are considered, deliver this Decision Making Business Case along with recommendations to the ICB Board.

Somerset Collaboration Forum
The Collaboration Forum is a way of facilitating collaboration between the constituent organisations within the Somerset Integrated Care System (ICS) to drive the delivery of the overall health and care strategy that is established by the Integrated Care Partnership (ICP). The Collaboration Forum supported the interactions and dependencies between the stroke programme and other programmes that are responsible for delivering our strategic aims.

Somerset ICB Board is the Decision Making Authority on this DMBC and will make the final decision. They have also considered and approved the PCBC which commenced the start of the public consultation and the decision to progress with a preferred option.

The governance structure for the Somerset Stroke programme is set out below.

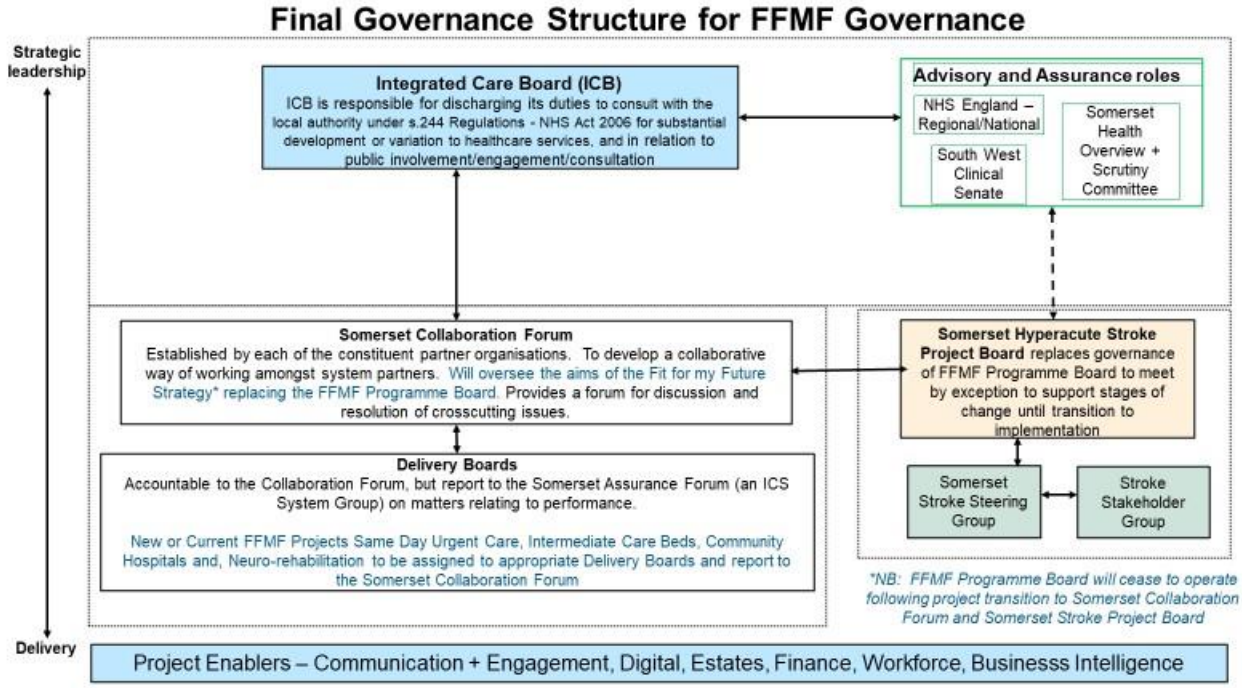


Image: Somerset stroke programme governance structure

5.2. Updates since the PCBC was published

5.2.1. National updates

Since the PCBC was developed, two pieces of guidance has been issued which have been used in the development of proposed changes and this DMBC:

National Clinical Guidance for Stroke (April 2023) which includes recommendations to rehabilitation, psychological and emotional support, and return to work services, amongst many other changes. This builds on the 2016 guidance which the PCBC was based on.

Somerset Stroke services do not consistently meet the pre-existing national standards based on 2016 guidance. The focus of this work remains on the future configuration of acute hospital based stroke services, which includes hyperacute stroke and acute stroke services. This is the specialist hospital care people receive in the first few days and weeks after a stroke.

The proposed Business Case fully delivers the 2016 National Guidance and Somerset commits to working in partnership with the ISDN and other local systems to move towards the 2023 National Guidance implementation and learning from best practice approaches.

NICE Guidance (NG236): Stroke Rehabilitation in Adults (October 2023) which covers rehabilitation after stroke for over 16 year olds.

5.2.2. Regional updates

A number of changes have been planned or implemented in the region since the PCBC was published. Key changes include;

Bristol, North Somerset and South Gloucestershire (BNSSG) reconfiguration – BNSSG ICB decided on and implemented changes to their stroke service configuration – including the consolidation of the hyperacute provision on to a single site at Southmead, the closure of Weston General Hospital as an admitting site for strokes, and reconfiguration of the sub-acute part of the pathway.

Whilst the BNSSG changes are being implemented, additional activity flows and requirement for stroke beds at Musgrove Park Hospital have been as expected. Four additional HASU beds are due to come online in January 2024 with the appropriate staffing following the approval of a business case.

Southmead Hospital /North Bristol NHS Trust move to 24/7 thrombectomy – in line with national guidance Southmead Hospital provides thrombectomy services for the region and have moved to providing thrombectomy services. This became a 24/7 service from 5th December 2022. The numbers of Somerset patients who receive thrombectomy treatment are set out in Section 3.

Dorset County Hospital NHS FT are in the process of implementing their business case which was approved by Dorset ICB earlier in the year. This business case was to provide a dedicated HASU in their current stroke unit and enhance the stroke community services. Phase 2 of their business case will be to increase the footprint of the stroke unit to accommodate the increase in activity for HASU services from the Somerset stroke service changes.

Southampton General Hospital/ University Hospital Southampton NHS FT move to 24/7 thrombectomy – In line with national guidance, Southampton is planning to provide a 24/7 Thrombectomy service from September 2024. This will mean that by the time the changes proposed in the business case are implemented, no matter where a Somerset patient is taken to, they will have access to 24/7 thrombectomy care.

5.2.3. Somerset updates

Somerset NHS Foundation Trust merger – On 1 April 2023, Yeovil District Hospital NHS Foundation Trust (YDH) and Somerset NHS Foundation Trust (SFT) merged to create a new trust called Somerset NHS Foundation Trust.

The new trust provides community, mental health and learning disability services throughout the county and into Dorset, along with acute services from both Yeovil Hospital and Musgrove Park Hospital and a quarter of Somerset's GP practices through its subsidiary Symphony Healthcare Services.

Both YDHFT and SFT's stroke services provide hyperacute and acute stroke care, post-stroke support and education. In addition, SFT provides community and inpatient rehabilitation care (including in people's own homes) for all stroke patients across the county.

Preparation for the merger of Taunton and Somerset NHS Foundation Trust and Yeovil District Hospital has been a driver for a project aiming to integrate the acute stroke team at Musgrove Park Hospital and Yeovil District Hospital and the stroke rehabilitation teams in the stroke rehabilitation units and community. This led to several developments to break down barriers and improve the ways of working, which included:

- Development of integrated stroke clinical governance processes including single integrated stroke performance dashboard
- Whole pathway mapping and streamlining of processes (e.g., referral from acute to community teams)
- Pathway shadowing so that stroke team members had a greater understanding of colleagues' pressures at other points along the stroke pathway.

- Improvement in information sharing to reduce repetition and reduplication of work, and delays.
- Therapy staff rotation between acute and rehabilitation setting
- Regular Leadership Exchange meetings between senior nurses in acute and rehabilitation units

There are additional opportunities that can now be realised through the merger of Somerset Foundation Trust and Yeovil District Hospital and this stroke reconfiguration, including full integration of the stroke teams to develop a single Somerset-wide stroke team with a single stroke clinical leadership team with shared objectives and goals.
The two trusts have already organised stroke workshops attended by members of the acute stroke services in Musgrove Park Hospital and Yeovil, as well as representatives of the community stroke units and community rehabilitation service.

These enablers are being addressed by a workforce subgroup and will continue to develop as the programme progresses to the decision-making phase.

SFT Business case investment – In October 2022 a business case was presented to the ICB by SFT (prior to the merger) with a proposal as to how it delivered stroke care in the short/medium term whilst the Strategic case for change will outline the longer-term plan.

To ensure that the existing service at SFT could be maintained as well as absorb the additional UHBW activity from the changes within BNSSG the proposal was to increase the HASU bed base from 4 to 8 beds at MPH.

To support the increase to 8 HASU beds the nursing, medical and AHP workforce needed to be elevated and the proposal was that this should occur alongside developing a 7-day service.

To run a 7-day consultant physician service 8am-8pm, an increase in consultant posts was proposed from 4.8 wte (including an existing Associate Specialist) up to 8.6 consultants.

This case was approved by the ICB and SFT are in the process of implementing this business case. This investment has been included within the system funding baseline within this business case, as part of the 'As Is/ Business As Usual situation.

The 10 year modelling and profiling of the 'baseline' has been developed using a number of assumptions, which has meant the baseline is:

- Modelling the BAU over the next 10 years - so that the service is safe, but not to invest to bring the service up to standard
- based on operational reality BAU costs
- Profiling the modelled benefits of continuing the BAU situation
- Not increasing bed capacity beyond baseline (incl. SFT business case implementation)

Our Somerset Integrated Health and Care Strategy
In April 2023, Somerset ICS published its Health and Care Strategy which sets out our ambition for a healthier future in Somerset over the five-year period up to 2028[52].

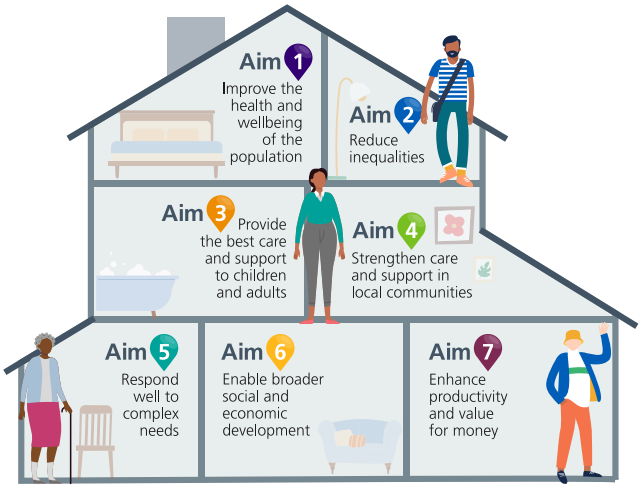
The vision for this strategy is:

> ***In Somerset we want people to live healthy independent lives, supported by thriving communities with timely and easy access to high quality and efficient public services when they need them.***

[52] Somerset-Health-and-Care-Strategy-compressed.pdf (nhssomerset.nhs.uk)

As a system we have agreed seven strategic aims that underpin our Integrated Health and Care Strategy. These reflect the national ICS aims and underpin our work as an ICB.

Image: Somerset Integrated Health and Care Strategy Steps



The proposals to improve acute hospital based stroke care meet the following strategic aims:

Aim 1: By implementing these changes, we will reduce the number of people with long term disability following a stroke

Aim 2: We will be providing access to 24/7 care, regardless of where someone lives in our county

Aim 3: The clinical model outlined in this proposal will improve the stroke care provided to people who use Somerset hospitals

Aim 4: The implementation phase of this proposal will ensure that pathways work effectively between hospital and community services

Aim 5: For those individuals who require the most complex care, outcomes will be improved through the implementation of National Clinical Guidance

Aim 6: Through improvements in stroke care, individuals who experience a stroke have a higher than likely opportunity to return to employment and family life, a reduction in disability and a decreased need for the claiming of benefits.

Aim 7: The delivery of benefits relating to a reduction in long term health and care needs relating to stroke care will enhance productivity and value for money

6. Clinical model

A significant amount of work has been undertaken by the Somerset stroke steering group (a partnership of clinicians, people with lived experience of stroke and other health and social care staff from across Somerset as well as colleagues from Dorset) to design a new model for acute hospital-based stroke services that meets both clinical best practice and one that is grounded in what matters most to people and delivers the best outcomes for patients.

This work has been led by Dr Rob Whiting, Consultant Stroke Physician at SFT and previously Clinical Services Director for Neurological Services (until 2022). As part of the process, we considered the national guidance, research and evidence from implementing these in other areas.

It was agreed that the options for change should be in line with the draft National Stroke Service Model and address the current inequalities in stroke care provision across Somerset.

The group recognised that it is not possible to eliminate all aspects of current inequity and that in some rural areas, compromises might need to be made. Achieving a well-staffed unit working 24/7 that is also within a 45 – 60-minute drive in a blue light ambulance might not be possible.

The desired characteristics of the model of care in Somerset were established as;

- Provide high quality emergency stroke care 24 hours a day, 7 days per week
- Minimise the number of handovers in care for patients
- Consolidate the workforce to provide optimum care, operationally flexibility and an integrated service
- Improve the affordability of the proposals
- Enhance transient ischaemic attack (TIA) services, ensuring equity of access for rapid assessment in all areas of Somerset with digital links to the HASU for advice and support
- Optimise the use of digital technology and learning from COVID-19 to enhance the “reach” that specialist clinicians achieve beyond their immediate vicinity, supporting community services, primary care and ambulance crews in a way not currently seen
- To deliver the model and operate effectively, these dedicated units will need to be supported by other services, including acute medicine, urgent diagnostics, vascular surgery, critical care, and therapies.

The Somerset Stroke clinical and workforce model is set out in detail in the appendices.

Core features of the clinical model are;

- People with stroke should be treated in a specialist stroke unit throughout their hospital stay unless their stroke is not the predominant clinical problem
- Twenty-four, seven consultant led stroke service co delivered by consultant and advanced practitioners:
  - Stroke Consultant 08:00 – 20:00 seven days a week
  - Advanced practitioners/Consultant practitioners 08:00 – 22:00 seven days a week.
  - Band 6 HASU nurse 22.00 – 08:00 seven days a week
  - On call stroke Consultant seven days a week between 20:00 – 08:00
- Stroke team will respond to all stroke calls from Emergency Department 24/7 with overnight HASU nurse responding to all stroke calls and the medical registrar responding to thrombolysis calls
  - Band 6 HASU nurse will need to be protected to allow response to stroke calls so backfill of an additional band 5, required for cover
  - Ensure stroke beds/staffing discussed as part of Trust bed state, HASU beds to be put alongside CCU beds
  - All Stroke beds to be ringfenced

Digital enablers
The clinical model incorporates a number of digital ‘must dos’ as enablers to support the clinical model.

Digital enablers and opportunities will be considered throughout the process and include;

- Telemedicine incl telemedicine in the (hyper)acute phase
- Local stroke physician team videotelemedicine, including Videotelemedicine in the pre-hospital setting, and videotelemedicine to bring specialist expertise to the ASUs 24/7 on both sites.
- Artificial Intelligence in the hyperacute setting
- Telemedicine and telehealth in the post-acute setting
- Electronic systems
- Video-Conferencing including Multidisciplinary team working, and education and research
- iPads to support the patient experience on the stroke unit

7. Development of the options

The PCBC set out the process for developing and considering the options for change and reconfiguration of Somerset Stroke and TIA Services. This process is summarised below. More information is available in section 12 and section 13 of the PCBC, and appendix 10 of the PCBC.

The options were developed with substantial engagement from local clinicians and staff, people with lived experience, community and voluntary sector partners and colleagues from neighbouring health systems.

The process for developing and appraising the options is set out below.

Image: Process for developing and appraising the options

At the start of the process a long-list of 9 options was developed. This long-list was based on all the possible ways we could change the hyperacute stroke service, including an option to not change it at all.

A range of expert groups were then asked to review the long list, as follows:

- Experts by Experience
- Taunton Stroke Team

- Yeovil Stroke Team
- Dorset Stroke team
- The Ambulance Service
- Taunton Emergency Department Team
- Yeovil Emergency Department Team

A set of Hurdle Criteria were developed to test each option against. The criteria used in Somerset was based on those used by BNSSG in their stroke review. A small number of amendments were made to ensure they reflected the local context, and these were approved by the Stroke Steering Group, on 26th April 2022, as suitable and appropriate for use within Somerset. The same hurdle criteria was used for assessing the longlisting and shortlisting.

The hurdle criteria applied were as follows:

Theme	Category	Specific criteria
Quality of Care - impact on outcomes	**Clinical Effectiveness**	Will this option lead to people receiving equal or better care/outcomes of care in line with national guidance standards or best practice ?
		Will this option result in more effective prevention to improve life expectancy in the system and reduce health inequalities?
		Will this option account for future changes in population size and demographics?
		Will this option lead to more people being treated by teams with the right skills and experience?
	Patient Safety	Will this option allow for patient transfers/emergency intervention within a clinically safe timeframe? Will travel time impact patient outcome?
		Will this option offer reduced levels of risk (e.g., staffed 24/7 rotas, provide networked care, implement standardisation?
	Patient and carer experience	Will this option improve continuity of care for patients (e.g., reduce number of hand offs across teams/organisations, increase frequency of single clinician/team being responsible for patients?
		Will this option enable greater opportunity to link with voluntary/community sector health and wellbeing services?
		Will this option improve quality of environment in which care is provided?
Deliverability	**Expected time to deliver**	Is this option deliverable within 2 years?
		Will this option deliver the required benefits?
	Co-dependencies	Does this option enable the system to maximise the role of and adapt to new technologies?
		Will this option rely on other models of care / provision being put in place and if so, are these deliverable within the necessary timeframe?
		Will the wider system be able to deliver on this change including the community and voluntary sector?
		Can the additional capacity requirements be delivered?
		Will it destabilize any other providers in a way that cannot be managed? Yes response is negative here - need to adjust in final scoring
		Does the system have access to the infrastructure, capacity, and capabilities to successfully implement this option in particular, a reduced length of acute stay with sufficient capacity outside of the acute trusts to support it ?
Workforce sustainability		Can the current staffing level cope with the changes across the system?
		Will this option improve the resilience of current staff (e.g., recruitment, retention)?

	Scale of impact: existing staff	Will it support the talent management of existing staff e.g., enable maintenance and /or enhancement of skills, competencies, career pathways, enable them to work at the maximum capability of their role
		Is the staff travel, relocation or retraining required in line with organisational change principles? YES is negative for these questions and need to adjust in final scoring.
	Scale of impact: future workforce	Is it possible to develop the workforce model required to deliver the option e.g., skills base, new competencies, new roles etc against the anticipated timeline for implementation?
		Will it support the financial sustainability of the workforce e.g., reduction in agency spend
		Will this option enable accountability and governance structures to support staff?
		Will this option increase multi-disciplinary/cross-organisational & system working/greater diversity & inclusion?
Travel times	**Distance, cost, and time to access services**	Will this option increase/reduce travel time and/or cost for patients to access specific services? Question not worded as yes/no. Assume increase. YES is negative for these questions and need to adjust in final scoring.
		Will this option involve patients travelling more frequently?
		Will this option change the number of journeys to access urgent medical intervention?
		Will this option reduce/increase patients' waiting time to access services?
		Will this option increase travel time for carers and family?
		Will this option increase cost for carers and family?
		Will this option support the use of new technology to improve access?
Access to care	**Service operating hours**	Will this option improve operating hours for the service?
		Does the option reduce the risk of unplanned changes and improve service resilience?
		Does the option maintain the ability of the service to adapt to planned or envisaged future changes
	Impact on patient choice	Does this option increase choice for patients?
		Will this option make it easier for people to understand which services they can access when and where?
Impact on Equalities	**Equalities**	Does the option prevent worsening health inequalities?
		Does the option ensure those with protected characteristics are not adversely impacted?

The finance criteria were removed from the general longlisting process and will be applied in detail to the shortlisted options.

The Hurdle Criteria were scored with a Pass or Fail.

Options with more passes than fails were added to the shortlist, along with the Do Nothing option.

A shortlist with 6 options was developed as set out in the diagram below;

Image: the longlist and shortlist of options

These 6 options were reviewed by the Stroke Steering Group and reduced to 4 options. A final shortlist of 4 options was agreed and for virtual consideration on 27th May 2022. Support for the shortlist from the FFMF Programme Board was confirmed on 9th June 2022 and therefore the shortlist was approved.
Subsequently, this was approved at the Somerset ICB Executive Committee on 7 September 2022.

The shortlisted options were reviewed by the Stroke Steering Group and Stakeholder Reference Group and each option was ranked based on the outcomes of the hurdle criteria assessment, stakeholder assessment of the shortlist and outputs from the modelling.

The four shortlisted options were assessed by a Clinical Review panel of the South West Clinical Senate in September 2022. The panel deemed that the first two options would not address the reasons set out in the Case for Change and provided assurance for two options that were 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). The South West Clinical Senate also set out a number of recommendations which have been considered throughout the process – please see the appendices for more information.

At this point, a decision was made to discount Options A & B on a clinical basis and no option was retained to keep a HASU at YDH. Because there was no clinical assurance, no detailed financial modelling was undertaken. There are a number of reasons why there were concerns with the deliverability of Option B:

- The Clinical Senate could not provide clinical assurance of this model of care
- A HASU at YDH would not meet the recommended minimum of 600 patients per year
- Ability to recruit sufficient stroke consultant staff to deliver the required standards on 2 separate HASUs and ASUs
- Trying to make consultants work across two sites, seven days a week may risk them resigning and taking up employment elsewhere, potentially worsening the situation

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** • Single HASU at Musgrove Park Hospital in Taunton. • No HASU in Yeovil. • ASU in Taunton and Yeovil.	**1 HASU and ASU** • Single HASU and ASU at Musgrove Park Hospital in Taunton. • No HASU or ASU at Yeovil
Not taking forward to consultation • Failure to meet the >600 admissions per year criteria. • Failure to improve access to time critical interventions. • Failure to meet the equitable access to 24/7 care criteria	**Not taking forward to consultation** • Failure to meet the >600 admissions per year criteria. • Failure to improve access to time critical interventions. • Failure to meet the equitable access to 24/7 care criteria	**Option to take forward to consultation**	**Option to take forward to consultation**

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Following the review of the shortlisted options and the clinical senate review, two preferred options were identified to take forward and they formed the basis of consultation between 30th January and 24th April 2023.

8. Public consultation

8.1. Context

We are committed to putting the views of local people at the heart of the NHS and to making sure that they are included as equal partners in the planning of local services. To ensure this happens we have process for involving people and communities in service changes.

Public involvement is an essential part of making sure that effective and efficient health and care services are delivered with people and communities at the centre.

By reaching, listening to, involving and empowering our people and communities, we can ensure that local people are at the heart of decision making and that we put our population's needs at the core of all we do.

This process has been developed in line with national guidance, good practice and our statutory duty to involve the public in service change. It includes several stages to promote a continuous cycle of meaningful engagement, following the Gunning Principles. This includes: audience analysis, equality impact assessments, insight gathering, pre-consultation engagement, communication planning, development of a public stakeholder reference group and public consultation on proposed changes.

Details of our pre-consultation engagement and how we involved people and communities can be found in the pre consultation business case.

The purpose of the public consultation was to consult with stakeholders and local people and communities on the proposed model options of the transformation of acute hospital based stroke services to inform the Decision Making Business Case and the final proposals to NHS Somerset's Board.

8.2. Public consultation – what happened

A 12 week public consultation on acute hospital based stroke services in Somerset ran from 30 January 2023 to 24 April 2023. During the consultation, people and communities living and accessing health and care in Somerset were asked to share their feedback on two options:

- **Option A**: A single hyperacute stroke unit at Musgrove Park Hospital, Taunton and an acute stroke unit at both Musgrove Park and Yeovil District Hospital
- **Option B:** A single hyperacute stroke unit and a single acute stroke unit at Musgrove Park Hospital, Taunton

n.b. for clarity of communication, the options which formed the basis of consultation were subsequently re-titled to option A and option B, noting that this had previously been option C and option D in the appraisal process.

Participants were asked to respond to questions on:
- If they agreed or disagreed that stroke services needed to change,
- To what extent they agreed with the proposal to deliver hyperacute stroke services from only one hospital and if this should be Musgrove Park Hospital.
- If acute stroke care should be provided at one of two hospitals.
- To highlight any groups or communities that they believed might be particularly affected by any of the changes proposed.

It was explained to people and communities that the proposed changes would mean:

Both options would create one centralised hyperacute stroke unit in Somerset at Musgrove Park Hospital, Taunton.

This would mean most people in Somerset would receive their first 72 hours of stroke care at Musgrove Park Hospital. People who live closer to hyperacute stroke units out of Somerset would be taken to their closest unit, for example at Dorset County Hospital, Dorchester.

Under option A:
- Musgrove Park Hospital, Taunton would continue to provide hyperacute stroke care, as it does now.
- Patients would be taken to their nearest hyperacute stroke unit, this could be out of Somerset if it was closer to you, such as Dorset County Hospital, Dorchester.
- Yeovil District Hospital would no longer provide hyperacute stroke care but would continue to provide acute stroke care.
- This means that patients who receive their hyperacute stroke care at another hospital outside of Somerset or in Taunton and live nearer to Yeovil, could have their next stage of treatment in Yeovil if this was closer to home.

Under option B:
- Musgrove Park Hospital, Taunton would continue to provide hyperacute stroke care and acute stroke care, as it does now.
- Yeovil District Hospital would no longer provide hyperacute stroke care or acute stroke care.
- Patients would be taken to their nearest hyperacute stroke unit, this could be out of Somerset if it was closer, such as Dorset County Hospital, Dorchester.
- Patients would have their acute stroke care at the same hospital as their hyperacute stroke care, for example Somerset patients at Dorset County Hospital would continue to have their acute stroke care at Dorset County Hospital.

Following the public consultation, two reports were prepared. These are available as separate appendices:

- **Consultation activity report** – this report sets out how the formal public consultation was delivered and provides information on the activities that made up the consultation.

- **Consultation findings report** – Opinion Research Services (ORS), an independent research organisation, analysed all responses to the public consultation and prepared a report of key themes and findings from the responses.

8.2.1. Stakeholder analysis

To make sure our engagement effectively captured the widest possible views and feedback we developed an extensive list of stakeholders who are involved in, affected by, or interested in the future configuration of the service, as well as the wider public.

The Equality Impact Assessment (EIA) was utilised to inform our stakeholder analysis and engagement activities.

A detailed stakeholder analysis was undertaken and informed our engagement and communications activity.

Priority audiences included:

- Patient and carers who have experience of stroke services.
- Key voluntary sector stroke support organisations including the Stroke Association.
- Protected characteristics identified in the EIA and HEAT analysis as being at higher risk of stroke.
- NHS and social care staff working in stroke services.

8.2.2. Patient and Public stakeholder reference group

A key part of the consultation preparation has been the establishment of the stroke patient and public reference group. The group consists of key voluntary sector organisations and people with lived experience. The public and patient stakeholder reference group is a time limited group established to provide feedback on our developing solutions and offer their perspectives and insights on how we can inform and engage local people in the hyperacute stroke public consultation.

The reference group is made up of a range of individuals and organisations with direct experience of stroke. The group informed the development of the proposals and supported us to plan the consultation activity and materials.

8.3. Consultation activity

Between Monday 30 January and Monday 24 April 2023, NHS Somerset undertook a public consultation on acute hospital based stroke services in Somerset.

As set out in our consultation communication and engagement plan, we sought to raise awareness and promote the consultation through activities that would maximise local networks and reach people in their local neighbourhoods, taking into account the geography, demography and diversity of Somerset and surrounding areas impacted including Dorset.

A range of methodologies and channels were used throughout the consultation to encourage as many local people, patients, their families and carers, health and care staff, partners and key stakeholders to make their views known to us.

In line with our consultation plan, the public consultation had three main workstreams:

- **General public consultation:** consultation with the general public through events, the questionnaire and special interest groups.
- **Staff consultation:** in addition to the consultation documentation and questionnaire we held focused discussion sessions with staff working in stroke services.
- **Representative telephone survey:** led by the independent research organisation, ORS, we sought to gain the views of a representative sample that was reflective of the geography and demography of Somerset and boarder counties.

We sought feedback on proposals on hyperacute and acute stroke services in Somerset. People could provide feedback in a range of ways including:

- Events: Taking part in a consultation event including online and face to face meetings, pop up or drop-in events.
- Outreach: providing feedback at one of the community support groups or community organisation meetings we attended.
- Questionnaire: completing a consultation questionnaire online or via post (freepost).
- Representative telephone survey: being invited to take part in the representative telephone survey.
- Interviews and focus groups.
- Feedback: providing feedback via email, post, social media or phone.

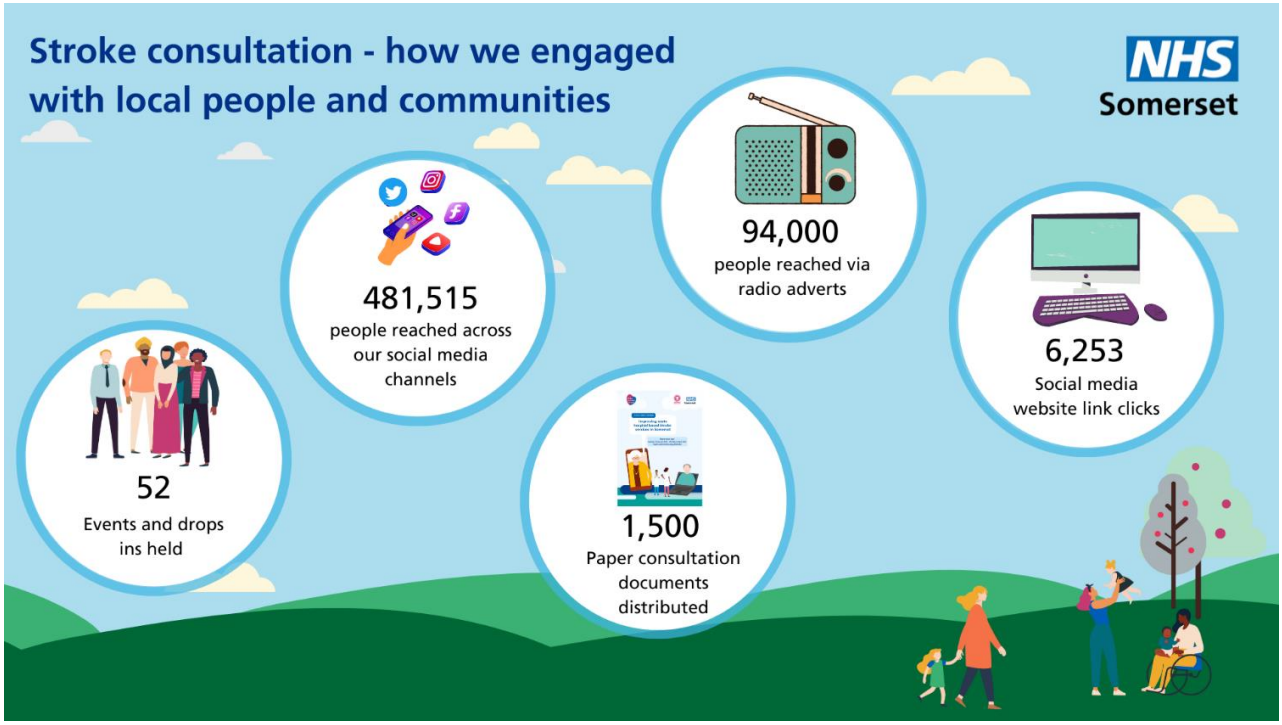


Image: Summary of stroke consultation - how we engaged with local people and communities

Public consultation events

Our engagement throughout the public consultation was delivered as a set of activities that were adapted to the location and opportunity. Working with our partners across the Somerset Integrated Care System (ICS) and Dorset colleagues, we were able to put together an engagement programme that worked with existing community events to ensure that we were available across the county (including into Dorset) and reaching diverse audiences with varied needs.

Where appropriate we set up a pop-up stand to showcase and draw attention to the consultation in a public space and we attended existing groups (including support groups for people with lived experience of a stroke and talking cafés across Somerset). We presented the information on the proposals and provided the means for people and communities to take part.

Additionally, we ran a series of public events, these consisted of a presentation and an opportunity to ask questions to our panel of professionals involved in the programme.

All the opportunities to come and meet us were advertised on our website, social media, engagement newsletter, citizens' panel. We also shared with partners and networks to also publicise.

We held and attended 52 events.

Communications materials

We created a variety of communication materials to make sure we met the needs of local people. Public facing materials used information contained within our Pre-consultation Business Case (PCBC). The PCBC was signed off by the stroke steering group, Fit for my Future Programme Board and the NHS Somerset Board.

In recognition of the broad range of people who might be impacted by any changes to hospital-based acute stroke services, we sent copies of the public consultation document and questionnaire to complete (and send to FREEPOST address) to 100 residential homes in Somerset with a view to reaching both residents and workforce. Additionally, we sent copies of the consultation document and form to complete to 26 organisations who represented a broader view of the population in Somerset with a view to reaching people engaging with these organisations including workforce.

We also produced materials in EasyRead and Aphasia friendly versions. Example materials can be found in the appendices.

Website

Information on the stroke consultation was shared on the Somerset Integrated Care System / Fit for my Future website. The webpages were updated as the consultation progressed. Links to the website were shared across all communications channels promoting the consultation including social media, newsletters, media and radio. These materials were published on the website alongside the Pre-Consultation Business Case. Unfortunately, we do not have any metrics software on the website so are unable to see page views or visits to the site.

Media releases and radio advert

We issued various press releases to raise awareness of engagement opportunities during the public consultation, disseminate information and signpost local people to different ways in which they can find out more about and respond to the consultation.

We also ran a radio advert campaign to raise awareness of the consultation. The 30 second advert ran from 13 February 2023 until 12 March 2023, with 93 spots across the month. The advert ran across Heart West Country, with a reach of 94,000 covering a population of around 433,000.

Social media

NHS Somerset and the Fit for my Future programme both have established social media profiles. We proactively used these channels to promote the consultation and share key messages. We targeted posts to our key demographics including cross border areas. We also posted in individual

groups as well as posting organic and paid for content across our channels. We shared a social media toolkit with our partners to support and amplify our reach and encouraged stakeholders to share across their social media channels.

Our social media channels include: Facebook, Instagram, Twitter and NextDoor.

Below is an overview of our posts. In addition to this, we also posted directly to a number of relevant community groups.

	Reach	Engagement	Link clicks
Paid for social media	248,325	2922	2365
Organic social media	233,190	5355	3888
Total	**481,515**	**8277**	**6253**

Our main social media messages encouraged residents to visit our website, attend an event and complete the consultation questionnaire.

Adaptation to our approach following mid-point review

Following the mid-point review of the consultation survey responses at the mid-point of the consultation, we evaluated and adapted our consultation engagement and communication activity. Key changes included a focus on encouraging men and people aged 18-25 years old to participate in the consultation. We also targeted more of our communications and engagement at people from deprived areas of Somerset to increase participation.

A detailed overview of our consultation activity can be found in the appendices.

8.4. Public consultation activity – gathering responses

During the consultation period, residents and other stakeholders were invited to provide feedback on the stroke proposal through a wide range of methods. A consultation questionnaire for all residents, staff members, stakeholders and organisations was made available online and paper questionnaires were circulated widely and available on request.

NHS Somerset received written and email submissions from residents, stakeholders and organisations.

ORS also independently facilitated in-depth engagement designed and conducted by ORS with staff at the Trust and representatives from communities that NHS Somerset were less able to reach. ORS provided independent assurance to those groups who may have felt it harder to talk honestly in a session hosted by NHS Somerset.

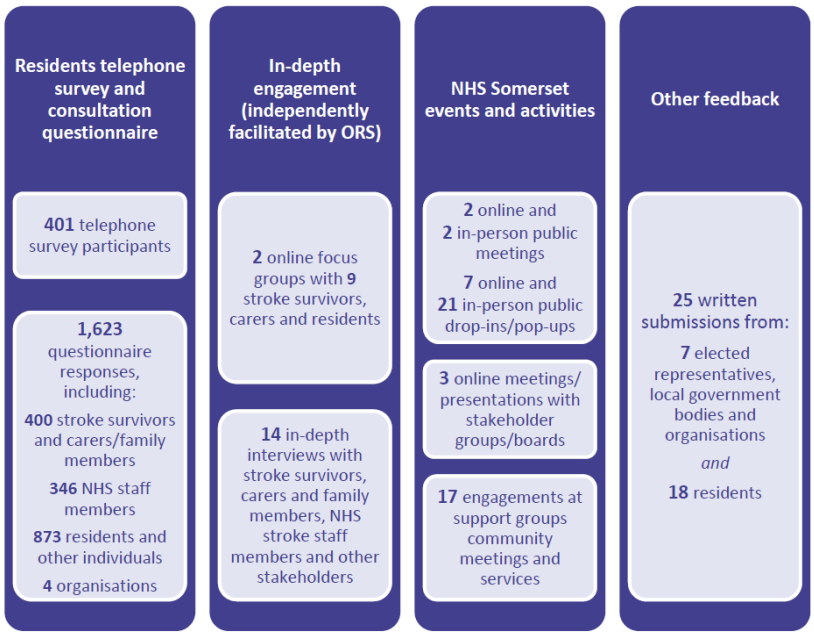


Image: Stroke consultation responses gathered

ORS have independently analysed all the feedback received. The insights and themed report have informed the development of this decision-making business case (DMBC).

You can read more about how we reached people during the consultation here [53]

8.4.1. Listening events

During the consultation period, 52 in-person and online meetings and events were held throughout the county either hosted or attended by the engagement team at NHS Somerset. The consultation activities were primarily intended as an opportunity for the public to find out about the proposals and ask any questions, and to promote broader engagement and signpost stakeholders to further information about the proposal and the open questionnaire and other consultation activities.

'Pop-up' events took place in which members of the NHS Somerset consultation team visited public locations such as supermarkets and shopping centres to speak to members of the public and promote the consultation. Flyers providing information and links to the consultation website were distributed, as well as paper copies of consultation documents and the questionnaire on request. In some cases, members of the public shared their views at the time which were noted and passed to ORS.

Members of the NHS Somerset consultation team also attended, online or in person, a number of pre-existing community and support group meetings to promote the consultation, answer questions, hear views on the proposals, and signpost attendees and participants to other ways to provide feedback.

8.4.2. Public panel meetings

Two public panel meetings were held to provide a chance for members of the public to ask questions of leaders from NHS Somerset and Somerset Foundation Trust about the proposed changes. One meeting was held in person at Yeovil Rugby Club and second was hosted online providing an opportunity for those who had not travelled to Yeovil for the first public meeting to directly challenge the same leaders.

[53] https://oursomerset.org.uk/wp-content/uploads/Final-Stroke-consultation-activity-report-.pdf

Following short presentations about the proposals, attendees were invited to ask questions and give feedback on the proposed changes. Attendees were again signposted to online resources and the questionnaire, and paper copies of the consultation document and questionnaire were available.

A further online public meeting was held which focused on residents living in or close to the Dorset boarder. Representatives from NHS Dorset were present to answer questions on Dorset County Hospital.

We also held a further public meeting online for Somerset councillors to address any questions they had.

8.4.3. Telephone and emails

The Engagement team managed and responded to email and telephone queries. Feedback provided on the proposals was logged. This feedback was reported to and analysed by ORS as part of their themed consultation feedback report.

8.4.4. Quantitative open questionnaire

Throughout the 12 week public consultation, stakeholders were signposted to the Somerset Integrated Care System website or provided with paper documentation. A range of information and resources were available, including the full consultation document and separate summary versions.

A structured consultation questionnaire was designed to allow stakeholders to provide feedback in a consistent format. Appropriate summary information was included for each question, with additional signposting to more detailed information; feedback was invited around any concerns or alternative solutions, and potential equalities impacts. Finally, a profiling section gathered stakeholder type and demographics.

8.4.5. Residents' telephone survey – to reach a representative sample of the Somerset population

The purpose of the telephone survey was to achieve a broadly representative set of views on the proposals from residents in the hospitals' catchment area (Somerset and neighbouring eligible wards in the surrounding counties of Dorset, Devon and Wiltshire) aged 18 and over.

The survey was conducted using a quota sampling approach with targets set on the numbers of interviews required by age, gender, area and working status.

ORS completed 401 interviews between 16 February and 13 April 2023 using a Computer Assisted Telephone Interviewing (CATI) methodology, with interviews undertaken by ORS's social research call centre. The sample source for the survey was a combination of random-digit dialling (RDD) and purchased mobile phone numbers to ensure inclusion of those less likely to have or use landline telephones.

8.4.6. Written submissions

During the formal consultation process, 25 written submissions were received, all of which were shared with ORS who included them in their analysis of all responses to the consultations. These included seven submissions from representatives or members of organisations, and 18 from individual respondents. No petitions were submitted as part of this consultation.

8.4.7. Deliberative engagement

The deliberative consultation activities with stroke survivors, carers, NHS stroke staff, representatives and local residents undertaken by ORS comprised focus groups and in-depth

interviews. These were designed to complement the other consultation activities and used as an opportunity to explore in more depth the themes arising in feedback from the open consultation questionnaire. Additional considerations around the proposed changes based on the experience of those with existing connections to stroke services in Somerset were raised through these activities.

8.4.8. Staff engagement

Programme Lead, Julie Jones spent time prior to the start of the public consultation engaging with staff to inform staff on the stroke units at both hospitals. Feedback and insights from staff helped to inform the proposals. Stroke staff were members of the stroke steering group and informed the development of the proposals.

During the consultation, the engagement team visited Aspire, the support group for people recently discharged from Yeovil District Hospital after having a stroke. They also ran a number of pop-up stands in public facing areas of the two acute hospitals and South Petherton Community Hospital and Williton Community Hospital, liaison and facilitation of these opportunity was done with staff at each hospital. Staff could also visit the pop up stands. Visits to the stroke units were also completed, giving staff the opportunity to go through the proposals and timelines.

For specific engagement with the staff most likely to be impacted by any changes, the engagement team facilitated the offer of confidential interviews with ORS to ensure that staff who wished to speak, could do so freely. This opportunity was taken up by four members of staff.

8.5. Consultation reach

To ensure we consulted with people who may be impacted by our proposals or that are not always well represented in public consultation we:

- Focused on reaching out to people where they are, in their local neighbourhoods and local networks.
- We promoted the consultation and provided opportunities with the aim of covering the geography, demography and diversity of Somerset, and surrounding areas impacted including Dorset.
- We advertised widely to make sure people were aware of the consultation even if they chose not to participate.
- We produced materials taking into account the differing needs of our communities, including Easy Read and Aphasia friendly.
- We tested our communication materials with members of our public and patient stakeholder group and Healthwatch Somerset readers' panel.
- We worked with partners in surrounding areas, including Dorset, to maximise our engagement and communications reach in surrounding counties where local people may be impacted by any changes.

The Equality Impact Assessment (EIA) was utilised to inform our stakeholder analysis and engagement activities. A detailed stakeholder analysis was undertaken and informed our engagement and communications activity.

Following the mid-point review of the consultation survey responses at the mid-point of the consultation, we evaluated and adapted our consultation engagement and communication activity.

Opinion Research Services (ORS) an independent research organisation also undertook a Representative telephone survey where they sought to gain the views of a representative sample that was reflective of the geography and demography of Somerset and boarding counties.

ORS also held independent in-depth interviews and focus groups with staff, people with lived experience of stroke, and people from underrepresented communities.

8.6. Public consultation findings – what did the consultation tell us

In its report, ORS included an executive summary which summarised the consultation outcomes to highlight the overall balance of opinions. The full ORS report is available in the appendices.

A number of key themes emerged in the consultation feedback as set out in this section;

8.6.1. Need for change

In the questionnaire and telephone survey respondents were asked to what extent they agreed or disagreed with the need to change. There was general recognition of the need for change across all consultation strands. In the deliberative engagement sessions in particular, Somerset's ageing population was recognised as placing increasing strain on services that are already restricted due to a limited specialist stroke workforce, and everyone considered the lack of 24/7 cover to be a challenge that should be remedied as a priority so that treatment can be provided quickly. On this note, there was evidence that many members of the public were not aware that 24/7 specialist consultant-led stroke care is not currently available in Somerset.

8.6.2. Proposed model of care: Hyperacute Stroke Services

In the questionnaire and telephone survey respondents were asked:

- To what extent do they agree or disagree with the proposal to deliver hyperacute stroke services from only one hospital site.
- If hyperacute stroke services were delivered from only one hospital, to what extent they agreed or disagreed that this should be Musgrove Park.

Levels of support for the proposal to deliver hyperacute stroke services from only one hospital in future were lower than those for the need for change in the two quantitative consultation strands.

In the residents' survey, just over three-in-ten residents (31%) agreed with the proposal, but nearly six-in-ten (58%) disagreed. In the consultation questionnaire, less than a third of NHS staff who responded (32%) and an even lower proportion (23%) of other individual respondents (including stroke survivors, carers and family members and residents) agreed. It should be noted, however, that views were more balanced among NHS staff working in stroke services, with nearly half (47%), agreeing while a marginally greater proportion (49%) disagreed.

Levels of agreement varied considerably based on geography in the consultation questionnaire: around half (51%) of respondents living nearest to Musgrove Park Hospital (MPH) in Taunton agreed with the proposal to deliver hyperacute stroke services from only one hospital site in future, whereas only around one-in-six (17%) living nearest to Yeovil District Hospital (YDH) agreed.

When asked to provide a view on if hyperacute stroke services were to be delivered from one hospital in future, whether this should be from MPH, nearly six-in-ten (58%) residents agreed, and nearly three-in-ten (29%) disagreed. There was again variation in views by geography: over seven-in-ten (72%) of those living nearest to MPH were in agreement, but only 44% of those nearest to YDH were.

In the consultation questionnaire, over two-fifths (43%) of NHS staff and less than a third (32%) of other individuals agreed that if hyperacute stroke services were to be delivered from only one

hospital in future, this should be MPH, while almost half (48%) of NHS staff and nearly three fifths of (58%) other individuals disagreed. Again, there was some geographical variation: four fifths (80%) of respondents living nearest to MPH agreed with the proposed location for a single hyperacute stroke unit (HASU) in Somerset, whereas only one fifth (20%) of those living nearest to YDH did so.

Focus group/interview participants, some written submissions and many attendees at the NHS Somerset-run events were more positive about the proposed model for hyperacute stroke services, seeing it as having potential to improve efficiency and quality of care, and make the service more attractive to new recruits. The prospect of 24/7 hyperacute care from specialist staff was viewed especially positively. However, YDH staff members, while generally agreeing that having one HASU providing 24/7 consultant-led specialist care was positive, did raise some concerns, including: the possible 'de-skilling' of stroke staff at YDH; national challenges around staffing, including potential difficulties recruiting new consultants; and that not delivering hyperacute stroke care at YDH could have negative impacts on surrounding hospitals such as Dorset County Hospital in Dorchester.

Ambulance waiting times and the impact of having to travel further to hospital on patient journey times and outcomes was the main criticism of this aspect of the proposed model of care across all consultation strands. It was felt that the proposed changes would preclude people from being seen within an acceptable amount of time after having a stroke.

Furthermore, visits from family and friends were consistently noted as a key aspect of stroke recovery, and there was concern that consolidating hyperacute services would impact visitors (especially older visitors) from Yeovil and the surrounding area, especially if they are reliant on public transport. Potential detrimental impacts on the work/life balance of staff, as a result of longer commutes, were also raised.
Despite the possibility of longer travel time to a single HASU however, many respondents and participants recognised the issues caused by lack of 24/7 specialist care, and that consolidating hyperacute stroke services could bring benefits in terms of clinical care and patient outcomes. Others were able to recognise both sides of the argument; they understood the rationale for the proposed model of care, while also understanding concerns around its impact on journey times.

Those who objected to the proposed model of care for hyperacute stroke services also raised some concerns around clinical sustainability, including that: consultant recruitment would continue to be challenging given national shortages; some YDH staff might refuse to transfer to MPH, further exacerbating shortages; and that undue pressure would be placed on MPH should services be consolidated there. There was also significant concern at the NHS Somerset-run events about the potential for further services to be lost from YDH and that Yeovil *"will end up with a second-rate hospital."*

8.6.3. Proposed model of care: Acute Stroke Services

In the questionnaire and telephone survey respondents were asked if acute stroke services should be provided at one or two hospitals.

Most questionnaire respondents and just over seven-in-ten residents (71%) thought ACUTE stroke care should be provided at both MPH and YDH if HYPERACUTE stroke services were to be delivered from only one hospital in future. Again, there was significant geographical variation among the latter; two-thirds (66%) of those living nearest to MPH thought acute stroke care should be provided at both hospitals (significantly lower than the overall result), while over three-quarters (76%) of those living nearest to YDH chose this option (significantly higher than the overall result).

Support for providing acute stroke care at both hospitals was also echoed across the other consultation strands. The reasoning for most was wanting to keep services local and the potential impacts of increased journey times to reach an acute stroke unit on patients, visitors and staff

members. In particular, early transfer back to their local area would allow carers/relatives to be more easily involved in patients' ongoing care. Retaining staff expertise in stroke services at both hospitals was also important to focus group/interview participants, as was the potential for an acute stroke unit at YDH easing pressure on MPH, which is already busy due to having other specialist centres.

8.7. Consultation equalities impacts and mitigations

In the questionnaire and telephone survey, respondents were asked if there were any particular groups or communities which they felt might be positively or negatively affected by the proposed changes.

Participants across the different qualitative consultation activities frequently raised the needs of particular demographic groups when discussing travel and access for some Somerset residents to get to the proposed HASU and ASU sites. It should be noted, though, that many of the concerns raised around the potential impacts of the changes related to travel via public transport and cars, rather than ambulances, with a particular focus on the implications for family members and carers who might visit patients in stroke units. It was recognised that the travel impacts on stroke patients would be lesser, as most would likely be transported by ambulance.

People with learning disabilities and other special needs were identified as potentially being put further at risk if their carers are unable to visit or be with them due to distance, traffic or access issues. Their attendance was considered especially important in providing patients' everyday caring needs alongside the stroke support received in hospital.

The proposals were said to put people from rural areas and small villages at a disadvantage, in particular those who are reliant on public transport, or isolated individuals without a support network of family and friends who are able and willing to drive them to appointments, and to visit them whilst in hospital. If both stroke units were to be consolidated at MPH, this would, it was felt, cause potential problems for these people due to the rurality of Somerset, and the fact they may already find long journeys difficult.

In terms of visitors, older people were thought to be less likely to have a support network and are oftentimes more isolated. It was also said that many older people have existing disabilities, frailty, and/or mobility issues, so for those living in the Yeovil area or the far west of the county, having to travel to Taunton could cause real issues with transport for the purpose of visiting.

Echoing feedback from other consultation strands, concerns were raised about the impact of changes on visitors with disabilities, who might already find travelling to hospital challenging and expensive. Participants thus said that *"in an ideal world"* all services would be available at both sites, but it was recognised that this is not a viable option.

Socio- economic issues were also considered: participants raised the potential difficulties faced by people on low incomes who need to visit loved ones in hospital, particularly those with young children and without access to private transport (who may be unable to afford taxis or travel by public transport). Moreover, there is a potential that some people will have to take time off work in order to make the longer journey to visit their loved one in Musgrove Park hospital. It was again recognised, particularly by staff and stroke survivors, that barriers to visiting could have significant impacts on patients' mental health and recovery.

Similarly, for YDH staff who would have to commute to and from Taunton daily, the time and cost of doing so was a concern.

Specific mitigations to reduce potential travel and access impacts were raised during discussions, such as improved and increased patient transport services, providing accommodation for visitors, or offering parking passes or tokens to reduce the cost of parking at MPH. It was again stressed that NHS Somerset should work in partnership with transport providers to improve public transport and road infrastructure to simplify journeys to hospitals.

8.8. How the consultation feedback has been used

The consultation activity and responses have been utilised to gain a wider understanding of the views of people who were impacted by the proposed changes which helped inform the proposals which are contained within this DMBC. We have also used these to ensure that our statutory duties have been fulfilled and that the responses to the consultation have been properly addressed.

Following the consultation, the Stroke Team, Stroke Steering Group, Stroke Public and Patient Reference Group, Stroke Project Board and the ICB Board have discussed the consultation activity, feedback, consultation responses and how this has influenced our final recommendations for service change.

A number of meetings and workshops were organised to ensure that the consultation responses were shared and evaluated, alongside attending other existing meetings.

A brief summary of meetings held include:

Date	Meeting	Purpose	Stakeholders
23/07/2023	Stroke Project Board Meeting	To note Consultation Feedback – key themes	Stroke Project Board
24/07/2023	Stroke Steering Group meeting	To review the draft feedback from the public consultation and consider actions which need to be taken.	Stroke Steering Group
11/08/2023	Collaboration Forum Meeting	To note Consultation Feedback	Collaboration Forum
13/09/2023	Stroke Public and Patient Stakeholder Reference Group	To gather further feedback on two questions raised during the public consultation relating to travel times.	Stroke Public and Patient Stakeholder Group
14/09/2023	Stoke Steering Group meeting	Preferred Option Criteria Assessment session with group.	Stroke Steering Group
28/09/2023	NHS Somerset Board meeting – development session	To provide the Board with an opportunity to hear from ORS and explore in more detail the feedback given during the consultation.	NHS Somerset Board
07/11/2023	Stroke Public and Patient Stakeholder Reference Group	To gather further feedback and insights on the main topics arising from the consultation feedback.	Stroke public and patient stakeholder group
30/11/2023	Somerset ICB Board Meeting	Update and review of consultation activity report and you said we are doing update.	Somerset ICB Board Meeting and public
07/12/2023	Somerset Scrutiny for Policies, Adults and	Update following the 12 week public consultation on acute	Somerset Scrutiny for Policies, Adults

	Health Committee Meeting	hospital based stroke services in Somerset (which ran from 30 January 2023 to 24 April 2023) and describes the next steps which will be taken on the future of acute hospital-based stroke services.	and Health Committee members and public
11/12/2023	Dorset Council People and Health Scrutiny Committee		Dorset Council People and Health Scrutiny Committee members and public

8.8.1. Consideration by Local Authority Scrutiny Committees

Engagement with Local Authority Scrutiny Committees has taken place throughout this programme. This section summarises the engagement about the consultation. More information about the wider engagement with Local Authority Scrutiny Committees is set out in section 13.4.

Somerset Scrutiny for Policies Adults and Health Committee met on 7 December 2023[54] and were presented with an update report which included a summary of the feedback received, following the 12-week public consultation on the future of acute hospital based stroke services and the next steps which were due to be taken.

There was an opportunity for councillors to discuss and question the content of the report. The Committee raised a number of questions with us outlining their concerns on the preferred option, particularly in relation to removing the HASU from YDH the impact it would have on residents in rural South Somerset. At the end of the discussion the committee remained concerned and made the following resolution.

The Somerset Scrutiny for Policies Adults and Health Committee:

- ***Proposed that the committee resolve this is not the best proposal for the people of Somerset***
- ***It was proposed that the committee should write to the Executive to inform of their decision***

Following the committee meeting, the ICB received a letter from the committee acting chair, highlighting their belief that it is not in the best interests of all the residents of Somerset, with particular concern for those living in the rural parts of our County. The extract of the letter is shown below:

> *Extract of letter from Scrutiny*
> *"The Committee feel very strongly that they have concerns that the proposal as it stands is not in the best interests of all the residents of Somerset. In particular there is a concern for those living in the rural parts of our County.*
>
> *Please on behalf of the Scrutiny Committee and Somerset residents make it clear to the Somerset NHS board this decision needs to be delayed and other options considered to safeguard the welfare of residents living in the south west part of the County".*

On receipt of this letter, the programme team considered their concerns and wrote back, highlighting the work that has been undertaken over a number of years to appraise viable options and identify a preferred option, the approach that had been taken during consultation to reach

[54] Minutes Template (somerset.gov.uk)

isolated and rural areas, the work that was been done to consider key areas such as increased travel times and access to public transport alongside the completion of an EIA to consider who would be impacted by the proposed change and this was used to understand both the impact and who needed to be engaged as part of a formal consultation.

A meeting was held with councillors on 17 January 2024 to provide the opportunity to answer questions regarding the proposals and to try and alleviate the concerns Scrutiny had. Not all councillors were fully satisfied with the proposal and it was stressed that the Scrutiny Committee would take an active role in scrutinising the implementation of the proposal to ensure it resulted in improved outcomes for the people of Somerset.

Dorset Council People and Health Scrutiny Committee met on 11 December 2023[1] and were presented with an update report which included a summary of the feedback received, following the 12-week public consultation on the future of acute hospital based stroke services and the next steps which were due to be taken. The committee took at the opportunity to ask question in relation to the impact the proposals would have on Dorset residents. The committee noted that:

> "The Committee was content with the consultation and the work completed and thought the consultation was robust.
> Members requested a written update following a decision being made by Somerset ICB".

9. Addressing themes from the consultation

Feedback from the consultation has been gathered and analysed, and the analysis has been considered by the Stroke Steering Group, Stakeholder Reference Group and the Stroke Project Board. Feedback summary;

- There was broad recognition of the need for change to address challenges in delivering acute stroke services in Somerset. Moreover, many respondents said they had not previously been aware that 24/7 consultant-led stroke care is not already in place at both current stroke units
- Overall views on the proposal to deliver hyperacute stroke services from a single hyperacute stroke unit (HASU) at one Somerset hospital were more negative, with a majority of residents (via the representative telephone survey) and respondents to the open consultation questionnaire disagreeing. Agreement varied based on geography, questionnaire respondents living nearest to Musgrove Park Hospital in Taunton were much more likely to agree with the proposal than those living nearest to Yeovil District Hospital.
- When asked if hyperacute stroke services were to be delivered from one hospital in future, whether this should be from Musgrove Park hospital, agreement was stronger among residents (via the representative telephone survey) than it was among respondents to the consultation questionnaire. Similar geographical variations to those outlined above were observed via both methodologies.
- Overall, focus group participants, interview participants, some written submissions and many attendees at the NHS Somerset-run events were more positive about the proposed model for hyperacute stroke services, seeing it as having potential to improve efficiency

[1] (Public Pack)Minutes Document for People and Health Scrutiny Committee, 11/12/2023 10:00 (dorsetcouncil.gov.uk)

and quality of care, and make the service more attractive to new recruits. There were, though, concerns about ambulance waiting times, the impact of having to travel further to hospital on patient journey times and outcomes, and the possibility that consolidating hyperacute services would impact visiting.

- Most questionnaire respondents and residents thought acute stroke care should be provided at both Musgrove Park Hospital and Yeovil District Hospital if hyperacute stroke services were to be delivered from only one hospital. This was also echoed across the other consultation strands. The reasoning for most people was wanting to keep services local and the potential impacts of increased journey times to reach an acute stroke unit on patients, visitors and staff members.

The Stroke Programme has considered the feedback and undertaken additional analysis and considered and taken account of a range of evidence. Key themes and concerns raised from the consultation are;

- Travel and transport times
- Clinical risk / quality of care
- Equality of access
- Inpatient environment
- Workforce

Each of these themes are set out and considered in detail below.

9.1. Travel and transport – travel times

Consultation feedback

People and communities shared their concerns in the consultation feedback that the extra travel time to hyperacute stroke services would mean a delay to treatment. For many respondents, this was contrary to the strong recognition across the county of the need to get treatment as soon as possible.

Key concerns raised:

- Concerns around increased travel times to other hospitals for stroke, especially in the context of the time-critical nature of stroke.
- Risk of worse patient outcomes and recovery due to delayed treatment for patients who have to travel further to access hyperacute stroke care
- The current ambulance waiting times adding to the delay in getting treatment.

We also had suggestions on maintaining two Hyperacute Stroke Units in Somerset and to locate the single Hyperacute Stroke Unit at YDH. These are addressed in Section 9.2.

Actions taken:
The options appraisal which led NHS Somerset to determine the proposals which went out to public consultation, was informed by a detailed travel analysis. Further analysis has now been undertaken using latest stroke data for Somerset to assess travel times with a deeper dive into modelling.

9.1.1. Travel time assessment - modelling of the impact of the proposals on access to stroke care

In the two options consulted on, patients would be taken to their nearest Hyperacute Stroke Unit which may be outside of Somerset. For some people this change would mean that their initial journey to hospital by ambulance could take longer.

The Somerset Stroke programme commissioned additional geospatial modelling of travel and worked with Southwest Ambulance Service NHS Foundation Trust to understand the impact of the proposed changes on ambulance conveyance to hospital. A number of assumptions have been made to inform the modelling – more information is available below and in the Geospatial appendix.

The modelling in this section looks at travel impacts to access a HASU – so the analysis and conclusions are consistent across Option A and Option B.

Travel for 50+ population to a HASU by ambulance

Most strokes occur in people aged over 50 – over the past five years, stroke patients aged less than 60 have formed 13.6% of the Somerset population who have had a stroke and in 2022/23, SSNAP data shows that 96.3% of Somerset stroke patients were aged over 50.

To reflect this, we have refreshed the geospatial modelling to understand the impact of the proposed changes on the 50+ age group who are at increased risk of a stroke and therefore most impacted by the proposed change.

Table: Travel to a HASU by Ambulance (for population aged 50+)

Travel to a HASU by Ambulance (for population aged 50+)	Current service configuration (based on population aged 50+)	Modelling of change scenario (based on over 50 population)
% of population who can reach a HASU in 45 minutes	95%	73.6%
% of population who can reach a HASU in 60 minutes	99.9%	98.9%

By implementing the proposal of centralising the Hyperacute Stroke Unit in MPH and for patients to be taken to their nearest HASU (which may be outside of Somerset), 98.9% of over 50's will be able to access a HASU by ambulance within 60 minutes in comparison to 99.9% in the current configuration.

Somerset population travel to a HASU

It is possible that residents across all of Somerset may wish to travel to a HASU, for example to visit their loved one. Modelling shows that the proposed changes would mean a longer travel time to a HASU by driving, compared to the current configuration of stroke care for the Somerset population

Table: Travel to a HASU for residential population by driving

Travel to a HASU for residential population by driving	Current service configuration	Modelling of change scenario
% of population who can reach a HASU in 45 minutes	92%	76%
% of population who can reach a HASU in 60 minutes	99.5%	99%

HASU care incorporates the first 72 hours following a stroke. This means the modelled travel impacts set out here would apply differently for option A and option B.

For option A, this travel time will impact travel for the first 72 hours of inpatient care whilst in a HASU before repatriation to an ASU which may be closer to home.

For option B, this travel time impact is more significant as it will impact travel for the HASU and ASU stages of care – up to two weeks.

Travel to an ASU is considered in more detail in the next section.

Scenario modelling of 22/23 ambulance journeys remodelled in change scenario

Modelling also assessed the impact of the proposed changes on journey distance, time and CO2 emissions based on modelling the 2022-23 activity data in the change scenario. This was based on stroke activity data from 2022-2023 and identified records where the destination HASU by ambulance had been Yeovil District Hospital and to identify the alternative HASU that would present the equivalent shortest journey under the change scenario. The change in journey distance, time and CO2 emissions from the alternative journey was then calculated under the proposed HASU change scenario.

- **Changes to journey distance** - The analysis shows that likely impacts on journey distance to a HASU by ambulance in the change scenario; 63.65% of Somerset stroke patients would see no change to their journey distance
- 2.51% of Somerset stroke patients would have a shorter additional journey distance in the proposed change scenario of up to 10km (this means Yeovil District Hospital previously presented the quickest journey (by time) but was further away (by distance) than the HASU presenting the second quickest journey time (which would be the quickest under the change scenario)).
- 34% of Somerset stroke patients would have additional journey distance of between 0 and 35km in the proposed change scenario

Changes to journey time - The journey time analysis shows that 64% of patients would have had no change to their journey time to HASU by ambulance, 5% would have had an additional ambulance journey time of up to 15 mins, and 31% of patients would have had an additional ambulance journey time of between 15 and 35 minutes.

Changes to journey time - The journey time analysis shows that a proportion of patients from 22/23 would have had additional journey times in the proposed change scenario.

This data shows that a small proportion of patient from the 22/23 activity data would have had slightly shorter journey distances to HASU by ambulance, but a large proportion would have had additional journey distance and additional journey time to a HASU by ambulance in the change scenario.

Modelling of impacts outside of Somerset ICB boundaries

The impact was also modelled of the change scenario for residents of Somerset and other ICB areas for whom their closest HASU location will be different in the change scenario.

The table below shows that the proposed change will mean additional journey time by ambulance to a HASU for the residents of Somerset of up to 35 minutes of additional travel by ambulance for those aged 50+.

Impacts are also apparent for residents of other systems where YDH is the closest HASU – particularly Dorset, with up to 30 minutes of additional ambulance travel for those aged 50+ or

drive time for the residential population. Smaller impacts are modelled for residents of BSW of up to 15 minutes additional travel or drive time, and up to 5 minutes for residents of Devon.

These impacts are the same for HASU travel in both option A and option B. Travel impacts for an ASU is considered in the next section.

Table: Areas with increased travel time by ambulance to the Stroke care location under the HASU change scenario

Areas with increased travel time by ambulance to the Stroke care location under the HASU change scenario (and ASU in option B)								
ICB	Residential population aged 50 plus with **additional** travel time (minutes)							
	0 to 5	**5 to 10**	**10 to 15**	**15 to 20**	**20 to 25**	**25 to 30**	**30 to 35**	**Total**
NHS Somerset	17,501	6,384	11,260	18,110	11,921	35,820	5,167	106,613
NHS Dorset	4,128	6,621	5,928	5,845	1,340	5,551		29,413
NHS BANES, Swindon and Wiltshire	341	1,550	531	0	0			2,422
NHS Devon	1,406	0	0	0	0			1,406

Modelling approach and accuracy

The geospatial modelling has assumed patients are transported from their home postcode to their closest HASU. It is acknowledged that this modelling is imperfect, as not everyone has a stroke at home, and although patients are more likely to be taken to a hospital closer to where they live, ambulance crews make decisions based on several different factors – there aren't set rules about which hospitals people in each area are taken to.

Modelling scenarios have been selected in order to provide indications of the likely impact of the change scenario on populations of Somerset and the surrounding areas. More information about the modelling is set out in the geospatial appendix.

SWASFT has formed a key part of the steering group and throughout the planning and appraisal process, and have confirmed they are happy that the modelling of the blue-light/ambulance travel impacts represents an appropriate basis on which to understand the potential impacts of the proposed changes.

9.1.2. Clinical review of evidence of impact of travel times

The impact of changes in travel time to the hospital need to be weighed against anticipated improvements in the speed of treatment when a patient arrives at the hospital (the "door-to-needle" (DTN) times:

Evidence from the reorganisation of stroke services in Northumbria[55] demonstrated a significant improvement of 26 minutes in average DTN times after the reorganisation. A thrombolysis audit performed at MPH shows that it a realistic expectation that the preferred model could improve local DTN times by a similar amount.

[55] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6502604/pdf/futurehealth-5-3-181.pdf

This is evidenced further by considering that the median DTN times at YDH over the past 6 months have been 79-80 minutes against a National median of 53-54 minutes. Thus, even improving to the National median DTN time would see a reduction in DTN times of 25-26 minutes.

Therefore applying a realistic reduction in DTN times of 26 minutes to the changes in travel times for Somerset population above, the preferred option would see:

- 64%: ***26-minute improvement*** in time to thrombolysis
- 5%: ***up to 11-minute improvement*** in time to thrombolysis
- 31%: ***between 11-minute improvement and 9 minute deterioration*** in time to thrombolysis

This suggests that at a population level for Somerset, we could anticipate an overall improvement in their speed of receiving thrombolysis, even when taking into account some increased journey time to the hospital

In addition to reviewing the travel time analysis, the stroke steering group have also reviewed the national clinical recommendations for best practice.

Stroke is a medical emergency and the quicker someone gets to a fully equipped and staffed stroke service will mean quicker access to specialist teams and treatment leading to improvement in outcomes. The FAST campaign is a test to quickly identify if someone is having a stroke and acting FAST gives the person having a stroke the best chance of survival and recovery and prompts the public to call 999.

The evidence is strong that being admitted to a specialist stroke centre with access to stroke expertise 24 hours a day, seven days a week results in better outcomes than being managed without these resources. The improved outcomes arise from careful attention and treatment to maintain homeostasis, skilled nursing and medicine to avoid complications and early intervention to treat complications before they become life-threatening[56].

NHS England have recognised and considered the issues that arise from rurality in their Configuration Decision Support Guide for stroke services, noting that in rural areas compromises might need to be made as achieving a well-staffed unit working 24/7 that is also within a 45-60 minute drive in a blue light ambulance might not be possible services should be organised in a way that will provide the greatest good for the greatest number of people.

In their Configuration Decision Support Guide, NHS England use the example of a rural area currently with two underperforming stroke services about 30 miles apart. In their example they note that the two hospitals cannot run 24/7 services because of insufficient stroke consultants. In the example they give, one hospital has two funded consultant posts, but one is vacant despite repeated advertisements. The two hospitals do not both have 600 stroke admissions a year, meaning that neither has a sufficient volume of cases to maintain the necessary levels of experience and expertise. In addition, both hospitals are dependent on the stroke physicians to help run the general medical rota, meaning that having a specialist stroke rota is unfeasible while also complying with the European Working Time Directive.

Within the example, centralising services onto one site therefore seems logical but doing so would mean that a population of about 70,000 patients will be up to 90 minutes' drive away from the stroke centre. This would result in about 110 patients a year having to travel the 90 minutes, of whom about 22 would have been suitable for thrombolysis but will arrive too late for treatment. Of these, three would have had a better outcome if they had received thrombolysis. However, travelling that extra distance will mean that all 110 patients will get better quality care in the specialist centre and far more than three will have improved outcomes as a result[57].

[56] stroke-services-configuration-decision-support-guide.pdf (england.nhs.uk)
[57] stroke-services-configuration-decision-support-guide.pdf (england.nhs.uk)

The example above from the NHSE decision making support guide has many similarities to our situation in Somerset. So, while not ideal, it is necessary to be pragmatic and organise services that will provide the greatest good for the greatest number of people and not fail to do this because it is thought that equality must be preserved at all costs. As stated in the NHS England Decision Support guide, maintaining poor services for all must not be an option even where it is not possible to provide thrombolysis for the entire population.

The national Stroke service Model 2022 and the National Stroke Clinical guideline 2016/2023 state that to optimise treatment, all patients with suspected stroke must be admitted directly to a stroke unit and receive early multidisciplinary assessment that involves as a minimum stroke specialist nursing input, stroke specialist medical input and swallow screening within four hours.

There is no doubt that intravenous thrombolysis given to the right patients in the right way also increases the likelihood of avoiding long-term disability, although it has no effect on overall mortality. Currently, even in the most active centres, only about 20% of unselected stroke admissions are treated with thrombolysis. The remaining patients are excluded from treatment because they arrive too late for the treatment to be useful or they have other contraindications that would make treatment too hazardous to justify. Within the stroke services configuration decision support guidance it says that if patients are treated within three hours of the onset of symptoms, for every seven patients treated, one person will have a major stroke converted into one that leaves little or no long-term disability[58]. This was also a recommendation in the 2016 National Stroke Clinical Guideline.

Until recently there was a strictly time-based window for stroke reperfusion treatments, where thrombolysis could only be given within 4 ½ hours of a known onset time for an ischaemic stroke. The evidence base has recently advanced, so that decisions regarding thrombolysis can be made on a "tissue" window, by using advanced imaging such as CT angiogram and CT perfusion scanning to determine whether and how much of the brain tissue could be rescued by thrombolysis. With these increased treatment options there is additional complexity, thus highlighting the need for greater stroke specialist input 24/7.

Similarly, for mechanical thrombectomy, the initial research trials had identified benefit from mechanical thrombectomy within 6 hour of onset of ischaemic stroke with associated large artery occlusion. More recent studies have identified that additional imaging such as CT- or MR-perfusion scanning may identify patients who could benefit from mechanical thrombectomy up to 24 hours after stroke onset.

The 2021 NICE Guideline states that thrombolysis treatment is started as soon as possible within 4.5 hours of onset of stroke symptoms. This guidance has now been updated within the National Stroke Clinical Guideline 2023 and states that:

- Patients with acute ischaemic stroke, regardless of age or stroke severity, in whom treatment can be started within 4.5 hours of known onset, should be considered for thrombolysis.

- Patients with acute ischaemic stroke, regardless of age or stroke severity, who were last known to be well more than 4.5 hours earlier, should be considered for thrombolysis with alteplase if:
- – treatment can be started between 4.5 and 9 hours of known onset, or within 9 hours of the midpoint of sleep when they have woken with symptoms.

[58] stroke-services-configuration-decision-support-guide.pdf (england.nhs.uk)

9.1.3. Ambulance wait times

In Somerset 75% of strokes are conveyed to hospital by ambulance and consultation feedback highlighted concerns that delays in ambulance response times and additional travel time would potentially affect patient outcomes. The Somerset stroke programme has worked with SWASFT to model the impact of the proposed changes and to review response times for ambulance calls, both category 2 calls of which stroke forms part of, and stroke specific performance.

Evidence of response times for category 2 response times between 2021 and the year to date in 2023 show an improving picture with the average Somerset response time to a cat2 call in 21/22 of 51.4 minutes compared to the SWAST average of 47.6 minutes. This has improved in 23/24 with Somerset cat 2 calls being an average of 41.6 minutes but in the context of the South West we still remain still just slightly below the SWASFT regional average for 23/24 of 40.1 minutes.

However, national targets for responding to category 2 calls is 18 minutes so Somerset ICB is working with SWASFT on a number of responses and actions.

At a national and regional level, data shows there is a strong relationship between ambulance handover delays and Category 2 Mean call response times.

At a system level there is still a relationship between ambulance handover delays and Cat 2 mean times, but the impacts on performance are multi-factorial so the smaller the area reviewed the more sensitive the relationships with lots of factors. Deciding where and when to have ambulance resources in order to achieve performance and patient care has a large number of considerations which include factors such as activity, physical geography, SWASFT infrastructure, profile of resources by hours and a range of other factors including regional factors, employee considerations and turnaround time at hospital.

A number of initiatives are being implemented to focus on and improve performance.

Regional initiatives are focused on call answering performance, Category 2 segmentation, workforce and resource planning e.g. overnight, and reduction in handover delays.

Somerset local initiatives to improve category 2 performance include;

- Bimonthly ambulance handover touchpoint meetings between Yeovil, Musgrove, SWAST and Somerset ICB to progress local improvement work
- Workforce – Recruitment / Retention including use of agency staff, operational incentives planning and funding for overnight resourcing
- In terms of handovers, regionally NHSE are working with regional clinical colleagues, the national team and the NHSE Emergency Care Improvement Support Team (ECIST) to share best practice and learning
- Increased use of alternative pathways – undertaking monthly in and out of hours front door audits of ambulance arrivals, educating crews/staff of all the alternative pathways that crews could refer to, which will avoid unnecessary admissions.

Specific provisions also include;

- Somerset Ambulance Doctor Car – the service is currently treating 80% of patients within the community or their own homes without the need to convey by ambulance. On average, 200 patients are treated within the community who otherwise would have been conveyed
- Mental Health resource – a Mental Health Ambulance has been commissioned in Somerset to solely deal with patients with Mental Health issues, this will provide specific care to patients with Mental Health which will provide more ambulance resource to meet our Cat 1 and 2 response times, this will be going live on the 22nd January 2024.

In terms of reducing Somerset handover delays specifically, although still very pressured

Somerset has seen an improved picture month on month with their lost hours in handover delays, from 1088 lost hours in September 2023 to 797 lost hours in November 2023.

SWASFT have been involved in the modelling of the impact of the proposed change scenario and have confirmed that they are happy that the assumptions, the data and the outputs are appropriate and within what they would expect. SWASFT have been part of the steering group and governance decision making process from the start with the Head of Clinical Development heavily involved. SWASFT have additionally commented that ambulance response times is a dynamic picture which relates to broader system pressures, often multifactorial, across the region, and they are pleased that the impact of handover delays and the correlation between these delays and their Category 2 performance has been recognised and SWASFT are working with commissioning partners in improving this across the region.

9.1.4. Current model risks and issues

Stroke care is becoming increasingly more complex, and this requires fully equipped and specialist staffed units to ensure that people get specialist stroke care as quickly as possible twenty-four hours a day seven days a week.

Currently neither Musgrove Park Hospital nor Yeovil Hospital has a 24/7 service and there is variation and an inequitable provision of stroke care in Somerset particularly at weekends and out of hours (OOH).

Clinical standards for hyperacute and acute units state that patients should be:

- Assessed by stroke specialist clinician within 1 hour of hospital arrival.
- A hyperacute stroke unit should have continuous access to a consultant stroke physician, with consultant physician review 7 days per week.
- Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face.
- A hyperacute, acute rehabilitation stroke service should provide specialist medical, nursing, and rehabilitation staffing levels matching the recommendations.
- Clearly defined unit (as specified by NICE) (An acute stroke unit is a discrete area in the hospital that is staffed by a specialist stroke multidisciplinary team).

The current configuration of stroke services creates several risks and issues:

- For a patient who arrives at Yeovil after 5pm on a Friday they will not get seen by a specialist stroke consultant until Monday morning.
- Patients who arrive at Taunton at weekends after 3pm will not be seen by a specialist stroke physician until the next day.
- There is a considerable time difference in terms of how quickly stroke patients receive IV thrombolysis in-hours compared to out-of-hours when delivered by non-stroke physicians (audit of Thrombolysis Door to Needle Times – June 21 at Taunton)
- The current AGWS out-of hours stroke physician telemedicine service is exclusively for patients being considered for thrombolysis or mechanical thrombectomy, accounting for about 20-25% of patients. However, many other stroke patients admitted out-of-hours who would benefit from senior specialist stroke expertise (e.g. patients admitted with intracerebral haemorrhage, stroke patients with complex comorbidities or unusual presentations (e.g. arterial dissection, venous stroke, stroke in pregnancy). The proposed clinical model would address this gap
- The sustainability of the current model is under threat due to the inability to provide equitable staffing across both sites to deliver 24/7 stroke care due to national shortage of stroke consultants.

- Patients do not receive timely access to stroke care on either site.
- Yeovil does not have clearly defined HASU or ASU with staffing levels matching the recommendations.

9.1.5. Conclusions / impact on the model

The travel impacts of the proposed changes have been reviewed by the stroke steering group with a range of clinicians, person with lived experience and the stroke association, and by the stakeholder group which included those with lived experience and carers.

Both groups recognised that travel to a Hyperacute Unit will be longer for some people however the benefits of being admitted to a specialist stroke centre with access to stroke expertise 24 hours a day, seven days a week results in better outcomes than being managed without these resources. Both groups felt that this mitigated the impact of increased travel times.

This is also supported by national evidence;

There's now a very strong evidence base from a range of reconfigurations that consistently shows that patients are prepared to travel further to receive specialist treatment in emergencies, including thrombectomy, and it mirrors what already happens in heart attack and trauma.

Professor Martin James, Consultant Stroke Physician Royal Devon and Exeter Hospital and Honorary Clinical Professor University of Exeter

In the context of the continued and well-publicised pressure on ambulance trusts, there needs to be a continued focus on reducing delays in pre-hospital emergency response and conveyance to hospital using pre-alerts to the stroke team. This will ensure that time critical acute treatments such as thrombolysis and thrombectomy, are delivered as rapidly as possible.

Pilots using pre-hospital video telemedicine between paramedics and stroke specialists in hospital will aid the diagnostic accuracy of stroke, enhance delivery of acute therapies and help to identify stroke 'mimics'. Somerset are keeping a watchful eye on the outcomes of these pilots and will consider implementing if they have been successful in reducing conveyances to the stroke team.

Consultation feedback highlighted concerns about delays in ambulance response time and the potential impact on outcomes for patients. Whilst the ambulance response time is improving, patterns of activity show that particularly since Covid, patients have continued to self-present at A&E.

As a result of the consultation feedback and additional analysis undertaken, the Somerset stroke programme have and assumed that patients will continue to self-present at A&E in the modelling of the change scenario.

Feedback through extensive engagement and co-design with local communities has reinforced the need for a balance between providing a range of choices for patients and the system's ability to deliver the best possible quality of care, with people generally being prepared to travel a further to access better health outcomes and having a good understanding of the evidence base and logic for this.

In their Decision Support Guide on stroke services, NHS England have recommended that the following factors should be considered when looking into redesigning stroke services in rural areas:

- Clinical and financial critical mass standards achievable in urban areas may not always be feasible in low population density areas

- Balance between volumes, travel times and financial viability
- Standards that must not be compromised are:
  - specialist assessment on admission (24 hours a day) and daily thereafter during hyperacute phase
  - stroke unit staffed and equipped in line with best practice specification
  - 24-hour access to scanning
  - access to thrombolysis, but less important than other aspects of care
  - access to therapy.

The clinical model for both options was developed with clinical teams using the national guidance available to ensure that for both hyperacute and acute stroke care best practice would be delivered along the pathway. The clinical model was reviewed by the stroke steering group who considered the Clinical Model fit for purpose to deliver right outcomes for patients and all agreed signed off.

The standards that NHSE say cannot be compromised are included within the clinical model for Somerset.

Getting to hospital quickly is important when you have a stroke, but it's also important to be seen by specialist staff quickly when you arrive and to have access to the best treatment available. One hyperacute stroke unit at Musgrove Park Hospital would be better able to support this care by providing rapid access to the right expertise and specialist equipment. The conclusion from the review of the impact of travel time and the benefits of a changed model continue to support the centralisation of stroke care as per national guidance and experience of other health systems. This conclusion continues to support both Option A and Option B.

This feedback and additional analysis was taken into account in the consideration of option viability summarised in section 10.

9.2. Travel and transport - Transport issues for visiting family and friends

Consultation feedback

People and communities shared their concerns in the consultation feedback about transport issues for visiting for family and friends.

Key concerns raised:

- Suggestions were made around making travel easier for visiting family, helping with car parking costs and having available accommodation nearby
- The importance of easy access for visitors was stressed, as visits from loved ones are crucial to stroke patients' recovery

Actions taken:
Family and friends play a really important part in a patient's recovery. As some patients would have to travel further if these changes went ahead, travel times for some visitors would also increase, making it more difficult for some people to travel to visit hospital. In Somerset the situation is the same for stroke patients as for every other service, and visitors to hospital are expected to provide their own transport.

The Somerset Stroke Programme commissioned additional geospatial modelling to understand the transport impact for visiting family and friends both driving by car and using public transport to both the HASU and ASU configuration in Option A and Option B.

9.2.1. Transport analysis – driving times to HASU and ASU

Travel to a HASU - Geospatial modelling set out above shows the modelled impact of the proposed changes to travel to a HASU by driving for the population of Somerset.
The modelled impacts of increased driving time to a HASU is the same for option A and option B, but impacts only the first 72 hours of care in option A, and up to 2 weeks in option B.

Travel to an ASU – driving time – Travel times for the Somerset population to an ASU is different between option A and option B.

Drive time to an ASU for residential population	Current service configuration	Modelling of change scenario – option A	Modelling of change scenario – option B
% of population who can reach an ASU in 45 minutes	92%	92%	76%
% of population who can reach a ASU in 60 minutes	99.5%	99.5%	99%

9.2.2. Transport analysis – public transport times to HASU and ASU

Modelling public transport travel to HASU and ASU locations has required a number of assumptions to be made and parameters set in the modelling. The Somerset stroke programme discussed the assumptions and parameters for the modelling with the stakeholder reference group, and the steering group, including clinicians, to get their feedback on the most important factors to consider.

Public transport availability and timetabling can vary significantly by day of the week and time of day meaning significant changes in the modelling outputs could be seen if the parameters are changed, so the modelling will not represent every situation, but provides indicative modelling of the potential impact – affected areas and population figures.

It is important to note that a proportion of the population of Somerset, and also the population of Dorset, do not currently have access to a HASU or ASU by means of public transport in the current configuration of services.

As such, modelling focused on the population who are able to access care locations in the current configuration of services using public transport, but who cannot do so under the change scenarios, and so would lose access to a HASU or an ASU by public transport.

Travel to a HASU – public transport - The modelling of public transport access to a HASU is the same for option A and option B and shows;

- The Somerset residential population modelled to lose access to a HASU by public transport is 109,072
- The Dorset residential population modelled to lose access to a HASU by public transport is 15,160

Travel to an ASU - by public transport – The modelling of public transport access to an ASU is the different for option A and option B and shows;

- For option A, access by public transport to an ASU would not change from current access
- For option B; The Somerset residential population modelled to lose access to an ASU by public transport is 109,072. The Dorset residential population modelled to lose access to an ASU by public transport is 15,160

9.2.3. Stakeholder group review

In 2018, views were sought from members of the public during the original Fit for My Future public engagement on the case for change for the FFMF strategy and travel was identified as a key issue. 49% of respondents agreed we should concentrate more specialist care services (like stroke) in fewer places, even if it means some patients and their visitors have to travel further. 33% didn't agree with 18% unsure. Greater centralisation is agreeable as long as there is clinical evidence to support this statement and the services are 'world-class'.

The length of time to travel across Somerset has been recognised as a particular issue in this consultation and working to maintain contact between a patient in hospital and their loved ones is an area that Somerset Foundation Trust are working on for all patients.

Discussion with the stakeholder reference group about the geospatial assumptions and modelling parameters included sought feedback on the most important factors to consider. Feedback included awareness of what matters for those with lived experience, for example considering the impacts of visiting hours and the travel timings modelled because the Somerset concessionary travel bus pass is valid from 9:30am

Throughout the programme of work the engagement with the stakeholder group has always focused on the ability of carers to visit and be with their loved ones. They understand the compromises that need to be made to get specialist stroke care and have made suggestions such as leaflets for relatives and carers that give them information about options for community transport and the opportunity for open visiting hours to give adequate time for visiting.

Further engagement with our Stroke Public and Patient Reference group asked what length of time would be considered acceptable to travel visit a loved one in hospital. In response, the group stated that ensuring their loved one reached the best possible care and treatment outweighed considerations of travel to visit them.

This is in line with qualitative studies[59] of patient experience of centralised acute stroke pathways where disadvantages of travelling further were perceived to be outweighed by the opportunity to receive the best quality care. This research highlights the necessity for all staff on a centralised care pathway to provide clear and accessible information to patients, in order to maximise their experience of care.

9.2.4. Clinical response – importance of visiting friends and family

Clinical teams know that visits from family and friend's aide patients in their recovery due to the emotional support, love, and encouragement they can provide to their loved one which reduces stress and anxiety for the patient leading to quicker recovery. Having to travel a long way to visit loved ones can have a detrimental effect on the amount of time relatives and carers can spend with their loved one especially if they have to use public transport.

Relatives and friends can help staff by providing vital information for staff around their likes and dislikes and relatives could be involved in guiding professional especially for patients with conditions such as dementia.

Another lesson learnt during the Covid-19 pandemic was how digital technologies can be used to enable patients to remain connected to their families and friends when options to meet in person are limited. Evaluation of digital devices such as iPads demonstrated that they can be a valued

[59] https://onlinelibrary.wiley.com/doi/10.1111/hex.12685

tool to increase social connection and support the emotional wellbeing of patients. Clinical teams who facilitate these virtual connections can play a large role in the patient's support system: present with the patient during milestone celebrations and acting as support when no family members are present, such as holding their hands when they become emotional seeing family members on screen. iPads can also be useful means to improve the quality of family meetings where relatives and carers are unable to visit in person.

9.2.5. Support already in place for visiting friends and family

A range of measures are already in place to support visiting friends and family;

- Innovations such as a using video technology for an inpatient to speak with a loved one are already in place for example both stroke units have iPad's which can be used to facetime families and loved ones.

- Both Somerset hospitals have facilities available where families can stay overnight when people are really unwell. The hospitals have a list of B&Bs that are a short distance from the hospital and there is a League of Friends bungalow on the Taunton site that can be used for relatives of patients who are critically unwell. Both sites have the facilities for relatives to stay within the ward if their loved one is very unwell

- Dorset County Hospital visiting hours on the stroke unit is between 2pm and 7:30pm however palliative and EOL patients have 24/7 visiting rights. In addition, DCH support the Carer Passport scheme which gives complete flexibility with visiting, and will also try to accommodate relatives to stay in the ward when their loved one is critically unwell

- Parking arrangements are currently in place to support friends and family including: at Musgrove Park Hospital, Q park has a reduced parking scheme which can be requested for up to two family members; at Yeovil District Park Hospital, concessionary parking is available for some relatives and parking for patients at End of Life is free

- At Dorset County Hospital, if a stroke patient is receiving palliative or end of life care, parking is free. If a patient remains in the stroke unit for longer than 7 days, relatives can obtain a concession parking permit for £12.50 a week

9.2.6. Conclusions / impact on the model

The consultation feedback has clearly highlighted travel as a key concern and the positive impact that visits from family and carers and friends can have on wellbeing and recovery after a stroke.

We have considered the evidence of the impact of additional travel for visiting friends, families and carers and feel that the best decision needs to be made for the majority of the population which means a requirement to travel further for hyperacute care to get the best outcomes.

The impacts of the change scenario likely for visiting friends and family can be partially mitigated through a number of considerations and actions which will be taken forward into the implementation phase for any proposed changes, including;

- Access and travel working group - recognising that issues around transport in Somerset, due to its particular geography and existing infrastructure which are outside the remit of the NHS to resolve, the programme team have recommended that these concerns be heard by colleagues across the ICS and for NHS Somerset to lead a working group to seek innovative ways of overcoming barriers to access.

- Visiting times alignment and communication - ensuring consistent approaches and communication of visiting times across the sites to support if people have working or caring, transport or other requirements – to minimise confusion where patients are transferred to another setting to continue their care

- Communication leaflet for friends and family outlining where to go for support with travel, visiting times – development of a leaflet and ensuring it is available to all ward staff to summarise community transport information. This will support ensuring consistent information and communication across the sites to support access to community transport options that could be signposted / available for friends and family – working with a stakeholder refence group to ensure information is accessible and responds to the needs and priorities of patient/friends and family groups

- Additional support will be considered and provided where needed to support specific stakeholder groups. See section 9.4 for more information.

- Engagement with the Somerset system-wide Sustainability Steering Group, and the travel and transport working group across the ICS which is in the process of being established to support the work around the travel plan for Somerset which Somerset Council is currently writing

- Engagement with the Dorset transport group to ensure links and information sharing and to link with Dorset council around their travel plans

This feedback and additional analysis was taken in to account in the consideration of option viability summarised in section 10.

9.3. Clinical risk / quality of care

Consultation feedback

Concerns were raised in the consultation feedback around quality of care. This focused on concerns that an increase in both travel times could lead to worse clinical outcomes for patients and that the increased number of patients on one site could result in capacity issues if the under resourced workforce issue was not addressed.

Key concerns raised:

- An under-resourced workforce could impact the quality of care received
- An increase in the number of patients at one hospital could impact the quality of care received
- Concerns around the impact on other hospitals if Yeovil District Hospital did not have a hyperacute or acute stroke unit
- Concern expressed by some that proposals may be driven by cost savings and the need to address internal challenges, rather than being in the best interests of patients

Actions taken:
A key activity undertaken by the Somerset Stroke Programme has been to review and refresh the activity modelling, the capacity and bed modelling, and the resulting workforce model and resourcing requirements using the latest activity data from 2022/23. The refreshed activity, capacity and workforce modelling has then informed a significant proportion of the financial modelling. Impacts were also tested on the quality of care and impacts on neighbouring hospitals.

9.3.1. Refreshed activity and capacity modelling

Activity projections at each site were reviewed as part of the development of the DMBC, building on the modelling in the PCBC.

The most notable changes to the baseline used for the activity and bed modelling between the PCBC to the DMBC are as follows:

- Activity – changes relate to year-on-year variation in volumes and patterns of admissions demand
- Beds (ASU) – changes relate to increases in average length of stay for stroke patients
- Diagnostics – changes relate to refined assumptions on the average number of diagnostic tests per stroke admission, based on updated advice from clinical experts

The impact of these changes have been small changes to YDH activity projections for stroke activity and ED attendances and projected of bed numbers.

The outputs from the refreshed modelling and additional analysis are summarised in the section below for option A and for option B.

Activity and capacity modelling

The figures in the tables below relate to activity which currently takes place at Musgrove Park Hospital and Yeovil District Hospital. These figures include assumed increases in activity resultant from the BNSSG Stroke Services Reconfiguration which was implemented in May 2023.

Activity modelling - The table below shows the modelled stroke unit admissions for options A and B; these are a simplification of the actual expected patient flows, in that they are based on the closest HASU to the patient, and don't reflect that some patients will bypass HASU, that some patients will not require ASU care and that in some cases ASU care will take place a different site to HASU care:

Table: activity modelling

	Activity		Change from baseline	
Hospital Site	Not including mimics	Including mimics	Not including mimics	Including mimics
Musgrove Park Hospital	841	1,261	54	80
Yeovil District Hospital	15	22	-399	-589
Dorset County Hospital	279	412	279	412
RUH Bath	46	67	46	67
Salisbury Hospital	17	25	17	25
Southmead Hospital	3	4	3	4
Royal Devon & Exeter	0	0	0	0
All Sites	**1,200**	**1,792**	**0**	**0**

9.3.2. Impact on other hospitals

As part of the PCBC we considered the impact the proposals would have on neighbouring areas. We received letters of support for the two proposals from Dorset County Hospital, Royal United Hospitals Bath, Salisbury NHS Foundation Trust, South Western Ambulance Service. The letters of support can be found in the PCBC appendices.

A review of demand and capacity following the PCBC and the assumptions made in the modelling has resulted an updated assessment of the impact of proposals on neighbouring areas. The impact on neighbouring sites is summarised here;

The table below show the activity which is modelled to shift from YDH to another site under options A and B, and the proportion of the overall YDH activity shift which this represents – for all patients, regardless of geographical area of residence.

Table: Proportion of YDH activity that would attend other hospital sites – all YDH activity

Hospital Site	Activity change from baseline	Proportion of YDH activity that would attend each site – total YDH activity
Musgrove Park Hospital	+54	14%
Dorset County Hospital	+279	70%
RUH Bath	+46	12%
Salisbury Hospital	+17	4%
Southmead Hospital	+3	1%

The table below show the activity which is modelled to shift from YDH to another site under options A and B, and the proportion of the overall YDH activity shift which this represents – for patients resident in Somerset.

Table: Proportion of YDH activity that would attend other hospital sites – Somerset residents only

Hospital Site	Activity change from baseline	Proportion of YDH activity that would attend each site - Somerset residents only
Musgrove Park Hospital	+48	16%
Dorset County Hospital	+216	70%
RUH Bath	+43	14%
Salisbury Hospital	+0	0%
Southmead Hospital	+0	0%

The proposed change would impact activity a hospital sites in Dorset, Taunton, and a smaller proportion of activity changes would impact RUH in Bath, Salisbury Hospital and Southmead Hospital.

This means consideration of the impact of proposed changes extends beyond Somerset borders and planning for any proposed changes needs to consider this.

Dorset County Hospital have been active members of our review and are supportive of the changes these proposals would bring to Dorset County Hospital.

- Throughout the programme of work so far NHS Dorset and Dorchester County Hospital have been part of the steering group which has led on the options appraisal and shortlisting of options amongst other things. The programme manager has been regularly meeting with NHS Dorset and Dorset County Hospital on a monthly basis to ensure that they are kept up to date with progress and discuss any issues.

- Dorset County Hospital are in the process of implementing their business case which was approved by Dorset ICB earlier in the year. This business case was to provide a dedicated HASU in their current stroke unit and enhance the stroke community services. Phase 2 of their business case would be to increase the footprint of the stroke unit to accommodate the increase in activity for HASU services from the Somerset stroke service changes.

- The impacts of the proposed changes have been considered in detail by Dorset and

impacts for estates, financial modelling and capital works were looked at in a greater level of detail. This then informed the option viability assessment paper considered by the Somerset ICB board on 30th November 2023.

SWAFT have been active members of our review and are supportive of the changes these proposals would bring to SWASFT.

Capacity modelling

Option A – capacity modelling - The table below shows the numbers we would expect to attend another provider for their HASU care under Option A and would need repatriation back to YDH for their ASU care; these numbers reflect the fact that not all stroke patients will require ASU care, particularly stroke mimics.

	ICB Residence			
HASU site	**Somerset**	**Dorset**	**Other ICB**	**Grand Total**
MPH	41	0	2	43
DCH	161	50	0	211

The data shows that the proposed change would impact residents of both Somerset and Dorset ICB. This means consideration of the impact of proposed changes extends beyond Somerset borders and planning for any proposed changes needs to consider this.

9.3.3. Bed modelling – averages based modelling

Option A - The table below shows the number of beds required under option A; this assumes that all patients will require admission to a stroke unit, even if not all patients were indicated as having been admitted to a stroke unit bed in the baseline data. The figures presented incorporate the following assumptions: closest HASU to the patient, that some patients will bypass HASU, that some patients will not require ASU care and that in some cases ASU care will take place a different site to ASU care. The bed numbers in this table were derived using an average-based methodology i.e. based on average stroke arrivals and average length of stay (see Demand and Capacity Approach appendix).

Table – Bed modelling – averages based bed modelling for option A

		Beds in option A		Change from baseline	
Metric	Hospital Site	Not including mimics	Including mimics	Not including mimics	Including mimics
Beds_HASU	Musgrove Park Hospital	6.7	9.4	0.5	0.6
	Yeovil District Hospital	0.0	0.0	-3.4	-4.6
	Dorset County Hospital	2.4	3.2	2.4	3.2
	RUH Bath	0.4	0.5	0.4	0.5
	Salisbury Hospital	0.2	0.2	0.2	0.2
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**9.6**	**13.4**	**0.0**	**0.0**
Beds_ASU	Musgrove Park Hospital	21.6	21.6	0.0	0.0
	Yeovil District Hospital	11.8	11.8	-1.7	-1.7
	Dorset County Hospital	0.0	0.0	0.0	0.0
	RUH Bath	0.9	0.9	0.9	0.9
	Salisbury Hospital	0.8	0.8	0.8	0.8
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**35.2**	**35.2**	**0.0**	**0.0**
Beds_Total	Musgrove Park Hospital	28.4	31.1	0.5	0.6
	Yeovil District Hospital	11.8	11.9	-5.1	-6.3
	Dorset County Hospital	2.4	3.2	2.4	3.2
	RUH Bath	1.3	1.4	1.3	1.4
	Salisbury Hospital	1.0	1.0	1.0	1.0
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**44.8**	**48.6**	**0.0**	**0.0**

Option B - The table below shows the number of beds required under option B; this assumes that all patients will require admission to a stroke unit, even if not all patients were indicated as having been admitted to a stroke unit bed in the baseline data. The figures presented incorporate the following assumptions: closest HASU to the patient, that some patients will bypass HASU, and that some patients will not require ASU care. The bed numbers in this table were derived using an average-based methodology i.e. based on average stroke arrivals and average length of stay (see Demand and Capacity Approach appendix for more details).

Table – Bed modelling – averages based bed modelling for option B

				Change from baseline	
Metric	Hospital Site	Not including mimics	Including mimics	Not including mimics	Including mimics
Beds_HASU	Musgrove Park Hospital	6.7	9.4	0.5	0.6
	Yeovil District Hospital	0.0	0.0	-3.4	-4.6
	Dorset County Hospital	2.4	3.2	2.4	3.2
	RUH Bath	0.4	0.5	0.4	0.5
	Salisbury Hospital	0.2	0.2	0.2	0.2
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**9.6**	**13.4**	**0.0**	**0.0**
Beds_ASU	Musgrove Park Hospital	24.2	24.2	2.5	2.5
	Yeovil District Hospital	0.0	0.0	-13.5	-13.5
	Dorset County Hospital	9.3	9.3	9.3	9.3
	RUH Bath	0.9	0.9	0.9	0.9
	Salisbury Hospital	0.8	0.8	0.8	0.8
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**35.2**	**35.2**	**0.0**	**0.0**
Beds_Total	Musgrove Park Hospital	30.9	33.6	3.0	3.2
	Yeovil District Hospital	0.0	0.0	-16.9	-18.1
	Dorset County Hospital	11.7	12.5	11.7	12.5
	RUH Bath	1.3	1.4	1.3	1.4
	Salisbury Hospital	1.0	1.0	1.0	1.0
	Southmead Hospital	0.0	0.0	0.0	0.0
	Royal Devon & Exeter	0.0	0.0	0.0	0.0
	All Sites	**44.8**	**48.6**	**0.0**	**0.0**

9.3.4. Variability modelling

In addition to the average-based bed modelling which produced the figures in the tables above, a further modelling approach was undertaken to quantify the impact of variability in stroke arrivals and length of stay on bed demand i.e. the number of beds required to accommodate resultant peaks in bed demand. This approach is a form of stochastic modelling known as Discrete Event Simulation (further detail of this approach can be found in the Demand and Capacity Approach Appendix.

The Stroke Project Board considered initial variability modelling outputs at their September meeting. Additional review and testing was undertaken with clinical, operational and commissioning/finance colleagues from the ICB and SFT.

The table below shows the projected bed numbers over the next 10 years based on the stochastic modelling

Projected bed numbers over the next 10 years based on the stochastic modelling

Option A	Year 1	Year 5	Year 10
HASU beds			
Taunton	12	13	14
Yeovil	0	0	0
ASU beds			
Taunton	24	24	27
Yeovil	16	16	18

Option B	Year 1	Year 5	Year 10
HASU beds			
Taunton	10	11	12
Yeovil	0	0	0
ASU beds			
Taunton	25	25	28
Yeovil	0	0	0

These bed numbers were agreed as set out in in table above to form the basis of the modelling of the change scenario, as set out in the table above at the October meeting of the Somerset Stroke Project Board. These bed numbers were deemed to provide the best balance between access and efficient use of resources i.e. a high likelihood of being able to access a stroke bed whilst having a reasonably high bed occupancy level. These figures include mimics for both MPH and YDH and are based on actual length of stay.

9.3.5. Clinical model

The clinical model has been developed by the clinicians involved in the stroke steering group using best practice guidance.

As the model developed it was shared with clinicians working within the Somerset stroke service and other services where stroke is part of the pathway such as the emergency department and refined from the feedback received.

The clinical model maps the journey from the pre alert by the ambulance service through the hyperacute and acute stroke phases and incorporates the standards required at each part of the pathway including the pathway for those who may walk into Yeovil emergency department or who may have a stroke as an inpatient.

Under Option A the principles of a standalone ASU at Yeovil are clearly articulated as this was recommended by the Clinical Senate when they reviewed the Options.

The clinical model for Somerset Transient Ischaemic Attack (TIA) services was put together in the same way using national guidance.

The workforce model was built around the clinical model to enable a 24/7 specialist stroke and TIA service to be delivered in Somerset.

All the clinical models have gone through and been signed off by the stroke steering group at their meetings in August 2023 and December 2023 as being able to deliver the vision and standards for stroke services in Somerset, including requirements for a standalone ASU in Yeovil in option A.

9.3.6. Workforce resourcing

Since the PCBC was written the workforce model has been reviewed in detail using the updated bed modelling and activity numbers.

The workforce model has been developed using best practice from the National Stroke Clinical Guideline 2016 workforce recommended levels of staffing for hyperacute, and acute stroke units.

Even though the National Stroke Clinical Guidance has been updated in 2023, the 2016 guidance has been used as we are not currently delivering the workforce to this standard. The Clinical model delivers on the 2016 recommendations for staffing and improves and delivers a standalone ASU at Yeovil with the appropriate staffing as per the guidance. The ambition is to work towards the 2023 guidance, however further significant workforce planning will need to take place.

9.3.7. Clinical view on capacity, resourcing and patient outcomes

Under both Options the activity increases have been modelled across 10 years to give the number of hyperacute and acute beds required over the same 10 year period. This gave the average number of beds needed on both the Yeovil and Taunton site. To pick up the peaks and troughs of activity across the year stochastic bed modelling was undertaken and the bed numbers increased to balance the availability of a bed against the occupancy level. This sensitivity analysis builds confidence that people can access a stroke bed when required.

Workforce analysis was based on the bed numbers using the staffing recommendations and the estate reviewed to ensure that the bed numbers could be accommodated. This builds confidence that increasing the number of patients at one site would not impact on the quality of care received.

The Clinical Senate review gave a clear view that securing the workforce with the required range of specialist skills (including consultants, and therapists) has particular significance for Option A, 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, the workforce plan for each of the models is robust and that the workforce model should explore the contribution from emerging roles across professions.

The workforce model and plan has been put together taking into account the Senate feedback and will be further refined as implementation begins.

The capacity for the Emergency Department (ED) has been reviewed and the clinical model allows for stroke specialist staff to respond to all stroke calls 24/7 relieving them of the need to provide that clinical input themselves.

The Radiology service has been involved in the process and have confirmed that they can accommodate the increase in scans required through the centralisation of hyperacute care.

9.3.8. Conclusions / impact on the model

The proposed clinical model is built on the assumption of a single workforce across all aspects of the acute hospital patient pathway.

The workforce will be recruited and retained in a resilient way to deliver the patient care required in supporting patients through their pathway in an optimum manner. They will work in a way that makes the most efficient use of the time and skills of the workforce e.g., reducing time for qualified professionals completing tasks that could more appropriate be delivered by other members of the team or through digital solutions and/or improved processes. The service will enable the

development of existing staff and the development and delivery of career pathways to compliment the workforce needs.

The consultation responses highlighted the need to concentrate on recruitment and retention of the workforce to successfully implement the proposals. Some responses did not think that there were enough staff to cope with the demand, including nursing, doctors and therapists. They stated that workforce requirements need to be considered to ensure that the proposals work effectively. A concern was expressed that staff need to be valued and developed and that the proposed changes should not result in de-skilling or demotivating the excellent staff that already provide care in Yeovil.

The Somerset Workforce Group brought together workforce leads from both Taunton and Somerset to work together to enable the vision of the One Stroke Workforce for Somerset. It has continued to develop proposals to support recruitment and retention of staff, including analysis of supply and demand and by using the vision within the people plan for how to retain, develop, inspire, and attract staff. Further detail of the assurance of workforce supply and actions proposed to ensure staff feel valued and want to work in the One Stroke Team are described in the workforce plan in the workforce plan appendix.

Workforce is considered in more detail in section 9.6, including DCH workforce.

The refreshed demand and capacity analysis, and bed modelling has enabled further testing of the assumptions made in the modelling, and to ensure bed modelling takes account of the variability in stroke arrivals and length of stay on bed demand i.e. the number of beds required to accommodate resultant peaks in bed demand.

The impact on Somerset hospitals and other neighbouring hospitals of the proposed changes has been discussed with operational and clinical colleagues in Somerset and in neighbouring systems, particularly at Dorset County Hospital. The Somerset Stroke Programme has assessed these impacts and shaped the clinical model to ensure quality of care for patients is core to the implementation planning of the proposed changes, and to the benefits measured as a result of this work.

The workforce analysis, workforce planning and assurance of workforce supply and actions give confidence that workforce resourcing for the proposed changes is achievable and deliverable in the implementation timescales. Workforce will form a key risk for implementation of the proposed changes and will be considered in detail and closely monitored in preparation for and during implementation and beyond.

The proposed changes will require investment for both revenue and capital and do not take money out of service provision.
This feedback and additional analysis was taken in to account in the consideration of option viability summarised in section 10.

9.4. Equality of access

Consultation feedback

Participants raised concerns in the consultation feedback that certain demographic groups would face challenges in travelling to a more distant site to access stroke services.

Key concerns raised:

- The need for loved ones to travel via public transport was a concern particularly for **older people, people living in rural areas**, and people who **rely on public transport.**
- Concerns were raised about potential difficulties faced by people on **low incomes** who need to visit loved ones in hospital, particularly those with **young children and without access to private transport.**
- People with **learning disabilities** and other special needs were identified as potentially being put further at risk if their carers are unable to visit or be with them due to distance, traffic or access issues.
- Potential impact on people on **probation** who are not able to travel out of county.
- Potential impact on people who experience **domestic violence.**

Actions taken:

Travel analysis has been undertaken to understand impact for those who rely on public transport or who might be most disadvantaged by any proposed changes. Additional engagement was also undertaken with groups suggested during the consultation who may be particularly impacted by the proposed changes.

9.4.1. Public transport – considered above

Public transport modelling set out above in section 9.2 showed that those who travel by public transport will be disadvantaged in access to a HASU by the proposed changes, and in option B in access to an ASU.

Somerset and Dorset residents are impacted by loss of access to a HASU and an ASU in option B – 109,072 Somerset residents and 15,160 Dorset residents lose access to a stroke setting of care at HASU, and at ASU in option B compared to the current configuration of services.

9.4.2. Additional analysis undertaken on equality of access

In addition to the public transport travel modelling, additional analysis was undertaken to test the potential impacts both of deprivation for those would be modelled to lose public transport access, and to assess the rates of private car access in areas where public transport access has been modelled to be lost.

Deprivation and increased journey time

Modelling shows that there are some residents of both Somerset and Dorset who would simultaneously experience higher levels of travel impact and higher levels of deprivation under the change scenario.

The modelling shows that within Somerset ICB, a comparatively small number of the residents in areas with travel impacts from the proposed changes are resident in areas with the highest levels of deprivation. However amongst these residents the travel impact tends to relatively higher.

The numbers of affected residents in Dorset ICB are significantly lower than in Somerset and the analysis suggests that Dorset residents who would experience an increase in journey time to a HASU do not tend to live in areas with the highest deprivation levels.

The numbers of affected residents in BANES, Swindon & Wiltshire (BSW) are low. This area is somewhat removed from Yeovil District Hospital meaning that this is the closest HASU for a relatively small number of residents. Amongst these residents the additional journey time tends to

be relatively low also.

Additional information is available in the Equality Impact Assessment in the appendices.

9.4.3. Impacts for specific groups

Feedback from the consultation raised that some specific groups of potential patients or affected friends and family may have potential additional impacts from the proposed change, and where additional support or mitigations may be required.

Specific groups identified and considered include;

Probation services - Our Equality Lead met with probation services to explore further any impact and any mitigation required that the changes may have on people on probation restrictions. Anyone on probation who had a suspected stroke would be treated as any other emergency patient and taken to their nearest HASU.

There would be no issues with low-risk offenders however with high risk offenders and those on licence the probation service would need to be aware of anyone admitted for treatment of a stroke as there is a need to be seen weekly by the probation service who would expect healthcare to inform the probation service of their admission.

Domestic violence – the ICB Equality Lead has unfortunately not been able to meet with domestic violence specialists prior to completion of the DMBC but any impact and any mitigation required (that the changes may have on people experiencing domestic violence) will be factored into the implementation planning.

Learning Disabilities - Specific support is provided to patient and their family and friends as required e.g. if a person has a learning disability, hospitals often allow the carer to stay with the person as they know them best and can be a great help to the staff in communication and ensuring they get the best care.

9.4.4. Update to the Equality Impact Assessment

The Equality Impact Assessment has been reviewed and updated throughout the process, supported and enabled by both the public engagement and consultation has been an integral part of the reconfiguration programme and commenced fromthe outset of developing the Somerset Stroke strategy in 2019, and our ongoing engagement with colleagues from Healthwatch, the Stroke Association, Public Health and our Lived Experience Group.

The EIA found that both option A and option B would improve equity for patients receiving hyperacute stroke care, as they would all be transported to the nearest HASU where outcomes are likely to be improved. This would ensure consistent timely access to specialist assessment, diagnosis, and intervention in the hyperacute phase.

In option A there would be a negative impact on those carers/relatives who are older people, or in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours.

In option B, there would be a negative impact on carers and relatives, especially those who are older, live in rural areas or are in areas of deprivation, as there would be an increased distance to travel to visit loved ones. This would potentially be for up to 10 days, rather than the 72 hours in Option A. As such, this has a much more significant impact.

9.4.5. Conclusions / impact on the model

The Somerset Hyperacute Stroke Programme recognises the need to consider patient choice and ensuring patients have access to the right treatment, at the right place at the right time.

The current Somerset stroke service model does not provide an equitable service across Somerset in terms of access to 24/7 hyperacute services.

There is the need for a balance between providing a range of choices and the system's ability to deliver the best possible quality of care, with people generally being prepared to travel a further to access better health outcomes and having a good understanding of the evidence base and logic for this.

Evidence confirms that an increase in travel time to a centralised HASU, is offset by the improved speed of assessment, diagnosis, and determination of appropriate treatment (for both stroke and non-stroke patients), which in turn leads to improved clinical outcomes for patients.

Option A and B means that people will have to travel further for hyperacute care to provide an equitable access to 24/7 hyperacute care however under Option A people will have a choice to return to an ASU in Yeovil to be closer to home.

The EIA is a live document and will continue to be refreshed with ongoing monitoring and evaluation of the change being monitored through the Key Performance Indicators, complaints and other outcome data as part of the governance processes to monitor the impact on specific groups who may have been disadvantaged due to the change.

This feedback and additional analysis was taken in to account in the consideration of option viability summarised in section 10.

9.5. Inpatient environment

Consultation feedback

We heard through the consultation feedback about the importance of offering appropriate inpatient environments, especially the need to support carers.

Key concerns raised:

- Visits from family and friends were consistently noted as a key aspect of stroke recovery, the hospital environment needs to support and enable this.
- Suggestions were made to make it easier for patients to stay in touch with family and loved ones, including better use of technology.

Actions taken:

The steering group reviewed the suggestions made.

9.5.1. Environment in estates

We discussed with the Somerset stroke steering group and both stroke services at Taunton and Yeovil the ward environment as part of discussions about the clinical model.
The clinical model sets out that a stroke unit should be a clearly defined unit with staffing as per stroke guidance including

- Adequate space for fully equipped gym, and functional practice (kitchen and bathroom)
- Appropriate space to accommodate group work, and quiet space for psychological

assessment and sensitive discussions.

9.5.2. Existing support / mechanisms

The Somerset stroke programme reviewed the existing support mechanisms to both enable friends and family to stay in contact with their loved one, for example through technology.

The stroke programme also and noted that the development of an appropriate and effective environment to support continue to support recovery should form part of the estates work.

9.5.3. Conclusions / impact on the model

The development of the inpatient environment will form a core part of the transition planning and works and the key principle of environment being appropriate and effective in supporting a patient to stay in contact with their friends and family will be considered throughout the planning and implementation of any changes, and particularly any estates works.

This feedback and additional analysis was taken in to account in the consideration of option viability summarised in section 10.

9.6. Workforce

Consultation feedback

Concerns were raised in the consultation feedback about the impact of potential changes on the current and potential hyperacute and acute stroke workforce.

Key concerns raised:

- Concerns were raised about the impact on **staff in rural areas and on low incomes** who may need to travel further to work
- Concerns that stroke **staff at Yeovil District Hospital** could become deskilled if they are not seeing hyperacute stroke patients
- **Risk loss of existing skilled staff** with change thereby exacerbating one of the problems that is given as a driver for change (lack of skilled workforce)
- The impact on the work life balance of staff **if they have to travel further to work**.
- Concerns around the **recruitment of the specialist workforce** needed at Musgrove Park and the extra staff needed at Dorset County Hospital
- Concerns from some of the NHS workforce that they agreed with the need to change but the **majority of staff who responded did not agree with the model of care proposed**

Actions taken:
A further detailed workforce analysis was undertaken, including workforce planning.

9.6.1. Workforce model updates

Since the PCBC with the refreshed bed modelling this has enabled the workforce group to match the staffing against the updated bed numbers using the 2016 National Clinical Stroke Guidance and the developed clinical model.

The key workforce assumptions from the PCBC have been broadly the same in the work for the

DMBC but has been in much greater detail and with the professional leads of each of the disciplines. It has included the support roles required and the workforce required for the TIA service.

9.6.2. Review of existing situation / provision

Our programme team have reviewed the existing workforce position in more detail.

There is a national shortage of stroke doctors, nurses and other specialists and our current local expert staff are spread across two hospital sites at Musgrove Park and Yeovil Hospital. One of the reasons we are reviewing hyperacute stroke services is because local stroke services need to be more sustainable. It would be more effective to fill rotas at a single specialist hyperacute stroke unit, and staff would have more opportunities to develop their skills and experience.

The stroke services at Yeovil have been particularly challenged over the past 10 years. Despite extremely committed staff in post, supported by agency locums, a number of recruitment approaches and campaigns have failed to recruit a substantive and long-term team to deliver stroke care at YDH. Despite recent success the YDH team does not have critical mass to deliver in the longer term

As part of our case for change we outlined how at present stroke services in Somerset are not set up to maximise the skills and experience of our staff 24 hours a day, 7 days a week. Currently, Yeovil District Hospital does not see the minimum recommended number of stroke patients (600 per year) for staff to maintain their skills and build expertise. By having one central hyperacute stroke unit, staff would see a higher number of patients helping to ensure they maintain and build the specialist skills needed.

The total number of strokes each year, per unit, to ensure that a hyperacute stroke unit should see no less than 600 patients per year. Less than 600 strokes per year would not be sufficient to ensure staff would have enough clinical experience and institutional learning experience to maintain their experience. The minimum of 600 strokes per year was also a threshold endorsed by the Midlands and East stroke review

Having larger hyperacute stroke units attracts more staff and enables staff to see enough patients to ensure they maintain and build their expert skills.

When you have small hyperacute stroke units it is difficult to recruit the specialised staff because the on call requirements are very onerous for the on-call staff.

National guidelines state that the minimum number of consultants required for a hyperacute stroke unit is 6. This is the minimum based on the need to cover a 24/7 shift rota. Taking into account our population demographics and prevalence of stroke in Somerset, we estimate that we would need 8 consultants to cover a single hyperacute unit in Somerset.

If we were to continue with two hyperacute units we would need 16 consultant to run a 24/7 service on both sites plus associated specialist therapies and nursing staff and the support infrastructure e.g. scanners.

9.6.3. Staff travel impacts

Staff home locations and analysis of the potential likely impacts of change on distance travelled was assessed in the PCBC. This data showed that if stroke staff currently working at Yeovil District Hospital were to be required to travel to Musgrove Park Hospital, there would be a significant increase in travel, with over 90% of current staff living within 5 miles of YDH.

If staff were to be transferred from a base at YDH to MPH, there is likely to be a package of financial compensation to cover the excess mileage, albeit for a defined period.

Any proposed change in base will be discussed with staff as part of the ongoing engagement. Formal staff consultations will be required as part of organisational changes at the point the programme moves into implementation.

Staff will be involved in implementation planning and further work will be done to understand and mitigate concerns.

9.6.4. Workforce planning

Throughout the development of the PCBC and into the DMBC process a workforce group has been in place. This group brings together professional workforce leads across Somerset Foundation Trust including representation from Yeovil and Taunton to develop the workforce model.

It has continued to develop proposals for the workforce model for the options and to support the development of a workforce plan, and essential part of which is to move to align to a one service two sites model of care through a 'skills and capabilities' workforce model.

Further detail of the workforce plan can be found in the appendices.

Key elements of the workforce plan include;

- **Recruitment and retention of staff** - to explore more innovative and creative ways to recruit and retain specialist stroke staff and ensure workforce sustainability

- **Analysis of supply and demand** – with recruitment activities and turnover information for the core posts within stroke considered and planned out

- **Workforce training and development** – key to unlocking the workforce challenge by changing to a "skills and capabilities" model rather than one solely based on professional qualifications which allows greater flexibility in the range of workforce solutions available for an existing workforce

- **Role consistency and standardisation** across the Stroke pathway to provide a consistent and standardised approach where appropriate and with the principle of avoiding unwarranted variation. This will enable a greater level of flexibility and support staff retention.

- **Staffing deployment – *which will be*** determined in line with national standards and associated aligned staffing requirements (i.e., 'Safe Staffing levels'). Staff currently move to different areas of the Trust when in escalation and this would continue from the ASU but not from the HASU where the level of staffing needs to reflect the level of patient dependency.

- **Clinical and management governance** principles

- **Statutory duties and staff rights** e.g. ***staff registration with*** their professional bodies (e.g., NMC, HCPC etc)

- **Competency framework** to deliver the "skills and capabilities" workforce model – using

available resources to enable mapping of competencies for our staff that not only ensures they are fully equipped to undertake their current role, but also gives them a clear and objective plan to develop and extend their role. This is key to upskilling our stroke workforce.

- **Integration of the stroke workforce** – the project aiming to integrate the acute stroke team at Musgrove Park Hospital and Yeovil District Hospital and the stroke rehabilitation teams in the stroke rehabilitation units and community has led to several developments to break down barriers and improve the ways of working. The two trusts have already organised stroke workshops attended by members of the acute stroke services in Musgrove Park Hospital and Yeovil, as well as representatives of the community stroke units and community rehabilitation service.

9.6.5. Dorset workforce interdependency

NHS Somerset is confident that the required staffing numbers can be recruited in the two-year window. However, notwithstanding the programmed timescale, the HASU at YDH would remain open until the planned staffing and associated facilities were in place at both MPH and DCH.

The current provision already has dedicated and specialist staff (e.g. nurses, OTs, physios, etc) and recruitment is ongoing for permanent consultants where the target staffing will be 1.6 FTE as well as further dedicated specialists. DCH are in part anticipating to address the lack of stroke consultants by engaging current consultants in related fields (e.g. ED) to provide specialist back up, and training and flexibility for other disciplines to specialise in Stroke care and registrars developing their future consultant roles

It was recognised the recruitment of new specialist stroke consultants would be equally difficult for DCH as YDH, although it might be assumed a slight advantage in recruitment to a larger HASU, it was also noted that big units did not necessarily attract staff, however certainty in the service provision does help attract potential candidates.

DCH are in the process of advertising and interviewing potential Associate Specialists that can be developed into consultants using the CESR route as SFT are doing. There is a potential consultant wanting to work at DCH however cannot start yet due to personal reasons.

9.6.6. Staff consultation feedback and ongoing engagement

While it was noted that this was not a formal staff consultation at this stage, staff engagement and views were invited as part of the public consultation and steps were taken to ensure there was the opportunity to discuss and capture them. Staff were able to attend any public consultation events and to give their response through the same channels as the public. In addition to this, six staff specific events were hosted through the consultation to enable discussion and feedback on the proposals.

The stroke programme team also attended existing staff meetings and visited sites to share the proposals and gather feedback and all the feedback was recorded, logged, and submitted to the independent agency responsible for compiling the thematic review.

The level of feedback from staff during the public consultation was positive as there were over 100 responses which provided a valuable insight into the proposals.

The ORS consultation report shows that in the consultation questionnaire, less than a third of

NHS staff who responded (32%) agreed with the proposal to deliver hyperacute stroke services from only one hospital in future.

However, views were more balanced among NHS staff working in stroke services, with nearly half (47%), agreeing while a marginally greater proportion (49%) disagreed.

The prospect of 24/7 hyperacute care from specialist staff was viewed especially positively. However, YDH staff members, while generally agreeing that having one HASU providing 24/7 consultant-led specialist care was positive, did raise some concerns, including: the possible 'de-skilling' of stroke staff at YDH; national challenges around staffing, including potential difficulties recruiting new consultants; and that not delivering hyperacute stroke care at YDH could have negative impacts on surrounding hospitals such as Dorset County Hospital in Dorchester.

9.6.7. Conclusions / impact on the model

The clinical and workforce model has been put together with input from the stroke teams in Taunton and Yeovil and professional leads and using the recommended staffing levels from the national Stroke Clinical Guideline 2016. This has been important to keep staff updated and continue to be able to answer their questions.

Discussions within the workforce working group has given an opportunity to test out the various workforce models to support changing to a "skills and capabilities" model rather than one solely based on professional qualifications which allows greater flexibility in the range of workforce solutions available for an existing workforce.

The workforce plan has been put together to maximise the skills of the existing staff and provide training and development for these staff to support retention and to attract new staff into stroke.

The skilled staff at both Taunton and Dorchester would be retained under both Option A and B and provide opportunities for development.

Developing a standalone ASU in Yeovil under Option A and staffing it with the recommended staffing levels means that the stroke skilled staff have the opportunity to remain within the stroke service and be dedicated to the stroke patients rather than spread across two specialities which supports retaining those experienced staff. Those staff who work within the Coronary Care Unit where the hyperacute beds are situated will continue to use their skills looking after cardiac patients.

There is an interdependency on workforce at Musgrove Park Hospital, Yeovil District Hospital and Dorset County Hospital which will require implementation alignment to ensure safe transition of service.

Staff in Yeovil, particularly the therapy and specialist stroke nurses, have been very clear that they would not want to move to Taunton and would consider other options if they were to lose the stroke service at Yeovil. There is a risk that some staff would choose to move to Dorchester if it was closer to home.

Under the Option A there is no need for staff to move from Yeovil to Taunton unless they requested to do so.

Mitigations for the concerns raised in feedback from staff to the consultation include recruitment and retention strategies as per the people plan, rotation of staff, alignment of training and development programmes and the opportunities from the merger to become one team.
Staff engagement and communication routes remain key and throughout the decision-making process and implementation phase a series of communication briefings and engagement

workshops will be held to ensure staff are well sighted on the details of the future state plans and service specifications.

This is aimed at supporting staff in understanding how the future of stroke services will work and to mitigate turnover risk associated with anxiety relating to change management processes.

These enablers are being addressed by a workforce subgroup and will continue to develop as the programme progresses to the implementation phase.

This feedback and additional analysis was taken in to account in the consideration of option viability summarised in section 10.

9.7. Alternative models proposed in the consultation feedback

Consultation feedback proposed alternative approaches or models of stroke care in Somerset. This section considers each model or approach proposed, some of which were considered at an earlier stage of the option appraisal process.

These alternative models are considered and responses set out below. We are satisfied that the alternative models suggested would not meet the case for change and deliver the services required for stroke care in Somerset.

Alternative models proposed in the consultation feedback	**Response**
Would a [hyper]acute stroke unit at Yeovil District Hospital ease pressure on Musgrove Park Hospital, which is already busy due to having other specialist centres?	Irrespective of Musgrove Park Hospital having other specialist centres both sites are busy in terms of urgent and emergency care as they both have an Emergency Department. Yeovil District Hospital does not have the infrastructure to cope with the additional numbers of emergency stroke patients that would arrive there if Musgrove Park Hospital did not have a hyperacute stroke unit and would require a substantial expansion of the service in an already busy site.
Alternative model proposed - locating a single HASU at YDH	In developing the proposed options, a series of workshops were held with people working in stroke services, other key stakeholders including the Stroke Association, and people with lived experience of a stroke. Together they looked at how local stroke services could be improved. These sessions were used to develop a long list, then a short list, of potential solutions for the future. These were assessed to decide how they would meet the following criteria: • Quality of care – impact on patient outcomes • Quality of care – impact on patient experience and on carer experience • Deliverability • Workforce sustainability • Affordability

	• Travel times for patients and their carers and visitors • Impact on equalities. The long list of options were then given a pass or fail score to decide which solutions would be taken forward for further assessment in a short list. Locating a single hyperacute stroke unit at Yeovil District Hospital was considered as part of the long list of options. This did not pass the solutions criteria as it would lead to: • An increase in travel time for more patients and their families in Somerset compared to one unit at Musgrove Park Hospital. • The infrastructure needed for scanning and beds is not available. • It would not address staffing issues. Maintaining two hyperacute stroke units at Taunton and Yeovil was considered as part of the long list of options and as part of the short list of options. The four solutions shortlisted were examined further and following insights from the public and patient group, were refined and reduced to two potential options. The potential pros and cons of each of the shortlisted options were discussed through the following perspectives: • Patients • Clinical outcomes • Workforce • Inequalities • Finance • Family and carers. The option to maintain two hyperacute stroke units was ruled out because it would not address the issues we currently have around workforce and infrastructure and would not be sustainable. It would not meet the more than 600 stroke admissions a year criteria. It would not improve the access time for patients to start treatment. It would not address our staffing issues.
Alternative model proposed - Can Somerset introduce mobile acute stroke unit (as seen in Scandinavian countries) to administer life-saving treatment before travelling to hospital?	Mobile stroke units (MSUs) are ambulances equipped with brain imaging equipment and specialist staff that are capable of delivering thrombolysis or identifying large artery occlusion when equipped with CT angiography. The Royal College of Physicians National Stroke Guidelines 2023 have reviewed the evidence regarding the use of mobile stroke units. They note that in data largely from non-randomised trials with a standard ambulance comparator group and blinded outcome assessments, after deployment of an MSU, patients with ischaemic stroke had a better clinical outcome, were more likely to receive thrombolysis and incur shorter onset to thrombolysis times (Turc et al, 2022a).

	However, it is too early to be certain what the effects of MSUs are on an unselected stroke population, the cost-effectiveness of MSU care, how to integrate MSUs into pre-hospital pathways and how these might be applied across both rural and urban regions. Ongoing randomised trials may answer some of these questions, although modelling of costs and benefits applied across different regions and service models is likely to be required (Chen et al, 2022).
Alternative model proposed - Could we use primary care centres (sites) for initial diagnosis with a view to only transporting those who absolutely need to be to the specialist treatment at the hospital?	Early diagnosis and treatment are imperative to improve outcomes after stroke. A brain scan is required to help make the diagnosis and treatment decision. Using a primary care centre as an initial screening and diagnosis stage would increase the risk of unnecessary delays in obtaining the diagnosis and initiating treatment, particularly where there is already difficulty in accessing prompt appointments in primary care. Ambulance service staff are trained in the use of pre-hospital screening tools to detect stroke, such as the FAST (Face, Arm, Speech, Time) test, and the MEND (Miami Early Neurological Deficit) tool. They also are more likely to know where the closest stroke treatment centre. In some areas of the country there is early research and evidence regarding Stroke Video Triage, whereby the paramedics assessing a patient with suspected stroke can communicate via video-link with a stroke specialist in the stroke treatment centre. This may increase the ability to detect patients with conditions mimicking stroke and reduce the unnecessary conveyance of vulnerable people who have not experienced a stroke. NHS England are currently piloting Stroke Video Triage across a number of regions in the UK. If the evidence from these pilot studies shows that Stroke 6 Video Triage is safe and effective, it may help to enable the appropriate conveyance of people with stroke, and reduce unnecessary conveyance of people with a condition mimicking stroke.
Alternative model proposed - Could you alternate Hyperacute Stroke Unit services between the two Somerset hospitals?	Alternating Hyperacute Stroke Services between Taunton and Yeovil would still require additional stroke consultants on both sites or the need for them to travel to either site. This option would be very confusing for the ambulance service as the crews will need to be very alert to the site being alternated and could result in a patient arriving on the site that is not receiving stroke patients that week and is not supported by the ambulance service. Therefore, this option would not be a viable option.
Alternative model proposed by Dr Rashed. ***Maintain current stroke services at YDH through a shared stroke***	Following the consultation, Dr Rashed, Consultant Stroke Physician at YDH proposed an alternative option to maintain stroke services at YDH. The key points of this model were to: 1. Continue to provide Yeovil HASU Services at Yeovil District Hospital. 2. Commit the extra investment desperately needed to ensure the delivery of high-quality stroke services at both MPH and YDH.

leadership team and stroke workforce across MPH and YDH	3. Provide and ensure both organisational and operational support, to deliver equitable services across both hospitals. 4. Constitute a single strong stroke leadership and a single stroke workforce that will ensure safe delivery of the service on both Musgrove Park Hospital and Yeovil District Hospital. 5. Give YDH a Yeovil Stroke Ward with dedicated HASU beds, both ringfenced, and dedicated staff to deliver on the National Guidelines. A meeting was held on 17 January with Dr Rashed to understand the proposal for an alternative model and his concerns on the proposed clinical model. Having reviewed his letter and following the discussion we believe the model of a single medical delivery team is the one which made it through the shortlist of options and was presented to the Clinical Senate as part of the Clinical Review Panel (CRP) in September 2022. The CRP reviewed the option and concluded that they were unable to provide assurance that this was a sustainable model. The CRP questioned whether this option should remain within the business case. The Panel were not satisfied that simply rotating the workforce, would allow the system to deliver the outcomes required and therefore this option was removed prior to public consultation.

9.8. Additional themes from the consultation to respond to

A number of additional themes and questions arose during the consultation which have been summarised and responded to below;

Case for Change How is the proposed change is different from now?	**There is not currently have a 24/7 emergency stroke specialist service in Somerset.** Neither Yeovil District Hospital or Musgrove Park Hospital have a 24/7 emergency stroke consultant service. Yeovil District Hospital has specialist stroke consultant cover between Monday and Friday. At weekends there is a daily telephone consultation for stroke patients. This means that if you are admitted with a stroke on Friday evening, you would not be seen by a stroke specialist consultant until Monday morning. There are also specialist stroke nurses who provide stroke care and support with thrombolysis seven days a week, from 8am to 6pm Monday to Friday and 9am to 5pm on weekends and can interpret scans and assess patients prior to thrombolysis. Musgrove Park has specialist stroke consultant cover available between 9.00 am and 5.00 pm Monday to Friday, and 9.00 am and 3.00 pm on weekends. There are also three stroke practitioners who respond to thrombolysis calls from the Emergency Department seven days a week between 8.00 am and 8.00 pm. These skilled clinicians can interpret CT scans and assess patients prior to thrombolysis being given. They also see referrals for suspected strokes across the hospital wards. Analysis of thrombolysis SSNAP performance shows often an inverse relationship between the number of patients thrombolysed and the speed of thrombolysis. This is likely to reflect the fact that thrombolysis delivered out-of-hours (by medical registrar supported by the AGWS network) is slower than when patients are assessed and managed in person by the stroke physicians. The preferred model, where there is a stroke physician present on site 8am – 8pm 7 days per week will help to address this.
Population assumptions in the modelling There are plans to build more houses in Somerset, particularly in the Yeovil area. Has this been taken in to account in the demand modelling, particularly for YDH?	An additional approximately 500 new houses are expected in the Yeovil area in Somerset over the next 10 years. The exact numbers of types of housing are currently unknown. The current population projections for Somerset have included new house building planned. As such, population projections for Somerset have formed the basis for demand and capacity modelling. If house building and projected population increases change in both South Somerset and North & West

	Dorset additional capacity would be through general growth in the NHS budgets, which requires commitment from central government, and the general approach the NHS has to take to managing increasing demands, through increased efficiencies in developing healthcare practice and technical advances.
Transport and travel times **Equality of access** Would early transfer back to their local area allow carers/relatives to be more easily involved in patients' ongoing care?	Under Option A patients would be transferred back to their local Acute Stroke Unit in Yeovil from both Taunton and Dorset after they have completed their hyperacute care. This would allow carers to be more involved in their loved ones ongoing care. For Option B there is the option of patients being discharged to their Community Stroke Rehabilitation Units at Williton or South Petherton which may be nearer to loved ones homes.

10. Appraisal of the options following consultation

Feedback from the consultation has been gathered and analysed. This analysis has been considered by the Stroke Steering Group, Stakeholder Reference Group and the Stroke Project Board to appraise the options following consultation.

Additional modelling and analysis looked at the two shortlisted options at a more detailed level and several areas of additional information were identified which were not available at the time of commencing the consultation.

This additional information can be summarised under two main themes:

- There was significant concern heard during the consultation that family and loved ones play an important role in a patient's recovery and the impact of not being able to see loved ones could have on the wellbeing of patients
    - Concerns around increased travel times to other hospitals for emergency stroke care, especially in the context of the time critical nature of stroke
    - Suggestions were made around making travel easier for visiting family, helping with car parking costs and having available accommodation nearby
    - The importance of easy access for visitors was stressed, as visits from loved ones was seen as being crucial to stroke patients' recovery
    - Concerns raised around the current ambulance waiting times adding to the delay in getting treatment

- It is not possible to deliver the entirety of Option B at the Dorchester County Hospital site and even a partly implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorchester County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set

10.1. Process for reviewing the viability of the two remaining options

Following the public consultation, the two options have been going through some detailed work up by system colleagues, along with Subject Matter Experts within Somerset Foundation Trust and continuing discussion with Dorchester County Hospital senior management and clinical staff.

To assess these findings, we used the same process which was originally undertaken to move from a long list of options to a short list of options which involved the application of a series of "pass/fail" criteria. The detail of this is contained within the PCBC[60] and were adapted from those used by BNSSG in their stroke review. A small number of amendments were made to ensure they reflected the local context and these were approved by the Stroke Steering Group, on 26th April 2022, as suitable and appropriate for use within Somerset.

A summary of these hurdle criteria are shown below.

- Quality of Care - impact on outcomes
    - Clinical Effectiveness / Patient Safety / Access to care
- Quality of Care – impact on patient and carer experience
- Deliverability
    - Expected time to deliver / Co-dependencies
- Workforce sustainability
    - Scale of Impact for Current staff / Future staff
- Travel times for patients, carers and their visitors
    - Distance, cost, and time to access services
- Impact on equalities

At the initial application of the hurdle criteria, information on the financial impact was not available at the time. On the reapplication of the hurdle criteria, we have considered the financial impact of both options.

This has enabled us to evidence whether anything has changed since the initial application of the hurdle criteria which would rule out an option. The same range of expert groups were asked to review the Options and support the application of the hurdle criteria, as follows:

- Experts by Experience
- MPH Stroke Team
- YDH Stroke Team
- Dorset Stroke team
- SWASFT
- SFT Emergency Department
- YDH Emergency Department

The Directors of Finance within Somerset ICS, working with their colleagues in Dorset to understand the financial impact of the options.

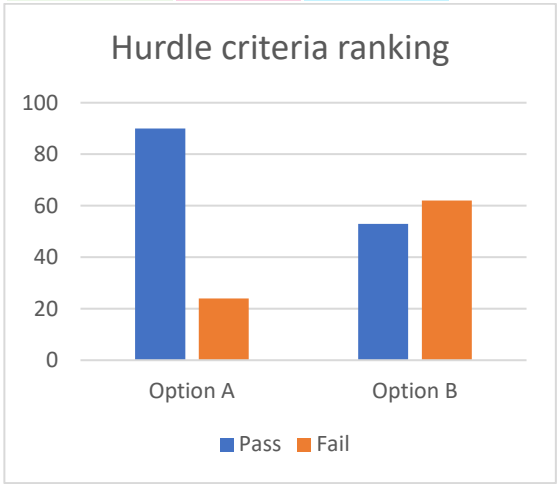
10.2. Findings of the reapplication of the hurdle criteria

The reapplication of the hurdle criteria demonstrated that Option B was no longer viable, with more fails than passes, particularly within the deliverability element and travel times for carers.

Option B would require a temporary solution at Dorchester County Hospital of temporary wards, before a final solution was made. This would not be implemented within the next two years.

[60] FINAL-Somerset-Hyperacute-Stroke-PCBC-V4.0.pdf (oursomerset.org.uk)

	Pass	Fail
Option A	90	24
Option B	53	62



The main hurdle criteria where there were more passes than fails for Option B were on deliverability within two years and travel times. Workforce sustainability also had a higher number of fails for Option B.

We know that having carers and family being part of and supporting rehabilitation after having a stroke is key to recovery, and this was consistently noted in the consultation feedback.

Further analysis was undertaken to understand the increase in travel time to a stroke care location under the options. The analysis showed that a lower proportion of Somerset residents are able to access an Acute Stroke Unit in Option B within the time bandings set out. The increase in modelled journey time at 11.00 and is intended to illustrate the increase in journey time by private car during the daytime. This is most relevant to journeys by friends and family to visit stroke patients at a HASU or ASU.

Support for providing acute stroke care at both Taunton and Yeovil hospitals was also echoed across the other consultation strands. The reasoning for most was wanting to keep services local and the potential impacts of increased journey times to reach an acute stroke unit on patients, visitors, and staff members. Early transfer back to their local area would allow carers/relatives to be more easily involved in patients' on-going care.

The hurdle criteria set deliverability criteria of two years. At the time of the reapplication of the criteria, it was expected that to deliver Option B at Dorset County Hospital would require a temporary ward to provide the bed capacity required before a final permanent solution was made, which could not be delivered within the two years.

Since the reapplication of the hurdle criteria, it has emerged that it is not possible to deliver the entirety of bed requirements for Option B at Dorset County Hospital site and even a partly implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorset County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set.

UNDERSTANDING THE FINANCIAL IMPACTS OF THE OPTIONS

Further financial modelling of both capital and revenue requirements has been undertaken of the two options. This has included a more detailed analysis by Dorset County Hospital NHS Foundation Trust.

Capital

Indicative estimates for the implementation of Option B are that the capital required for the temporary solution at DCH is approximately £7.8m, however this would still not provide a solution to accommodate the increased demand in a 38 bed stroke unit on the DCH site, therefore Dorset ICS does not support option B. Even if this option could accommodate the required number of beds, this represents 25% of the Somerset system capital allocation and by investing this money in stroke services means that we could not invest in other priority areas such as Electronic Health Records and a reduction in addressing the backlog maintenance requirements in Somerset.

The indicative capital costs of option A are £3.5m, and whilst this would have an impact on other areas of the system capital programme, is more manageable than option B.

The SFT capital costs of both options are relatively modest and will be managed within existing operational capital programme allocation.

Revenue

The indicative additional revenue costs at DCH of Option A is £2.63m in comparison with £3.2m for option B.

The indicative annual additional revenue costs at SFT of Option A are £2.1m and for Option B are £0.9m.

10.3. Recommendation of a preferred option

The appraisal process assessed that the implementation of the bed requirements under Option B is not deliverable on the Dorchester County Hospital site. Even a part implemented solution would require significant capital investment which would have to be diverted from other planned improvements in Somerset, to support both Dorchester County Hospital and Musgrove Park Hospital to provide stroke services and could not be implemented within the two-year timetable set. Put alongside the strong public opinion heard through the public consultation around the adverse impact on families and carers if stroke services were completely removed from Yeovil a recommendation was made to the ICB Board to discount Option B and to work with Option A as a preferred Option – this decision was approved by the ICB Board at their meeting on 30 November 2023[61].

The Somerset Stroke Programme has continued further analysis and modelling of the preferred option (previously option A), including further analysis of the financial geographical, operational impacts and public feedback. This analysis is summarised in the next section.

[61] Enc-E-Reconfiguration-of-Stroke-Services---Review-of-option-viability-prior-to-DMBC.pdf (nhssomerset.nhs.uk)

11. Assessing the impact of the preferred recommended option

11.1. Description of the preferred option

Not all hospitals in Somerset have the latest specialised equipment or resources to provide the best initial, emergency care for people who have had a suspected stroke.

The preferred option (previously option A) would ensure that everyone was taken to the nearest hospital with a hyperacute stroke unit to ensure they had access to the best care and treatment immediately. This may be Musgrove Park Hospital in Taunton, or an out of county provider (primarily Dorset County Hospital in Dorchester).

Preferred option **Hyperacute and acute stroke care and TIA services**
Single HASU at Musgrove Park Hospital in Taunton. **No HASU in Yeovil.** **ASU at Taunton and Yeovil**
SWASFT would take all suspected stroke patients to **nearest HASU**
Yeovil emergency department (A&E) **would not** receive suspected stroke patients at any time unless patient walks in or has a stroke as an inpatient
Patients who would normally go to Yeovil would go to **Taunton or Dorchester for their HASU** care
Any Somerset people and those people who live nearer to Yeovil even though they have a Dorset postcode i.e., Sherbourne and other surrounding villages that have had their HASU care at Dorchester will be repatriated back to Yeovil following their HASU care.
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
There will be **an impact on other health systems** in this option, primarily Dorset
TIA service would be delivered 5 days a week in Yeovil and at weekends patients would be directed to Taunton service.

Principles

- People with stroke will be treated in a specialist stroke unit throughout their hospital stay unless their stroke is not the predominant clinical problem.
- All people with suspected strokes are conveyed to the nearest site with a HASU.
- In Somerset, there will be a single county-wide HASU based in Taunton.

- People would be repatriated from Taunton to an ASU in Yeovil following their HASU care and within 24 hours.
- Any Somerset people and those people who live nearer to Yeovil even though they have a Dorset postcode i.e., Sherbourne and other surrounding villages that have had their HASU care at Dorchester will be repatriated back to Yeovil following their HASU care.
- ASU care will continue to be provided in both Taunton and Yeovil.
- People would be either transferred into a Community Stroke Rehabilitation Unit (SRU) following their acute stroke care or be discharged home or with Early Supported Discharge service support at home which could be in Somerset or Dorset.

CLINICAL MODEL OF CARE

The clinical model has been developed by the clinicians involved in the stroke steering group using best practice guidance.

As the model developed it was shared with clinicians working within the Somerset stroke service and other services where stroke is part of the pathway such as the emergency department and refined from the feedback received.

The clinical model maps the journey from the pre alert by the ambulance service through the hyperacute and acute stroke phases and incorporates the standards required at each part of the pathway including the pathway for those who may walk into Yeovil emergency department or who may have a stroke as an inpatient.

HASU

A single, centralised hyperacute stroke unit would be developed in Musgrove Park Hospital in Taunton. This unit would provide all the hyperacute care following stroke and refer appropriate patients onward to Bristol Southmead Hospital for mechanical thrombectomy or neurosurgical management. This would provide a larger and more sustainable specialist stroke workforce, which would enable faster decision making and improved continuity of care 24/7, leading to improved equity of service and improved outcomes.

Some patients who may have gone to Yeovil for their stroke care would be taken to Dorchester as the nearest HASU for their hyperacute care and refer appropriate patients onward to Southampton for mechanical thrombectomy or neurosurgical management.

Principles

- There would be a consultant stroke physician present on the HASU site from 8am – 8pm, 7 days per week, and available on-call outside these times to offer senior specialist input for stroke cases via videotelemedicine
- Initially, out of hours support would be via the Network, as is currently the case, but longer term following additional recruitment this would be staffed through an internal rota
- There would be stroke advanced clinical practitioners present on the HASU site from 8am – 10pm, 7 days per week to provide specialist input to stroke patients and support the patient pathway
- The stroke team will respond to all stroke calls from the Emergency Department 24/7 with overnight band 6 HASU nurse responding to all stroke calls and the medical registrar responding to thrombolysis calls
- SWAST convey patient with suspected stroke to closest HASU
- SWAST continue to Pre-alert all with suspected stroke to the Emergency Department

(ED)

- ED differentiate between whether the patient would be eligible for reperfusion (thrombolysis) or not, and initiate stroke pathway using established pager alert system
- Emergency Department to order CT prior to patient arriving
- Patients would go straight into ED and to the CT scanner accompanied by stroke team and crew. The attending stroke team would organise CT angiogram in addition to CT head at same for appropriate patients
- If Stroke straight to the HASU to be assessed for emergency stroke treatments by a specialist clinician without delay
- If stroke diagnosis excluded on initial assessment and CT scan, patient will return to Emergency Department
- If scan or stroke diagnosis is unclear, patient will go to the HASU
- Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face
- There would be twice daily consultant ward rounds on the HASU
- Beds are level 2 beds with associated nurse and therapy staffing as per recommended stroke guidance
- Continuous physiological monitory including telemetry to detect arrhythmias such as atrial fibrillation
- Protocols in place for dysphagia management, continence promotion & prevention of venous thromboembolism
- Specialist seating and equipment to facilitate mobility
- Ring fencing of HASU beds; bed available within 20 minutes if required 24/7 to allow for transfer from Yeovil for those patients who walk in or have a stroke as an inpatient
- Patients who have been confirmed as not a stroke should be moved out from HASU ASAP
- Stroke patients would spend up to 72 hours in the HASU before being transferred to the acute stroke unit in Musgrove Park Hospital or repatriated to their local acute stroke unit in Yeovil District Hospital
- Clinically stable patients who do not require acute stroke unit care would be transferred to the stroke recovery unit in either Williton community hospital or South Petherton community hospital or discharged home with early supported discharge or community rehabilitation follow-up

Clinical Standards that would be met

- Call to hospital arrival < 60 minutes
- A pre-alert system is needed to communicate patient characteristics and ensure all patients are met by the stroke team on arrival at the ASC or CSC. (BASP CS 1.1)
- Patient with suspected stroke should have CT scan within 60 minutes of hospital arrival (BASP CS 2.2)
- Assessed by stroke specialist clinician within 1 hour of hospital arrival
- People with suspected acute stroke should be admitted directly to HASU within 4 hours of arrival (NICE QS 1)
- All eligible patients should receive IV thrombolysis within 60 minutes of arrival to hospital (BASP CS 1.4)
- A hyperacute stroke unit should have continuous access to a consultant stroke physician, with consultant physician review 7 days per week
- Assessed by stroke specialist clinician within 1 hour

- Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face
- A hyperacute, acute and rehabilitation stroke service should provide specialist medical, nursing, and rehabilitation staffing levels matching the recommendations
- Patients should receive swallow screening within 4 hours of arrival (BASP CS 3.5)
- Patients should be assessed by all members of stroke multidisciplinary team within 72 hours (BASP CS 3.10)
- Patients should have rehabilitation goals agreed within 5 days and regular review of goals (NICE QS 6)

ASU

Acute stroke care would be provided by dedicated stroke teams in Taunton and at Yeovil, with dedicated acute stroke beds at each site and staffed as per the 2016 National Stroke Clinical Guideline.

Principles for ASU at Taunton and Yeovil

- Clearly defined unit (as specified by NICE)
    - Adequate space for fully equipped gym, and functional practice (kitchen and bathroom)
    - Appropriate space to accommodate group work, and quiet space for psychological assessment and sensitive discussions
    - Adequate hardware to facilitate quick access to clinical systems
- Nursing and MDT staffing as per 2016 guidance
- 5-day consultant ward rounds
- Access to consultant advice out-of-hours by telephone or videotelemedicine where appropriate
- Advanced clinical practitioners working in extended roles supporting TIA clinics and stroke follow-up clinics, as well as taking a leading role in the Somerset stroke education, governance and research programme
- Side rooms available for infection control and palliative / end of life care
- Ringfenced beds
- Ability to recruit to clinical research trials
- Ability to deliver an ambulatory TIA service

Clinical standards that would be met

- A hyperacute, acute and rehabilitation stroke service should provide specialist medical, nursing, and rehabilitation staffing levels matching the recommendations.
- Patients should receive at least 3 hours of rehabilitation covering a range of multidisciplinary therapy for minimum 5 days per week (NICE QS 2)
- All appropriate patients should receive at least 45 minutes of therapy per day (BASP CS 3.11 – 3.13)
- An acute stroke unit should have continuous access to a consultant physician with expertise in stroke medicine, with consultant review 5 days per week
- Patients should spend at least 90% of their in-patient stay on a stroke unit (BASP CS 3.1)
- The stroke services should participate in clinical research (BASP CS 6.5)

Principles for a standalone ASU at Yeovil.

The Clinical Senate Review was very clear that to deliver Option A the ASU beds at Yeovil would need to be within a dedicated unit as specified in the NICE guidance with the associated staffing recommendations. (An acute stroke unit is a discrete area in the hospital that is staffed by a specialist stroke multidisciplinary team. NICE 2022)

- There should be 24/7 access to CT brain imaging and CT angiography
- There should be 24/7 access to telemedicine stroke advice from a stroke consultant where emergency interventions such a thrombectomy, thrombolysis or intensive blood pressure lowering in intracerebral hemorrhage may be indicated
- There should be 24/7 access to transfer a patient to HASU from hospitals with only an acute stroke unit, for full stroke assessment and management
- Patients requiring specialist assessment prior to transfer should be assessed with remote videotelemedicine support and discussion with the consultant specialist based in the HASU
- This would potentially provide another layer of risk mitigation for stroke patients presenting to the non-HASU site where the HASU consultant could visualise the patient
- Patients who cannot be transferred to HASU should be able to access the on-site acute stroke unit, including multidisciplinary assessments and ongoing stroke care (including hyperacute stroke care) and rehabilitation until discharge or transfer
- There will be regular education and training sessions with medical registrars, emergency department staff, and stroke nurses to support safe and effective delivery of stroke thrombolysis where necessary
- The acute stroke unit should be staffed as per Royal College of Physicians recommendations
- There should be access to carotid imaging, ambulatory ECG, and echocardiography.
- Retain the stroke registrar post at Yeovil

Clinical model of care for the ASU at Yeovil

- 5-day consultant ward rounds
- Clearly defined unit with multidisciplinary staffing as per National Stroke Clinical Guideline 2016
- Adequate space for fully equipped gym, and functional practice (kitchen and bathroom)
- Appropriate space to accommodate group work, and quiet space for psychological assessment and sensitive discussions
- Ringfencing of beds
- Adequate hardware to facilitate quick access to clinical systems
- Communication with the HASU consultant at weekends by telemedicine
- Trained transport crew for repatriation – basic infusions, NG tube, sliding scale insulin
- Senior Stroke practitioner cover at the weekend
- Ability to admit 7/7 including straight from thrombectomy as well as from any of the feeding HASUs
- Specialist seating
- Clear pathway for inpatient strokes and those that walk in with ability to use telemedicine to the HASU at Taunton
- Clear pathway for repatriation 7/7 from both MPH & DCH and back to HASU if required.
- Orthoptic and orthotic service
- Ringfenced beds
- Opportunities to recruit patients to clinical research trials
- Ambulatory TIA service
- Robust repatriation policy from HASU to ASU
- Daily call between SFT/DCH and YDH to identify transfers
- No duplication of assessments on transfer
- Equitable access to community Stroke Rehabilitation Units in both Somerset and Dorset

This would ensure that expertise in acute stroke care is retained across both sites and that patients can be repatriated closer to home for their acute care, which will ensure that families and carers can be involved in supporting recovery and decision making.

Repatriation from HASU at a hospital not local to the patient

Effective repatriation of patients ensures that they receive the most appropriate service, closer to their home.

To support the clinical model of care, a clinical model repatriation statement of intent has been agreed by the Somerset Stroke Programme Board as; To enable prompt repatriation back to the nearest ASU, repatriation will happen within 24 hours of being identified as suitable for transfer.

A repatriation policy and plans and protocols to operationalise this would be developed as part of the implementation process.

Pathway for emergency assessment & management of suspected stroke patients who walk into ED or have a stroke as an inpatient.

It is anticipated that most patients with suspected stroke will phone 999 and be conveyed to the closest hospital with a hyperacute stroke unit (HASU). Nevertheless, there will be a cohort of stroke patients who arrive in the emergency department at the non-HASU site because either:

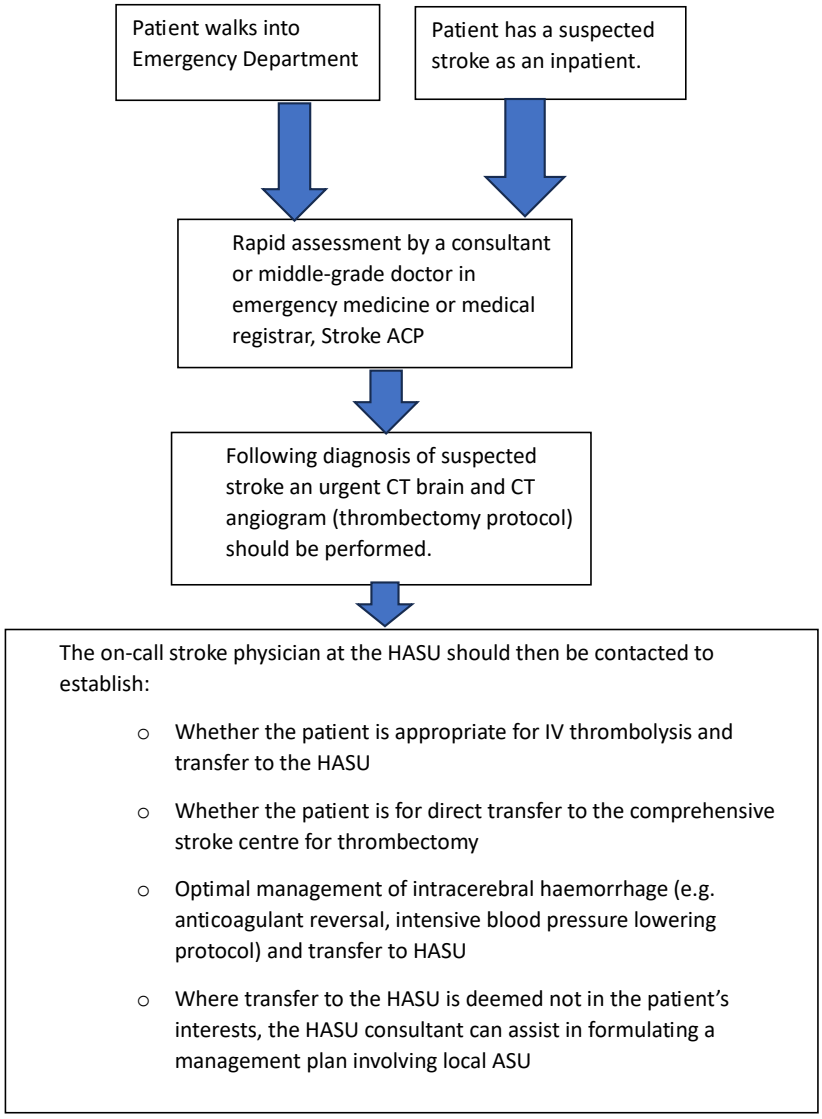
- They self-present to the non-HASU site; or
- They are conveyed by ambulance to the non-HASU site because stroke was not initially suspected pre-hospital
- They are already in-patient at the non-HASU site who develop an acute stroke

Principles

- Would be discussed with:
    - In hours during the week stroke consultant on YDH site
    - OOH with Stroke consultant at Taunton HASU or on call stroke consultant
- Thrombolysis would be delivered by a competent medical registrar
- Patients would go straight for thrombectomy if suitable
- Ability to do CT angiogram on YDH site
- If HASU care required to be transferred to the nearest HASU
- 24/7 videotelemedicine access to stroke consultant

The pathway for the management of these is as follows:

INPATIENT AND WALK IN PATHWAY FOR PATIENTS PRESENTING WITH STROKE AT A NON-HASU SITE



Clinical standards met

- Patient with suspected stroke should have CT scan within 60 minutes of hospital arrival (BASP CS 2.2)
- Assessed by stroke specialist clinician within 1 hour of hospital arrival
- People with suspected acute stroke should be admitted directly to HASU within 4 hours of arrival (NICE QS 1)
- All eligible patients should receive IV thrombolysis within 60 minutes of arrival to hospital (BASP CS 1.4)

TIA SERVICE

As part of the acute stroke services review, it is necessary to review the provision offered to people experiencing a transient ischaemic attack (TIA).

Within the PCBC we said that the outcome of this will be determined once we have a preferred Option so that we can offer a better service than is currently provided

As the preferred Option, the Stroke Steering Group felt that to deliver a clinically safe TIA service under Option A would require an ambulatory approach and to have access to a stroke consultant on site and 7-day access to the appropriate diagnostics. Therefore, Yeovil would have a 5-day service with Taunton providing a 7 day service.

CLINICAL MODEL FOR TIA

The clinical model for TIA is that the Somerset population has access to a seven-day service that meets national standards.

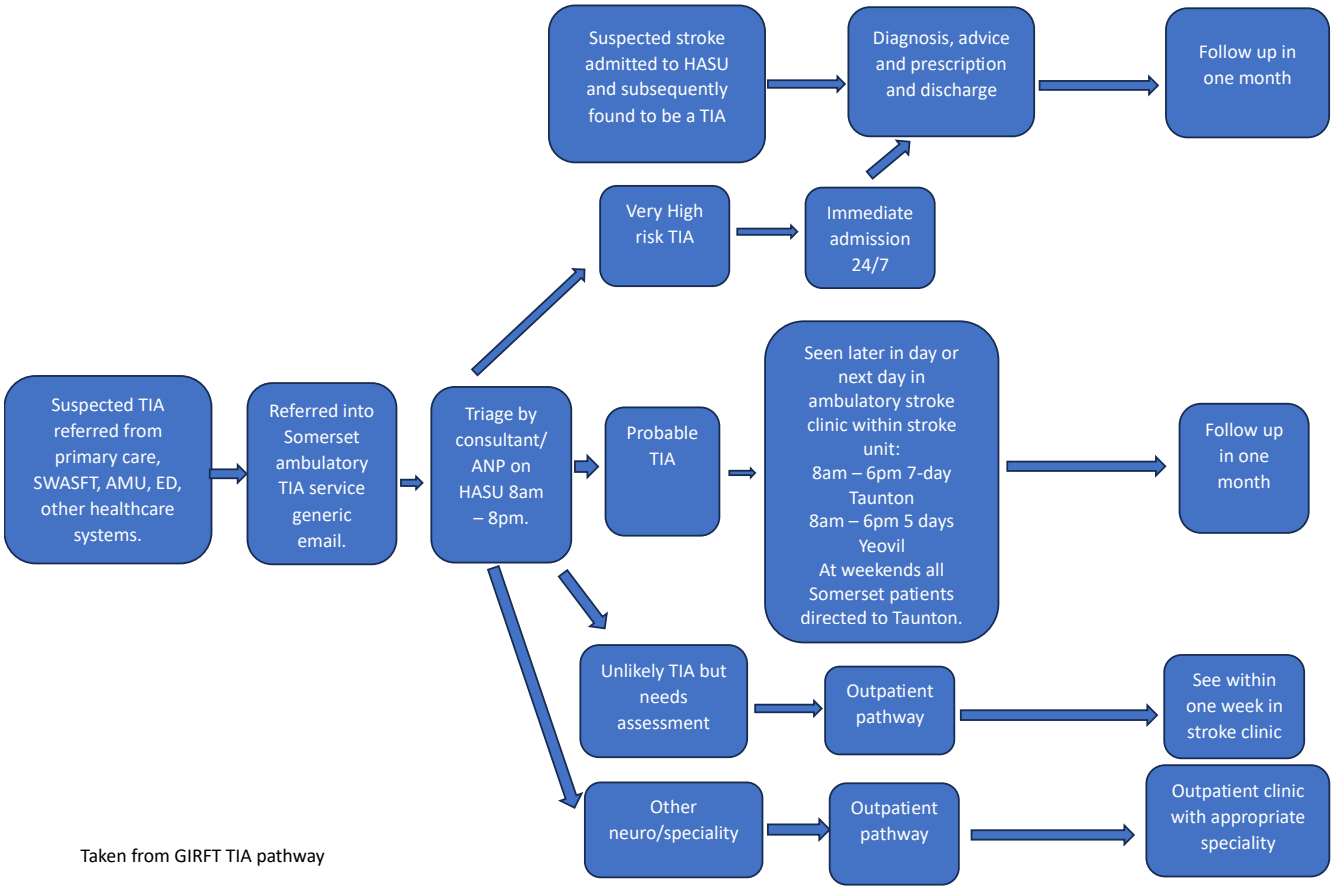
Principles

- People to be seen within 24 hours 7 days a week
- Practitioner led service with access to consultant supervision if required
- Ambulatory service on the stroke unit at both sites
- Space for private conversations
- Flexible access to scanning (i.e., MRI, carotid dopplers) not fixed slots.
- Same day access to ECG monitoring
- Seven-day Somerset service
- Generic Somerset TIA service email
- Will take referrals from other healthcare systems and practitioners i.e.., SWASFT paramedics
- 7-day service at Yeovil residents directed to Taunton service at weekends
- 5-day service at Yeovil
- Access to videotelemedicine advice
- Meets the GIRFT TIA pathway

Standards met

- Refer immediately people who have had a suspected TIA for specialist assessment and investigation, to be seen within 24 hours of onset of symptom (NICE CG 2019)
- Do not use scoring systems, such as ABCD2, to assess risk of subsequent stroke or to inform urgency of referral for people who have had a suspected or confirmed TIA.

SOMERSET TIA SERVICE PATHWAY



Taken from GIRFT TIA pathway

The Clinical Model and Pathways have all been reviewed by the clinical experts and steering group and signed off as meeting the preferred option.

Further sign off has been done by the Medical Director of SFT and the CMO of the ICB.

How this option responds to the Case for Change

The PCBC set out the main reasons for needing to reconfigure acute stroke services within Somerset which were:

- Workforce sustainability
- Clinical outcomes
- Inequalities
- Financial sustainability

The preferred option delivers the following under each of the headings:

Workforce sustainability

- Gives greater opportunity to explore more innovative and creative ways to recruit and retain specialist stroke staff
- Creating a more attractive place to work, which will lead to improved recruitment and retention levels, recruitment, and lower vacancy rates
- Future-proofs the stroke service against single point of failure risk with regards to senior specialist stroke consultant staffing and leadership

- Allows greater flexibility in the range of workforce solutions available for an existing workforce
- Meets the appropriate standards as set out in the relevant guidance documentation (e.g., British Association of Stroke Physicians and the National Stroke Clinical Guideline 2016)
- Bringing together the stroke service into one service two sites model

Clinical Outcomes

- Ensures and responds to the key standards set out in the clinical model
- Ensures delivery of the recommended number of > 600 strokes per year
- Delivers time critical interventions more quickly i.e., brain scan, within 1 hour, time to see a stroke specialist within I hour, door-to-needle time for stroke thrombolysis, proportion of patients receiving thrombolysis within 1 hour of hospital arrival, and proportion of patients admitted to the hyperacute stroke unit within 4 hours
- Delivers a standalone ASU at Yeovil as recommended and with recommended staffing level (2016)
- Enables access to a safe and equitable service 24/7
- Ability to use videotelemedicine across both sites 24/7, facilitating greater access to stroke specialist input, particularly out-of-hours
- Improvement in length of hospital stay

Inequalities

- Delivers a 24/7 clinically sustainable service to the population of Somerset rather that the current in hours and out of hours variation
- Improvement in door-to-needle times for stroke thrombolysis; this will mitigate the longer pre-hospital travel times experienced by some patients
- Provides equity of patient outcomes
- Delivers a Somerset TIA service to national standards
- A stroke is a medical emergency and urgent treatment is essential. Urgent care is excluded from patient choice rules and as stroke care is considered to be urgent, patient choice does not apply to this service. Patients will be conveyed to the location of their nearest HASU
- If the patient self presents, or has a stroke whilst an inpatient, they will be transferred (if appropriate) to the nearest HASU for thrombolysis, direct transfer for thrombectomy or where transfer to a HASU is not deemed to be in the best interest of the patient the HASU consultant would support the formulation of a management plan involving the local ASU
- Our proposals allow for a degree of patient choice for the post HASU care, both for Acute Stroke Care and Rehabilitation
- For patients who have a TIA, patients are required to be seen urgently for specialist assessment and investigation within 24 hours of onset of symptoms. As this remains urgent care, patient choice does not apply to this service
- There would be a risk to continuity of care because of repatriation between HASU and ASU which can be mitigated by ensuring that there is good handover of care and using trusted assessments fostered by the one team, two site approach in Somerset

Financial sustainability

- Reconfiguration of hospital services can provide a powerful means of improving quality in an environment where money and skilled health care workers are scarce

- The Option has been modelled over 10 years to consider the demographic growth, changes in age specific stroke incidence, and activity projections
- There is an opportunity to reduce the reliance on agency staff reducing cost
- The benefits of delivering time critical interventions in the hyperacute phase more quickly means that outcomes are improved and support the opportunity to reduce long term care costs

11.2. Capacity impacts

The table below sets out the bed numbers which will be delivered in Somerset in the recommended preferred option;

Table: Bed numbers for the preferred recommended option

Hospital	Setting	Current	Proposed
MPH	HASU	4 (8 from Feb 2024)	12
	ASU	19	24
YDH	HASU	4	0
	ASU	12	16
DCH (additional beds)	HASU	0	4
	ASU	0	0

11.3. Workforce impacts

11.3.1. Workforce model

The workforce model has been developed using the 2016 staffing recommendations in the National Stroke Clinical Guideline. It takes into account the need to explore innovative ways to recruit and retain stroke specialist staff ensuring that they use their specialist skills in the right way and developing other roles that may support highly skilled staff not completing tasks that others can do. Digital technology will be used to support better ways of working and improved processes will improve efficiency.

The proposed clinical model is built on the assumption of a single workforce across all aspects of a patient's pathway. This will enable greater career opportunity, training and education and satisfaction for our valuable stoke workforce and, in turn, continuity of patient care as well as equality of treatment.

The service will enable the development of existing staff and the development and delivery of career pathways to compliment the workforce needs.

Implementation plans will consider how best to safely implement the changes whilst still retaining current workforce and being sure the other sites are ready to receive.

The workforce plan in the appendix sets this out in more detail.

The baseline has provided the current staffing for both Taunton and Yeovil and Option A staffing model has been built using the national recommendations, with input from professional leads, managers and stroke clinicians.

The workforce model will deliver:

- Provide a sustainable 24/7 specialist stroke service for Somerset.
- Opportunities for development of the current workforce
- Creating a more attractive place to work, which will lead to improved recruitment and retention levels, recruitment, and lower vacancy rates
- Ensuring adequate staffing levels and skill mix to meet national service specifications and deliver the best quality treatment, care and support for people who have had a suspected or confirmed stroke or TIA
- Improved equity of provision for development, education and high-quality training for all staff involved in the delivery of stroke care across the county
- A reduction in avoidable temporary staffing levels and costs, either through bank or agency
- Improved sickness levels
- Improved staff satisfaction and engagement levels, leading to improved retention rates
- Improved succession planning and talent management

11.3.2. Workforce numbers

Hyperacute and acute stroke services are not compliant on any of the sites. The services do not meet the recommended WTE/ratio standards under the 2016 recommended staffing levels or the guidance on the delivery of a dedicated HASU on Dorchester's site and a dedicated ASU at Yeovil.

There is a plan to have a dedicated HASU on the Dorchester site following the implementation plan from the NHS Dorset stage 1 business case in spring this year.

The Somerset workforce model and staffing requirements for the proposed reconfiguration of stroke services in Somerset have been built on the nationally recognised clinical model for delivering a Hyperacute and Acute Stroke unit meeting national guidance.

The workforce numbers have been compiled using the National Stroke Clinical Guideline 2016 which sets out the specialist medical, nursing and therapy staffing levels. The therapy levels in the 2016 table are based on weekday working and the intention is to deliver a robust 5-day service and maintain the current level of weekend service.

Under the transformation work the aspiration is to work towards the 2023 guidance which gives 7 day staffing levels for all professions.

The DMBC sets out the workforce requirements for the services at Musgrove Park Hospital in Taunton, Yeovil District Hospital and Dorset County Hospital and the workforce plan for the recruitment and retention of key staff across multiple disciplines.

The staffing has been modelled against the bed numbers which has taken into account the variability in stroke arrivals and length of stay on bed demand i.e., the number of beds required to accommodate resultant peaks in bed demand.

HASU

The HASU staffing numbers have been modelled with a higher staffing ratio of specialised nurses of 1 nurse to 2 patients like high dependency beds within critical care due to the intensity of physiological monitoring required and requirement of delivering thrombolysis in the unit.

The ability to respond to all stroke calls 24/7 as in the clinical model has been factored into the staffing numbers.

ASU

The ASU staffing have been modelled against the 2016 recommended staffing levels for Taunton and Dorchester and providing a standalone ASU at Yeovil as per the clinical model.

Medical cover

Medical cover has been modelled against the recommended staffing levels and the BASP consultant workforce requirements.

The model sets out the staffing requirements to deliver a 24/7 specialist stroke service which includes out of hours cover arrangements.

The medical staffing requirements provide cover for 7-day ward rounds of the HASU.
and 5-day ward round of both ASUs.

Therapies.
The full range of therapy workforce has been modelled including speech and language, dieticians and psychologists at all sites.

Staffing numbers have been modelled against the 2016 recommended staffing and includes the current service provided at the weekends.

TIA
The TIA service will move from a clinic model to an ambulatory model similar to providing same day services due to the need to see all suspected TIAS within 24 hours.

Staffing for both Yeovil and Taunton include the ability to provide the TIA model identified in section 11.1 with associated admin and support roles.

Advanced practitioners

Advanced practitioners have been included to deliver the clinical model of 8am – 10pm cover 7 days a week in Somerset. Dorchester have also included additional ACP roles.

The following tables show the difference between the current and future workforce requirements for Taunton and Yeovil and Dorchester.

Current and future workforce requirements for Taunton and Yeovil and Dorchester in **Whole Time Equivalent (WTE)**

	Taunton baseline	Taunton Option A	Diff	Yeovil Current	Yeovil Option A	Diff	DCH current	DCH Option A	Diff	Total additional staff to be recruited	Notes
Medical staff including juniors	13.6	19	5.4	8.0	9.0	1		3.73	3.73	10.13	2.6 consultant posts across Taunton and DCH other junior staff
Nursing staff	80.9	91.5	10.6	43.6*	21.3*		49.0	62.5	13.5	24.1	* Without HASU
Therapies	17.4	20.2	2.8	10.5*	7*			2.64	2.64	5.44	* Without HASU
TIA service	1.7	1.7	0	1.7	1.7					0	
ACP/Admin	9.2	14.0	4.8	6.0	8.8	2.8	0	2.97	2.7	10.3	

11.3.3. Workforce position

The current workforce picture in terms of specialist stroke workforce is well known with a national shortage of consultants and therapist's particularly occupational therapy.

Within Somerset there has been some successful recruitment to medical staff in Taunton where a joint post between Geriatrics and stroke is planned and the recruitment of two Associate Specialists who will be supported to work towards consultant status (CESR).

Yeovil has been successful in recruiting two stroke consultants however this does not give them the ability to provide 24/7 HASU care, but supports the continued 5-day service to a dedicated ASU. With the potential retirement of the part time consultant at Yeovil this does still mean that a sustainable HASU service at Yeovil can be delivered as per the guidance.

The increase in advanced practitioners gives nurses and therapists the opportunity for development and the current advanced practice apprenticeship provides the framework for working towards advanced practice status, although there is a two-year lead in time before these practitioners can work at the advanced level.

With the implementation plan being set at two years this means that these posts should be ready to support the clinical model.
The workforce plan in the appendices sets outs the workforce picture, including turnover rates and known recruitment and retention challenges.

The turnover figures in the workforce plan combine Taunton and Yeovil and confirms the national picture of turnover for medical staff and therapies.

11.3.4. Workforce gaps

Analysis of the workforce numbers for both Somerset and Dorchester shows that there is an increase across all professional groups.

There will be a need to train the Associate Specialists up to consultant level through the CESR route and to develop the role of ACP's which is a three-year programme, however they can be clinically competent at the end of year 2. This is a popular role for all professions and gives a career structure to support recruitment and retention.

The model of the workforce across Somerset and Dorchester provides equity against the 2016 guidance. There is the opportunity to apply for AP roles on all sites.

There will be the need to provide a regular training session on thrombolysis delivery for the Emergency Department staff and junior doctors and the APs at Yeovil to maintain a safe service for those patients who walk in or have a stroke as an inpatient. This will require time from the consultant group to do this. However, many of the specialist registrars who rota around the region will have this skill and provide the on call OOH service at Yeovil.

11.3.5. Workforce plan (delivery/implementation)

As part of the mobilisation and subsequent implementation programme if approved, Somerset and Dorchester will build on the work previously undertaken and continue to:

- review and finalise the key roles and skillsets required for the revised service model
- learn from experience elsewhere to further consider new ways of working and innovative roles
- review the skills, capabilities, and aspirations of the team(s) to identify opportunities and mitigate shortfalls where possible
- identify and mitigate retention and succession planning risks
- continue to develop and support staff in preparation for new ways of working

Detailed recruitment plans will continue to be matured and Somerset and Dorchester will begin initiating any additional recruitment process specific to the stroke programme following DMBC approval. These plans and associated workforce strategy will be closely managed during the implementation phase of the programme. The Trust is confident that the associated service developments will prove to be an attractive aid to future recruitment and retention.

A joint Implementation Workforce Group across Somerset and Dorchester will be established during the implementation phase of the proposed change.

It is recognised that the current services already have significant workforce challenges, but it is believed that the reconfiguration of services and the development of a nationally compliant service will support recruitment and retention in the long term.

Recruitment to therapy roles within stroke is not so much of a problem as other services as it is a desirable area of practice but as a summary SFT are:

- Currently hosting 4 OT apprentices across 2 cohorts in MPH and are due to qualify in 18 months & 30 months.

- Have 1.5 professional lead OT posts for the trust investing in our current staff to support with professional and clinical development

- Offer a rotational scheme at both Band 5 and band 6 level to offer opportunity to gain experience in a variety of clinical settings including stroke.

- Attending careers events at both educational and healthcare settings and linking in with university program leads

- Are part of regional and national working groups to ensure our practice and service development is current and driving forwards

Dorchester are undertaking similar work to recruit therapists and will work jointly with Somerset on recruitment during the implementation phase.

The recruitment strategy will take a phased approach, over 6-12 months, with a lead-in time and project plan to recruit to stroke and allied services specifically.

Workforce planning for consultants using the British Association of Stroke Physicians guidelines is recommended together with consideration to development of competency-based roles as part of the future workforce model.

Methods of recruitment will include:

- International recruitment and sourcing via specialist agencies
- UK and local Market by using different approaches for advertising and brand awareness showcasing the good work currently undertaken across the stroke service from the merger and transformation work, together with continuous professional development and career progression opportunities.
- provide advertising and marketing communications about staffs positive experiences of working for stroke services.
- Digital media
- Open Days
- Direct marketing campaigns through universities, professional journals and networking.

Recruitment will commence after the final decision has been made about the future of the stroke model of delivery through the DMBC and approvals process

11.3.6. Workforce travel impacts of this option

Travel implications for this option are minimal and would only be in the event of reduced cover on either site due to sickness or other leave which required staff to be redeployed to ensure patient safety.

11.4. Quality impact assessment

SSNAP is a major healthcare quality improvement programme measuring how well stroke services are delivering against a set of key indicators to improve the quality of care given to patients. It measures the quality and organisation of stroke care and uses best practice from national evidence and guidelines such as NICE to acquire the standards.

In section 3.1.4 there is a review of the SSNAP data for Somerset and Dorchester and all units are struggling to meet a number of the key indicators.

To deliver the key indicators there is a requirement to have the right clinical service model in place which supports the right staffing, processes and pathways and environment to improve performance against both the clinical and organisational SSNAP audits.

Below is a comparison of the current service models in Somerset and Dorchester.
None of the units delivers 24/7 services and Yeovil does not have a dedicated HASU and ASU.

Dorchester has a dedicated ASU and will have a dedicated HASU in Spring 24 following the success of their Stage 1 business case.

Comparison of current HASU and ASU service at Dorchester, Taunton and Yeovil

	DCH	YDH	MPH	Comments
Dedicated HASU with dedicated staffing as per national guidance	No within stroke unit	No within CCU	Yes	DCH implementing HASU bay on stroke unit spring 2024
7/7 ward round of HASU	No	No	Yes	DCH will be yes once HASU bay implemented

				in spring 2024
Assessed by stroke skilled specialist clinician within 1 hour	No	No	No	Not 24/7
Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face.	Yes	No	Yes	
24/7 specialist stroke service	No	No	No	
A pre-alert system is needed to communicate patient characteristics and ensure all patients are met by the stroke team on arrival at the ASC or CSC.	Yes	Yes	Yes	
Patient conveyed straight to the CT scanner on arrival	Yes	No	Yes	
Access to consultant advice out-of-hours by telephone or telemedicine where appropriate	No	No	No	Not 24/7
Clearly defined ASU with dedicated staffing as per national guidance	Yes	No	Yes	
5/7 ASU ward round by specialist stroke team	Yes	Yes	Yes	For YDH those stroke patients on 8B
ESD and community service	Yes	Yes	Yes	

The table below sets out the outcome of the changes to the service model that would greatly enable all the units to deliver an improvement in SSNAP performance.

Taunton and Dorchester would have a dedicated HASU with the associated recommended staffing. Yeovil would have a dedicated ASU and associated recommended staffing levels.

Comparison of proposed service at Dorchester, Taunton and Yeovil on implementation

	DCH	YDH	MPH
Dedicated HASU with dedicated staffing as per national guidance	Yes		Yes
7/7 ward round of HASU	Yes		Yes
Assessed by stroke skilled specialist clinician within 1 hour	Yes		Yes
Assessed by a consultant within 14 hours (can be by telemedicine) and seen within 24 hours face to face.	Yes		Yes
24/7 specialist stroke service	Yes		Yes
A pre-alert system is needed to communicate patient characteristics and ensure all patients are met by the stroke team on arrival at the ASC or CSC.	Yes		Yes
Patient conveyed straight to the CT scanner on arrival	Yes		Yes
Access to consultant advice out-of-hours by telephone or telemedicine where appropriate	Yes	Yes	
Clearly defined ASU with dedicated staffing as per national guidance	Yes	Yes	Yes
5/7 ASU ward round by specialist stroke team	Yes	Yes	Yes
ESD and community service	Yes	Yes	Yes

11.5. Interdependencies of the option

The PCBC set out the interdependencies that required consideration to ensure that safe and effective care is delivered for people who have experienced a suspected or confirmed stroke or TIA.

These interdependencies have been reviewed to consider the impact of Option A on the supporting clinical services.

For the HASU and ASU, the interdependencies and minimum specification identified within the PCBC have been incorporated into the clinical model.

The table below shows the outcome of the review of the interdependencies:

Interdependency	Outcome of review
Emergency Department	The centralisation of the HASU beds in Taunton has been mitigated by providing a specialist stroke response to the ED for all stroke calls 24/7 and for those patients who have had a confirmed or unclear diagnosis of stoke will be taken directly to the HASU.
Acute Medicine	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Neurology	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Diagnostics	This has been reviewed and the updated modelling assumptions shared with radiology and essentially, this will result in around 1 to 2 additional patients per day. This will create some additional pressure on Radiology, but the result will be a small increase in waiting times for either IP or ED scans. Looking at a pan-Somerset view, this should result in an improvement in capacity for YDH scanning. There is an ambition to locate a scanner in the Emergency Department and a potential location has been identified and SFT are working on a case supported by the regional team however this will require capital investment which is being worked through. This would reduce the time to scanning and support quicker diagnosis and treatment.
Intensive care	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Neurosurgery	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Vascular surgery	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Cardiology	Assumptions and modelling reviewed and no change from PCBC, minimal impact.
Thrombectomy	Bristol have moved to a 24/7 service Southampton will be 24/7 from September 2024.
Repatriation and inter facility transfers	Inter facility transfers remain the same Repatriation has been modelled and costed for the DMBC
TIA	Model reviewed following the approval to have option A as a preferred option and service model and pathway reviewed against the updated NICE guidance and a move to an ambulatory same day service model agreed.

11.6. Travel and transport

Sections 9.1 and 9.2 set out the detailed travel and transport modelling undertaken to respond to the queries and concerns raised in the public consultation.

This section sets out the travel and transport impacts of the preferred recommended option in more detail;

- For patients who will have an increased ambulance travel time following a stroke. This will be mitigated by an improved clinical model of care which will improve outcomes for many stroke patients.
- Travel time by ambulance for Somerset residents aged 50+; modelling indicates that 73.6% would be able to travel to a HASU by ambulance within 45 minutes or less, compared to 95% in the current configuration of services. 98.9% of Somerset residents aged 50+ would be able to travel to a HASU by ambulance within 60 minutes or less, compared to 99.9% in the current configuration of services
- On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience increased travel during the first 72 hours to visit loved ones in a HASU which is different from the current HASU in YDH.

  Travel time by driving for the Somerset residential population - 76% of the Somerset residential population would be able to travel to a HASU by driving within 45 minutes or less, compared to 92% in the current configuration of services. 99% of the Somerset residential population would be able to travel to a HASU by driving within 60 minutes or less, compared to 99.5% in the current configuration of services

  Residents of other systems - Impacts are also apparent for residents of other systems where YDH is the closest HASU – particularly Dorset, with up to 30 minutes of additional ambulance travel for those aged 50+ or drive time for the residential population. Smaller impacts are modelled for residents of BSW of up to 15 minutes additional travel or drive time, and up to 5 minutes for residents of Devon.

  Public transport - The Somerset residential population modelled to lose access to a HASU by public transport is 109,072. The Dorset residential population modelled to lose access to a HASU by public transport is 15,160. It is important to note that a proportion of the Somerset and Dorset residential populations do not have access to a HASU in the current configuration of services.

Ambulance conveyances

SWAFT have confirmed that the modelled impacts represent a likely change in ambulance conveyances of 4.6 additional journeys and 11.8 increased journey time a week, which forms approximately 1.5 hours a day impact for SWASFT.

The additional contractual costs for SWASFT, in the context of this business case, are immaterial (<£100k), and will be picked up through the contract payment mechanism on implementation.

Patient repatriation

Repatriation of patients where required between HASU care, particularly to the standalone ASU at YDH is key to enable effective flow. As set out above, a repatriation statement of intent has been agreed by the Somerset Stroke Programme Board as; To enable prompt repatriation back to the nearest ASU, repatriation will happen within 24 hours of being identified as suitable for transfer. A more detailed repatriation policy will be completed within the implementation phase.

11.7. Neighbouring system impacts

Any changes to the provision of stroke services in Somerset will have an impact on neighbouring health and care systems, and as such we have identified these implications and sought to understand the interdependencies. The implications of the changes proposed are shown in the table below.

	Activity		Change from 'do nothing'	
Hospital Site	Not including mimics	Including mimics	Not including mimics	Including mimics
Musgrove Park Hospital	841	1,261	54	80
Yeovil District Hospital	15	22	-399	-589
Dorset County Hospital	279	412	279	412
RUH Bath	46	67	46	67
Salisbury Hospital	17	25	17	25
Southmead Hospital	3	4	3	4
Royal Devon & Exeter	0	0	0	0
All Sites	**1,200**	**1,792**	**0**	**0**

The biggest impact is predominantly on Dorchester County Hospital NHS FT and for patients who reside in Dorset, but currently use YDH for their acute hospital based stroke care, as well as SWAST who provide ambulance services. Key partners from Dorset and SWASFT have been present on the Stroke Steering Group, Clinical Reference Group and Stroke Project Board.

Support has been given from SWAST and RUH and letters of support can be found in the appendices.

11.7.1. Pathways

Clinical pathways are tools used to translate guidelines or evidence into local structures and clinical processes of care which details the steps in a pathway and aims to standardise care for a particular diagnosis such as stroke.

Clinical pathways reduce variation, improve quality of care, and maximize the outcomes for specific groups of patients as well as improving patient safety and patient experience.

Pathways have been developed and set out above in section 11.1 for;

- Stroke mimics
- Mimics
- Walkins
- In-patient strokes
- TIAs

Pathways will help support smooth and safe flows between hospital sites where required. The implementation plan for any proposed changes would include further developing the pathways in to standard operating procedures to ensure effective and consistent implementation of the pathways at an operational level.

11.8. Estates and equipment impacts

Implementation of the preferred option requires estates and equipment works as summarised

below;

The stroke service at MPH is provided from Dunkery Stroke Unit there the hyperacute and acute stroke beds are located. The proposed change requires estates work to increase the numbers of stroke beds at MPH, utilising the Dunkery and adjacent Triscombe wards. The estates works would enable appropriate provision of HASU and ASU beds, with required services and fittings, including appropriate hoisting.

The stroke service at Yeovil is provided from Ward 8B, and this would be the location for the standalone ASU at YDH the change proposal, Estates works would include reconfiguration of the floor plan to provide the required bed numbers, with associated services and fittings, including appropriate hoisting.

Both the MPH and YDH works would include appropriate space for therapies, side rooms or bays, staff and administrative spaces and facilities.

Proposed DCH estates work would include appropriate space for therapies, side rooms or bays, staff and administrative spaces and facilities. This will be tested and refined further during the implementation phase.

11.8.1. Equipment

An assumption has been made in the financial modelling to allow for equipment requirements to implement this option.

11.9. Equalities impacts

The Equality Impact Assessment has been reviewed and updated throughout the process, supported and enabled by both the public engagement and consultation has been an integral part of the reconfiguration programme and commenced from the outset of developing the Somerset Stroke strategy in 2019, and our ongoing engagement with colleagues from Healthwatch, the Stroke Association, Public Health and our Lived Experience Group.

The EIA identified that in the preferred option, there will be a negative impact on those carers/relatives who are older people or live in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours of care whilst receiving Hyperacute Stroke Care.

It is not possible to mitigate all the negative impacts on protected groups which have been identified in this EIA. The impacts that remain are predominantly:

- For patients who will have an increased ambulance travel time following a stroke. This will be mitigated by an improved clinical model of care which will improve outcomes for stroke patients.

- On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience ~~an~~ increased travel during the first 72 hours to visit loved ones in a HASU which is different from the current HASU in YDH.

The impacts set out have been mitigated in part through the preferred option maintaining the ASU at YDH and plans to reduce impact for patients and their carers in the first 72 hours of care, alongside plans to swiftly repatriate patients back to an ASU once they are medically fit to do so.

In considering this negative impact which remain, we have sought to balance this against the improvement to patient outcomes which by implementing the clinical model which is contained within the DMBC. The new clinical model will ensure compliance with 2016 best practice guidelines, enable greater equity of access to specialist treatment, help address the existing workforce issues and create a service which is sustainable over the long term.

During the implementation phase of this project, we will continue to look for ways to mitigate the negative impacts of this change.

The EIA is a live document which will continue to be updated throughout the implementation phase of this project. It will continue to be refreshed with ongoing monitoring and evaluation of the change being monitored through the Key Performance Indicators, complaints and other outcome data as part of the governance processes to monitor the impact on specific groups who may have been disadvantaged due to the change. We will continue to look for ways to mitigate the negative impacts of this change.

11.10. Environmental impact assessment

Somerset system Sustainability colleagues have completed an environmental impact assessment of the stroke change proposals which assesses the environmental impact of the proposed model, as well as the interdependencies with future local initiatives, such as the Somerset Council Travel Plan that is currently being developed. The environmental impact assessment is in the appendices

Key reflections and impacts for the preferred option are;

Travel impacts

- Increased ambulance travel which poses an environmental question.
- Reduced patient length of stay in hospital, which will have an environmental benefit
- Impact of travel times particularly given significant public transport challenges - most significantly impacting those residents in and around Yeovil - with the environmental benefits of the utilisation of public transport are well understood, and the Somerset ICS Stroke programme will be working closely with local councils including travel and sustainability leads to review suitable mitigations of the challenges posed.
- Enhanced use of technology will support clinicians to make interventions and treatment more accessible remotely.

Staff travel

- Staff travel impacts from changes to the medical, nursing and AHP workforce which will ultimately have an impact on staff travel to and from work, which subsequently will have an environmental impact - noting that individual travel times will be determined based on specific location of residence.

Opportunities could also include;

- supporting staff to move to a lower carbon form of transport, supported by significant recent increases in publicly accessible EV charging points within Somerset and additional infrastructure funding
- Encouragement and clear messaging around the efficacy of Active travel incl. A Park and Ride service operating to Musgrove Park Hospital, which will support staff, patient and visitor travel. the service is recommended.
- Further discussions with staff will take place during implementation as part of the ongoing engagement and eventual formal staff consultations required as part of organisational changes or staff transfers as appropriate.

Digital technology

There are a number of environmental benefits that can be realised, as a result of implementing digital advancements as part of the future model. The benefits are summarised in the table below.

Digital Technology	Benefit
Telemedicine	Reduced need for travel by consultants or other clinicians between sites
Artificial Intelligence (AI) for diagnosis/decision making support: potential to ensure only the right patients are transferred for re-perfusion therapies	Fewer inappropriate/unnecessary patient transfers
Transfer process transformation	Reduced paper-based systems
All ICS staff reporting on same IT system	Reduced duplication, potential for reduced travel between sites (multiplied by many staff) as all access IT system remotely so notes can be done from anywhere
Tele-rehab	Reduced travel of clinicians to patients' homes. Also reduced paperwork from all exercise and monitoring data being electronic and immediately accessible

Environmental impact assessment Conclusions and Recommendations

The conclusion of the environmental impact assessment is that overall, improved patient outcomes will potentially mean that the patients will have a shorter length of stay and the number of journeys for friends and family will be reduced. and reduced length of stay in acute hospital setting will reduce carbon emissions from the proposed changes compared to the increase in emissions from increased travel distances by ambulance or for visitors.

A number of concluding actions and recommendations following actions are recommended as a result of this impact assessment document - these actions will be incorporated in to implementation planning and delivery:

- Continual review of available technology to minimise unnecessary travel as well as systems integration to minimise use of paper.
- Work with local councils and travel leads regarding mitigations associated with the repatriation and ASU options, particularly public transport links.
- Maintain regular updates in relation to local environmental policies to ensure the proposals meet the latest requirements.
- Build on developed channels of communication with ICS sustainability leads to ensure a system approach to the environmental impact of the proposals.
- Develop a further patient with lived experience travel working group to further explore the impacts and mitigations of the proposals.
- Telemedicine to be confirmed by clinicians around suitability. Attend Anywhere is the model they currently use. Existing telemedicine would be easier to implement.

- Additional cooling required for better patient recovery which will result in further carbon emissions. Patient recovery is sub-optimal in warmer wards, or solar impacted.

- Estates have concluded significant improvement would need to be made to the building to allow for the additional beds. Embodied carbon should be a key consideration when planning any estates improvement, meaning all the CO2 emitted in producing materials.

11.11. Digital

Digital healthcare

in the context of stroke services form a key enabler to delivery of a reconfigured stroke service in Somerset. The PCBC set out a range of digital opportunities which could be considered.

This section sets out the opportunities which have been reviewed by clinicians in more detail, including consideration of how digital enables can best support the 'digital must dos' in the clinical model.

SFT are now working closely with colleagues across Dorset to extend their EHR business case to include the Dorset trusts and are establishing a partnership board to support the combined programme which willy help with the stroke digital implementation.

There are several applications of digital technology currently in use across the stroke service, as well as substantial opportunities to develop this further in the Preferred Option to improve the quality of patient care which are set out in more detail below.

The digital options and opportunities will form a core enabler of the implementation phase of the preferred recommended option. The opportunities identified for digital enablers to add value are concentrating on effective and consistent use of existing tools and digital mechanisms. Any future investments for example for local implementation of national pilots will be considered through the ongoing transformation and development of the stroke service and wider digital transformation work

Telemedicine and Telehealth

Telemedicine and Telehealth consist of a network of audiovisual communication and computer systems for delivery of clinical services. They make use of the advances in high-speed data transfer and data security to provide remote centres with the expertise that is usually only available in specialist centres.

1. Telemedicine

(a) Telemedicine in the (hyper)acute phase

There is good evidence for the use of telemedicine networks in the (hyper)acute phase to support the safe delivery of stroke-specific treatments (such as intravenous thrombolysis).

Currently the Avon Gloucestershire Wiltshire Somerset (AGWS) stroke telemedicine network supports and supervises the delivery of stroke thrombolysis in the out-of-hours period when there is no stroke consultant specialist available locally to facilitate this.

Patients with suspected stroke are conveyed direct to the CT scanner on arrival to hospital. After CT scan the images are uploaded to a CLOUD-based imaging repository (Biotronics 3D) which the remote specialist can access to review the scan. There can occasionally be delays in images being uploaded to the CLOUD system. A general medical registrar assesses the patient and then phones the stroke network consultant to discuss the case using a scripted proforma. After discussing the

patient's clinical situation with the medical registrar, and reviewing the brain scan, the remote consultant advises whether the patient should receive IV thrombolysis and / or be referred for mechanical thrombectomy.

While not as effective as face-to-face assessment by a consultant stroke specialist, these additional processes help to assure the safe administration of intravenous thrombolysis, at the cost of some additional time being taken to contact the network stroke physician and discuss the case. This is borne out by local audit of stroke thrombolysis demonstrating that speed of thrombolysis (the "door-to-needle" time) is on average 30 minutes longer out-of-hours. It is also in keeping with the observational evidence referenced in the National Stroke Guidelines[62] (2023) that shows that telemedicine is associated with more protocol violations and longer treatment times (Meyer et al, 2008; Dutta et al, 2015).

The AGWS stroke telemedicine network is only for the use of assessing ischaemic stroke patients who may be candidates for intravenous thrombolysis or mechanical thrombectomy. The network is not available to provide specialist input about other stroke patients, such as those admitted with intracerebral haemorrhage.

The National Stroke Guidelines refer to the use of telemedicine in the hyperacute stroke setting. Their recommendation 2.5 (G) states that "where telemedicine is used for the assessment of people with suspected stroke by a specialist physician, the system should enable the physician to discuss the case with the assessing clinician, talk to the patient and/or family/carers directly and review radiological investigations. Telemedicine should include a high-quality video link to enable the remote physician to observe the clinical examination" [2016].

The current AGWS stroke telemedicine network does not meet these National guideline recommendations as:

a. it is only for dialogue between the medical registrar and the remote physician, rather than patient, family or carers
b. there is no high-quality video link available to enable the remote physician to see the patient or clinical examination.

Opportunities to develop use of digital technology will be considered during this DMBC to improve the quality of patient care.

Local stroke physician team videotelemedicine

In the Preferred Option, the plan is for a local team of stroke physicians to:

- Maintain a presence at the HASU site from 8am to 8pm, 7 days per week.
- Provide local out-of-hours (video)telemedicine support availability for all stroke patients at the HASU and ASU sites

Local audits estimate that extending the hours of on-site presence of the stroke physician means that 50% of patients who would previously be assessed via the telemedicine network will be assessed and managed face-to-face. These patients will benefit from faster door-to-needle times.

The local stroke physician videotelemedicine network in the Preferred Option will bring advantages when compared to the current AGWS telemedicine network:

- Prompt access to local radiology system to reduce potential delays in uploading scans to the Cloud.

[62] https://www.strokeguideline.org/contents/?_gl=1*1yzjj0m*_up*MQ..*_ga*MzQ3NTM0OTMwLjE3MDI1NzI4MDI.*_ga_EE3BZMVLRT*MTcwMjU3MjgwMS4xLjAuMTcwMjU3MjgwMS4wLjAuMA..

- Use of Microsoft TEAMS to enable the remote stroke physician to be able to review the patient and / or speak to their relatives. This would meet the National guideline recommendations
- Ability to remotely assess any stroke patient, on either HASU or ASU, rather than limiting the service to those who are potential candidates for thrombolysis / thrombectomy
- Local knowledge of the stroke unit and staff, and remote access to patient drug chart, observations and blood results, facilitates better decision-making
- Regular audit of the quality of care and decision-making using telemedicine (as per National Stroke Guideline recommendation 2.5 (H)).

(b) Preferred Option: Videotelemedicine to bring specialist expertise to the ASUs 24/7 on both sites.

The remit of the current AGWS stroke physician telemedicine network is only to support decision-making about stroke thrombolysis and/or mechanical thrombectomy. There are many other patients who may benefit from remote specialist expertise whom this service does not cover (such as patients admitted with intracerebral haemorrhage) Furthermore, if a patient on the HASU or ASU deteriorates out-of-hours for another reason, there is no established stroke physician service in place to offer specialist advice for these patients.

The proposed local stroke physician videotelemedicine service will facilitate senior specialist assessment for any stroke patient admitted to the HASU. It would provide specialist advice and / or assessment for unwell or deteriorating patients already on the HASU or either of the ASUs at Musgrove Park Hospital and Yeovil District Hospital.

The use of videotelemedicine at the non-HASU site could facilitate timely, safe stroke management (including thrombolysis where appropriate) of patients at the non-HASU site (e.g. for patients self-presenting to the non-HASU site or inpatient strokes at the non-HASU site). The effectiveness and safety of this procedure in non-HASU sites in a telemedicine network has been shown to be comparable with that achieved in dedicated stroke centres.

The ability to see and talk to the patient using videotelemedicine (Microsoft TEAMS) will improve the quality of the assessment. Experience from the use of videotelemedicine elsewhere across the country demonstrates that patients are reportedly not fazed by having to speak to a consultant on an iPad screen rather than in person. This enhanced specialist service for patients on the ASU can enable prompt escalation of their care where necessary, which may include transfer from the ASU to the HASU.

The use of Microsoft TEAMS is already well established across both Musgrove Park Hospital and Yeovil District Hospital for multidisciplinary meetings and educational events. A local trial of Microsoft Teams for videotelemedicine between the acute stroke unit at Yeovil District Hospital and a stroke physician based at Musgrove Park Hospital has demonstrated that it provides sufficient image quality not only to detect relevant stroke neurological signs remotely and to facilitate a discussion between clinicians and patients. The proposal would include availability of iPads on the acute stroke units and HASU. The remote stroke physician would carry a smartphone and laptop or iPad with which they could be contacted out-of-hours.

(c) Videotelemedicine in the pre-hospital setting

In the pre-hospital setting the use of videoconferencing (Stroke Video Triage) between trained paramedics and the HASU-based stroke team are currently undergoing evaluation.

This has the potential to facilitate triage of patients with suspected stroke and decision-making as to the most appropriate setting for them to be assessed. There is the potential to ensure that patients

with acute stroke and TIA are managed in the most appropriate setting.

It can also reduce the proportion of patients with “stroke mimic” conditions being unnecessarily conveyed to a HASU rather than their local hospital. The technology facilitates app-based videoconferencing across multiple devices (e.g. tablet, laptop, webcam) with 3G, 4G, and 5G connectivity. Service evaluations in North Central London and East Kent have demonstrated that the technology is acceptable, usable, and generally reliable, but did require clinician training.

A pilot of stroke video triage in East of England did note a number of challenges such as lack of paramedic access to telemedicine, and difficulty in matching a small pool of trained paramedics to suspected stroke / mimic patients.

NHSEI have commissioned Stroke Video Triage across several pilot sites in England to evaluate the wider adoption of this technology. If these pilot studies demonstrate that Stroke Video Triage is safe, efficacious, and cost-effective, it is likely that it will be rolled out across the country, including Somerset.

Establishing the use of videotelemedicine in the Preferred Option will leave the Somerset stroke team well placed to develop and adopt Stroke Video Triage if the emerging evidence confirms that it is beneficial.

2. Artificial Intelligence in the hyperacute setting

The application of artificial intelligence in stroke care has been steadily increasing, enabling the timely sharing of images between key health professionals across stroke networks to facilitate prompt decision-making. Several CE-marked tools for real-time augmented decision support have been developed.

For over two years both Musgrove Park Hospital and Yeovil District Hospital have been using the Brainomix e-stroke suite. This incorporates the e-ASPECTS scoring which supports the clinician to identify the location and extent of cerebral infarction in acute stroke patients.

Brainomix also includes a CTA module to support the identification of intracranial arterial occlusion where thrombectomy may be indicated. There is also a CT perfusion module which can help to identify patients presenting outside the traditional reperfusion time window who may still benefit from thrombolysis or thrombectomy. Use of this artificial intelligence will increase the proportion of patients who can benefit from such treatments.

The e-stroke suite delivers pseudonymised imaging to a stroke clinician’s laptop, iPad or smartphone, facilitating prompt decision-making wherever the clinician may be situated.

3. Telemedicine and telehealth in the post-acute setting

In the Preferred Option the use of telemedicine in community hospitals can facilitate remote specialist assessment of patients whose care may need to be stepped up to the acute hospital (e.g. deteriorating patient). Telemedicine networks can also be useful in selecting and enrolling patients in acute stroke trials, allowing a more representative sample of the population as well as increasing recruitment to stroke research trials.

The Covid-19 pandemic led to the use of telehealth systems (e.g. Attend Anywhere) for delivery of stroke follow-up clinics and virtually-delivered stroke rehabilitation. While there has since been a return to face-to-face clinics, it is clear that some patients prefer not to have to travel to the clinic, preferring the option of being followed up by telephone or video consultation. In the Preferred Option we will continue to offer a mix of stroke follow-up clinics delivered face-to-face, by telephone and using telehealth.

In the post-acute community setting there are a number of studies evaluating the use of telemedicine for stroke (physical and cognitive) rehabilitation. Although there is low- or moderate-level evidence relating to whether tele-rehabilitation is a more or similarly effective way to provide rehabilitation, this approach offers exciting opportunities for innovation.

The COVID-19 pandemic has seen many teams use tele-rehabilitation as an alternative method to provide home-based stroke rehabilitation. Synchronous tele-rehabilitation uses videoconferencing facilities so the therapist and stroke survivor can communicate in real time, while asynchronous tele-rehabilitation uses computer-based interventions to remotely monitor and adapt exercises. Tele-rehabilitation can be used to promote self-management exercises and practice between scheduled rehabilitation sessions with therapists, providing opportunities for efficient delivery of intensive or high-dose rehabilitation and also inclusion of carers where possible and appropriate.

4. Electronic systems

Both Musgrove Park Hospital and Yeovil District Hospital use electronic systems for prescribing. The stroke team in Somerset NHS Foundation Trust have developed the use of pre-specified prescription “order sets” for stroke management, with safety alerts and links to the British National Formulary (BNF) facilitates safer prescribing practices. The Somerset Integrated Digital Electronic Record (SIDER), a shared care record system gives health professionals access to an overview of the patient’s health and social care record in one digital record. This enables our clinicians to have accurate patient information to facilitate safe and effective decision-making about their treatment.

In the Preferred Option electronic systems for health records, physical and neurological observations can be viewed remotely to enable the stroke clinician to review patient vital signs and investigations remotely. The electronic prescribing system also can enable a remote clinician to directly prescribe without having to delegate this to a clinician on the ward. Electronic records can enable the remote stroke clinician to write directly into the patient record, thus reducing the risk of errors through miscommunication.

5. Video-Conferencing

(a) Multidisciplinary team working

The Covid-19 pandemic caused a shift towards virtual rather than face-to-face meetings. This has lended itself well to multidisciplinary (MDT) meetings involving clinicians from various hospitals without the need for unnecessary travel.

Successes have included MDT meetings in the community stroke recovery units which have enabled stroke physicians (amongst other MDT members) to remotely participate in MDTs while remaining at the HASU site.

The joint stroke-vascular MDT meeting has enabled stroke consultants and vascular surgeons from various participating hospitals to discuss cases, while also viewing imaging, without the need to travel.

A further success has been the development of weekly neuroradiology meetings whereby a consultant neuroradiologist based in Southmead Hospital provides tertiary opinion on stroke and neurology cases with virtual attendance from neurologists and stroke physicians across Somerset.

The Preferred Option will continue to make the most of video-conferencing facilities with Microsoft TEAMS to bring together the stroke multidisciplinary team and allied professionals / specialists from across the county.

(b) Education and research

Currently both Musgrove Park Hospital and Yeovil District Hospital, as well as the community stroke units, have their own multidisciplinary education and research programmes. In the Preferred Option, videoconferencing can facilitate the delivery of an education programme which can be accessed across multiple stroke sites in the HASU, the ASUs and the community stroke recovery units. This will be an opportunity for stroke staff across the county to share best practice and learning.

6. iPads to support the patient experience on the stroke unit

Another lesson learnt during the Covid-19 pandemic was how digital technologies can be used to enable patients to remain connected to their families and friends when options to meet in person are limited. Evaluation of digital devices such as iPads demonstrated that they can be a valued tool to increase social connection and support the emotional wellbeing of patients. Clinical teams who facilitate these virtual connections can play a large role in the patient's support system: present with the patient during milestone celebrations and acting as support when no family members are present, such as holding their hands when they become emotional seeing family members on screen. iPads can also be useful means to improve the quality of family meetings where relatives and carers are unable to visit in person.

Evaluation of iPads in the clinical setting have also demonstrated that they can be a form of cognitive stimulus for patients on the ward. There are an increasing number of approved apps for stroke recovery that can be accessed on iPads, enabling patients to practice between therapy sessions.

In the Preferred Option we will use iPads on the HASU and ASU to maintain the connection between patients and their families and friends. We will also maximise the potential of iPads to assist in patient recovery.

11.12. Finance

The following section describes the financial impact of the preferred option (Option A). The financial oversight of this work has been provided by the Somerset System Finance Group, made up of the ICB and Trust Chief Financial Officers from within the system.

Impact on the System

The baseline cost of stroke services at Somerset NHS Foundation Trust is £10.9m. The cost to the system of implementing this preferred new hospital stroke service model has been estimated at £4.2m per year. This includes one-off transitional cost to the system of £0.2m to cover the costs of agency premiums whilst recruitment to therapy roles is completed.

Impact on Somerset NHS Foundation Trust

The additional cost to the system is in part recognising the additional costs incurred at Somerset NHS Foundation Trust to maintain Stroke services on both the Musgrove Park Hospital and Yeovil District Hospital sites.

- Additional workforce costs, £1.5m, which assumes offsetting benefits of improved length of stay and reduced use of agency staff as we move through the 10-year period
- Additional non-pay and the revenue impact of the cost of capital, £0.2m,
- One-off transition costs linked to agency premiums, as stated above, £0.2m

In addition to this, Somerset NHS Foundation Trust will suffer a loss of income from out of County patients no longer being admitted to Yeovil District hospital, £0.3m

Additional Commissioner Costs

A further cost will be incurred as a result of Somerset patients being treated at Dorset County Hospital NHS Foundation Trust, as a result of the newly configured hospital stroke service at Yeovil District Hospital:

- Additional workforce, non-pay and overhead costs incurred by Dorset County Hospital NHS Foundation Trust because of Somerset patients now being treated at Dorchester Hospital, £1.8m
- Additional costs of activity at the Royal United Hospital, Bath, because of more Somerset patients being treated in Bath rather than Yeovil District Hospital, £0.1m

Transport Costs

The Somerset system will incur additional transport costs because of repatriating patients from Dorset County Hospital or Royal United Hospital, Bath, to Yeovil District Hospital for their ASU care, this is estimated as £0.1m.

Modelling has incorporated repatriation activity assumptions and high-level financial assumptions based on conversations with potential providers. An exercise will need to be undertaken during the implementation phase to ensure an appropriate model of repatriation transport is in place which will support the commitment to repatriate within 24 hours.

	Patients	£
Transport Costs		
Dorset County to YDH	211	48,952
RUH to YDH	27	6,264
MPH to YDH	41	9,512
	279	**64,728**

The modelled assumptions assume that all patients that would have previously been treated at YDH will be repatriated to YDH for their ASU care. This is estimated at 279 patients per year, at a cost of £232 per journey.

Whole System Impact – revenue monitoring

The table below provides a summary of the estimated revenue impact of the proposed changes. The table includes the 'baseline' funding at Somerset NHS Foundation Trust and the impact of any additional costs of implementing the preferred option. These costs will be refined as the system implements any agreed changes to ensure the cost of the implemented service is funded accordingly.

Revenue Forecasts Preferred Option													
Somerset Patients admitted to Out of County providers													
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		Total
	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s	£'000s		£'000s
Somerset Foundation Trust													
Direct Costs (incl. baseline)	8,346	10,097	10,097	10,139	10,139	10,492	11,441	11,441	11,535	11,798	11,798		108,977
Implementation Costs		134	67										201
Indirect/Overheads	2,599	2,599	2,599	2,599	2,599	2,599	2,599	2,599	2,599	2,599	2,599		25,990
Additional Commissioner Costs													
Royal United Hospitals Bath		133	177	182	186	190	195	200	205	209	214		1,892
Dorset County Hospital		1,771	1,814	1,857	1,902	1,948	1,994	2,042	2,091	2,141	2,193		19,754
Total Transport Costs (Repatriation)		65	66	68	70	71	73	75	76	78	80		722
Sub Total	10,945	14,799	14,821	14,845	14,895	15,300	16,302	16,357	16,506	16,826	16,884		157,536
Out of County Patients no longer admitted to Yeovil District Hospital													
Loss of Income		340	348	356	365	374	383	392	401	411	421		3,790
	10,945	15,139	15,169	15,201	15,260	15,674	16,685	16,748	16,907	17,237	17,305		161,326
		- 4,194	- 4,224	- 4,256	- 4,315	- 4,729	- 5,740	- 5,803	- 5,962	- 6,292	- 6,360		

Capital investment implications

An initial estimate of the cost of the capital works at Dorset County Hospital, to absorb the additional patient activity from Yeovil District Hospital, has been provided by the Dorset County Hospitals NHS Foundation Trust. These costs include ward refurbishment and configuration, new equipment and contingency, and stroke ward extension, although the latter has currently been deemed as not directly relating to the Somerset stroke services development.

It is acknowledged that the Somerset system will need to manage the capital impact of the proportion of costs incurred at Dorset County Hospital relating to Somerset patients, to be managed within the Somerset system capital allocation. The Somerset system have assessed these costs for the business case, at £1.843m, however it is also acknowledged that a more detailed capital exercise is required at Dorset County Hospital to provide a final capital cost of all the works that are necessary.

Costs of equipment and an expected minor capital works requirement at Somerset NHS Foundation Trust will need to be prioritised within the system capital allocation.

The Economic Case and Net Present Social Value

The economic case assumes that the additional costs of delivering the preferred option could be partly offset by an estimated £811 per patient in savings in the first 90 days post stroke and £314 per year in subsequent years (as people who have a stroke have lower disability over the long term). These estimates are based on the evaluation of the impact of similar changes to service in other areas of the country and, for prudence, only 50% of this financial benefit has been factored into the modelling for Somerset[63].

[63] **https://www.england.nhs.uk/mids-east/wp-content/uploads/sites/7/2017/07/configuration-decision-support-guide-appendices-2.pdf**

Reduction in Acute LoS									
Numbers of Admissions	1,792								
Acute los benefit pr patient (£)	811	50%							
Yearly los benefit (£)	**1,453,312**	**726,656**							
Reduction in Community									
Numbers of Admissions	1,792								
Savings per quarter per patient (£)	78								
Savings per patient (£)	312	50%							
Yearly Community Benefit (£)	**559,104**	**279,552**	Saving per year over 10 years, so multiplies each year						

Net Present Value

To implement the preferred model of care (second table) requires an estimated total capital investment of £1.8m. It is assumed that the preferred model of care will generate a non-cashable benefit for the commissioners of £1.0m from the first full year it is operational. This will rise to £3.5m by year 10. Therefore, as per the tables below, the total Net Present Value of the baseline option is valued at £132m, compared to the preferred option, £128m, demonstrating marginal value of the preferred option.

Baseline	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**		**Total**
	£'000s	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**		**£'000s**
Capital requirements												
Somerset NHS Foundation Trust Cost	**13,056**	**13,223**	**13,411**	**13,411**	**15,078**	**15,141**	**15,141**	**15,498**	**15,571**	**15,571**		**145,101**
Commissioner Cost												
Loss of Income												
Other System Benefits												
Net position	**13,056**	**13,223**	**13,411**	**13,411**	**15,078**	**15,141**	**15,141**	**15,498**	**15,571**	**15,571**		**145,101**
Discount Rate	1	0.98	0.96	0.94	0.92	0.9	0.88	0.87	0.85	0.83		
Present Value	**13,056**	**12,959**	**12,875**	**12,606**	**13,872**	**13,627**	**13,324**	**13,483**	**13,235**	**12,924**	**NPV**	**131,961**

Preferred Option												
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**		**Total**
	£'000s	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**	**£'000s**		**£'000s**
Capital requirements	**1,843**											**1,843**
Somerset NHS Foundation Trust Cost	**12,895**	**12,829**	**12,806**	**12,808**	**13,162**	**14,113**	**14,115**	**14,210**	**14,475**	**14,477**		**135,890**
Commissioner Cost	**1,905**	**1,991**	**2,039**	**2,088**	**2,138**	**2,189**	**2,242**	**2,296**	**2,351**	**2,407**		**21,646**
Loss of Income	**340**	**348**	**356**	**365**	**374**	**383**	**392**	**401**	**411**	**421**		**3,790**
Other System Benefits	**- 1,006**	**- 1,286**	**- 1,565**	**- 1,845**	**- 2,124**	**- 2,404**	**- 2,684**	**- 2,963**	**- 3,243**	**- 3,522**		**- 22,642**
Net position	**15,976**	**13,883**	**13,636**	**13,416**	**13,550**	**14,281**	**14,065**	**13,944**	**13,994**	**13,783**		**140,527**
Discount Rate	1	0.98	0.96	0.94	0.92	0.9	0.88	0.87	0.85	0.83		
Present Value	**15,976**	**13,605**	**13,091**	**12,611**	**12,466**	**12,853**	**12,377**	**12,132**	**11,895**	**11,440**	**NPV**	**128,444**

Note - provider cost includes direct, implementation, indirect and transport costs for each option.

12. Benefits of the proposed changes

12.1. Benefits of the proposed change

The expected benefits from implementing this DMBC include improvements to patient outcomes and experience, longer term benefits for society and the wider health and care system as well as provision of a sustainable service which improves experiences for staff. The purpose of setting expected benefits is to describe a clear set of clinical, quality and operational benefits which will be achieved through implementing these proposals. Realising the benefits will be part of the implementation and associated governance processes to ensure these are achieved are set out in Section 14.

Engagement in the development of the benefits
The benefits have been developed by the Stroke Steering Group and reflect the clinical standards which this business case has been developed around. It has also been tested with the Steering Group which has included a patient representation and a VCFSE representative.

Development of the benefits
The main areas of benefits expected to be delivered by implementing these proposals include:

Workforce sustainability – will address the significant risks caused by ongoing challenges with recruitment and retention of specialist staff. Specifically the current sub-optimal levels of specialist stroke workforce, with neither provider having the number of specialist staff needed to provide the units with 24/7 consultant cover.

Clinical outcomes – meet the national performance targets in relation to hyperacute and acute care which will have a positive impact on clinical outcomes including rates of thrombolysis and thrombectomy, time taken to receive thrombolysis, TIA assessments falling outside of 24 hours and access to MDT assessments.

Equity of service – provide equitable provision of acute stroke care across the county, especially over weekends and out of hours to ensure patients receive quick access to treatments such as thrombolysis. It will provide consistent services for patients suffering a TIA no matter where someone lives.

Financial sustainability – will provide a better correlation between the money spent on stroke and the outcomes achieved, particularly in relation to the long term impacts requiring long-term care.

It is important to translate these into specific benefits from which we can measure the impact of the proposals as they are implemented.

The key clinical inputs into developing these benefits have been derived from various national guidelines which have been described in Section 2.

The benefits can be summarised as:

Area	Benefit
Workforce sustainability	Lower turnover rates
	Improved staff satisfaction
	Reduction in agency spend
	Lower vacancy rates
Clinical Outcomes - HASU	Patient with expected stroke should have CT scan in 60 minutes of hospital arrival (BASP CS 2.2)
	People with suspected acute stroke should be admitted directly to HASU within 4 hours of arrival (NICE QS1)
	All eligible patients should receive thrombolysis within 60

	minutes of arrival to hospital (BASP CS 1.4)
	A HASU should have continuous access to a consultant stroke physician, with consultant physician review 7 days a week
	Assessed by a consultant within 14 hours (can be telemedicine) and seen within 24 hours face to face
	Patient should receive swallow screening within 4 hours of arrival (BASP CS 3.5)
	Patients should be assessed by members of a stroke MDT within 72 hours (BASP CS 3.10)
Clinical Outcomes – ASU	Patients should have rehabilitation goals agreed within 5 days and regular review of goals (NICE QS 6)
	Patients should receive at least 4 hours of rehabilitation covering a range of multi-disciplinary therapy for minimum of 5 days a week (NOCE QS 2)
	All appropriate patients should receive at least 45 minutes therapy a day (BASP CS 3.11 – 1.13)
	An acute stroke unit should have continuous access to a stroke physician with expertise in stroke medicine, with consultant review 5 days a week
Equity of service	% of patients being seen by a specialist within 30 minutes of arrival
	Repatriation rates back to Somerset
	24/7 stroke and 7 day TIA service for all Somerset patients
Financial	Reduction in spend on bank and agency
	Reduced Length of stay
	Reduction in long term care costs
	Reduction in acute care needs in the first 90 days post stroke

Monitoring the benefits
A set of performance indicators have been developed (see appendices) and will be used by the Joint Stroke Co-ordination Board (Somerset and Dorset) to monitor whether the expected benefits are being delivered. They will also be used to ensure equity of service access for Somerset residents, no matter where they live and which service they are accessing. Section 15 .3 provides confirmation the governance process for implementation.

A formal review of the benefits will be undertaken by NHS Somerset to provide assurance on both delivery of benefits and patient experience.

13. Assuring the preferred option

The assurance and governance requirements for proposals for change of this scale are rigorous and have been completed in the right sequence. Assurance of the proposal includes a number of key steps:

13.1. Clinical Senate

The role of the Clinical Senate is to work with commissioners to describe optimal service configurations in the quest for high quality, sustainable services. The Clinical Senate have:

- Undertaken a desktop review of the Case for Change
- Established a Clinical Review Panel to examine the proposals prior to the NHSE Stage 2 Assurance meeting, confirming clinical viability of the options which were taken to public consultation

Following the Clinical Review Panel, The Clinical Senate produced a report which has been reviewed and the panel recommendations assessed to ensure that all the recommendations have been taken into account in delivering the preferred option. Many of the recommendations are included in the clinical model.

The recommendations and the actions taken are in the appendices and are all complete.

13.2. NHS England

NHS England has issued a range of guidance in relation to service change which is designed to ensure compliance with the relevant legal framework and good practice. This section considers compliance with this guidance, focussing on the requirements set out in "Patient and public participation in commissioning health and care" (2017)[64] which was statutory guidance for CCGs and "Planning, assuring and delivering service change for patients" (updated March 2018)[65] and the Major Service Change: an interactive handbook (Updated June 2023)[66] which has been reviewed and refreshed based on legislative and statutory duties as of June 2023, in line with the Health and Care Act 2022.

13.3. The five tests of service change

NHSE England's role is to support ICBs and their local partners to develop clear, evidence-based proposals for service change and where it is agreed that a service change is substantial, to undertake assurance of the planned service change, with due consideration for the government's four tests of service change and NHS England's test for proposed bed closures, alongside other best practice tests.

Test 1: Strong Patient and Public Engagement
The PCBC describes an extensive process of:

- Continuous public engagement which includes:
  - Early engagement on the case for change and emerging proposals for health and care in Somerset (2018)
  - Engagement on the criteria for option appraisal to identify the most important criteria for decision making (2019)
  - Development of the stroke strategy (2019)
  - Development of the Case for Change, including review by the Healthwatch Readers Panel (2022)
  - Development and assessment of the options, from longlisting to shortlisting
  - Support in preparing for consultation
  - Engagement on the criteria for option appraisal to identify the most important criteria for decision

[64] https://www.england.nhs.uk/wp-content/uploads/2017/05/patient-and-public-participation-guidance.pdf
[65] https://www.england.nhs.uk/wp-content/uploads/2018/03/planning-assuring-delivering-service-change-v6-1.pdf
[66] Major Service Change Interactive Handbook (2023) - Service Change and Reconfiguration - Integrated Care (future.nhs.uk)

- Creation of a stakeholder reference group to specifically support the stroke and TIA reconfiguration activity. This included Representatives from a range of voluntary sector groups and representatives with a range of different lived experience, including carers
- Ensured we have an individual with lived experience on the Stroke Steering Group
- Considered thematic analysis from patient and public engagement
- VCSE involvement in the process – various interested organisations were involved on the Stakeholder reference group, Steering Group and Health Watch representative on the Stroke Project Board and decision-making boards (CCG Governing Board/ ICB Board)
- Engagement with both Somerset and Dorset Health Scrutiny Committees
- Engagement with staff, both within the stroke units and the wider hospital communities
- Engagement and consultation activities informed and aligned to the Equality Impact Assessment
- Development of consultation materials and how we undertook the consultation
- Independent review of the consultation feedback
- Engagement with the stakeholder reference group, stroke staff and other professionals to review viability of the options which were taken to consultation
- Consideration of the key themes in the consultation feedback to inform the final decision-making business case

Conclusion: This test has been met

Test 2: Consistency with current & prospective need for patient choice

- **Patient Choice**

  A stroke is a medical emergency and urgent treatment is essential. Urgent care is excluded from patient choice rules and as stroke care is considered to be urgent, patient choice does not apply to this service. Patients will be conveyed to the location of their nearest HASU If the patient self presents, or has a stroke whilst an inpatient, they will be transferred (if appropriate) to the nearest HASU after discussion with the clinical at the HASU in Taunton.

  Our proposals allow for a degree of patient choice for the post HASU care, both for Acute Stroke Care and Rehabilitation.

  For patients who have a TIA, patients are required to be seen urgently for specialist assessment and investigation within 24 hours of onset of symptoms. As this remains urgent care, patient choice does not apply to this service.

Conclusion: This test has been met

Test 3: Clear, Clinical Evidence Base

- Case for change – contained a clear clinical evidence base to support the rationale for change. This was supported by the Clinical Senate and CCG
- Clinical Leadership – the programme was led by from Dr Rob Whiting who is a practising stroke consultant. He was supported by a strong cross-agency, multidisciplinary clinical team that are represented through the Stroke Steering Group
- Development of the options and preferred option – the application of the evidence has been used throughout the process and was integral to considering the options put forward. The evidence has been reviewed and where appropriate, challenged by the Clinical Senate and NHSE South West Clinical Network for Cardiovascular Disease
- Outcomes and benefits have been informed by the clinical evidence base to improve outcomes for people who experience a stroke

Conclusion: This test has been met

Test 4: Support for proposals from clinical commissioners

- Internal governance process which ensured the proposals have been taken through the following routes for information, endorsement or approval prior to submitting the final DMBC.
    - Prior to June 2022, governance included CCG Governing Body, FFMF Programme Board, Clinical Executive Committee, SFT/YDH Joint Board in Common, Health & Wellbeing Board, Clinical Reference Group, Inequalities Steering Group
    - From July 2022 when the ICB commenced, governance included ICB Board, Stroke Project Board, Collaboration Forum, SFT Board.
- Partnership working has been at the heart of our approach and we have worked closely with NHS Dorset, Dorchester County Hospital NHS Foundation Trust and South West Ambulance Service NHS Foundation Trust. Representatives from both Dorset and SWAST have been involved in the process for improving stroke care
- Support for our proposal has been received from SWASFT; RUH Bath
- We have sought external assurance from NHS England and the South West Clinical Senate. This has involved both the following formal checkpoints as well as a number of informal meetings
    - **Stage 1 - Strategic Sense Check (14 May 2022)** which was a formal discussion between Somerset CCG and NHS England and examined the Case for Change, the level of consensus for change, ensure a full range of options are being considered and the potential risks are identified and mitigated. This also explored the alignment between Somerset's plans and other local systems (particularly Dorset and BNSSG)
    - **Clinical Senate Desktop Review (May/June 2022)**
    - **Clinical Review Panel by the South West Clinical Senate (28 September 2022)**
    - **Stage 2 – Assurance Checkpoint (13 December 2022)** which is a more detailed assurance of proposals undertaken by NHS England. This examined the strategic alignment of the proposals within Somerset and our neighbouring systems, current and future provision of commissioned services, change proposals from neighbouring systems and delivery of national priorities.

Conclusion: This test has been met

Test 5: NHS beds test / patient care test

At the NHSE Stage 2 assurance checkpoint, this test was considered by both the SW Clinical Senate and NHS England and deemed to have been met as overall, there were no expected reduction in bed numbers, although the location of the beds might be different.

We have undertaken further analysis of demand and capacity to support the development of this DMBC.

We have reapplied this test and can provide assurance that whilst there is a reduction in HASU beds at YDH, these beds will be provided elsewhere and there will be no overall reduction in bed numbers.

The summary impact contained within this DMBC is shown below.

Hospital	Setting	Current	Proposed
MPH	HASU	4 (8 from Feb 2024)	12
	ASU	19	24
YDH	HASU	4	0
	ASU	12	16
DCH (additional beds)	HASU	0	4
	ASU	0	0

Conclusion: This test has been met

13.4. Local Authority Scrutiny Committee Engagement

We have engaged with the Somerset Council Adults and Health Scrutiny Committee throughout the stroke programme of work and at key points in the reconfiguration process, we have also engaged with the Dorset Council People and Health Scrutiny Committee as the changes impact the Dorset population who use YDH services.

13.4.1. Somerset Council Adults and Health Scrutiny Committee

We have maintained an ongoing dialogue with Somerset Council Adults and Health Scrutiny Committee and kept them informed of the consultation and various options under discussion throughout the process. There was a gap in dialogue with the committee when Somerset County Council changed into Somerset Council on 1 April 2023 whilst the new committee and chair were being established. Our engagement builds on that documented within the PCBC and has included:

12 October 2022 Scrutiny Committee Meeting – a report was provided giving an update on the development of hospital based hyperacute stroke services and Transient Ischaemic Attack (TIA) services in Somerset and offered the opportunity to the committee to input into the design of the consultation.

> ***The Somerset Scrutiny for Policies, Adults and Health Committee made comments and observations on the proposed consultation.***

26 January 2023 Scrutiny Committee Meeting – a report was provided giving an update on the development of hospital based acute stroke services and TIAs, focusing on the process to develop options for reconfiguration of stroke services, the assurance process through the South West Clinical Senate and NHS England Stage 2 Assurance and concluded with the intention to commence public consultation.

The Committee overran during its meeting and did not have time to consider the paper in full. The Committee was asked to vote on this and it was carried by a majority with a request that this item was on a future agenda. As the consultation was going to be Somerset wide Councillors were encouraged to actively participate in the consultation.

> ***The Somerset Scrutiny for Policies Adults and Health Committee:***
> ***Agreed to the start of a formal public consultation on the hyperacute and acute stroke services options as set out in the report.***

30 January 2023: Launch of formal public consultation – opportunity for scrutiny committee and individual members to share their feedback on the proposals.

8 March 2023 Scrutiny Committee Meeting – an updated version of the January report was provided to scrutiny, along with the PCBC and appendices enabling consideration by the scrutiny committee which could not be undertaken in January. Colleagues from Dorset attended the meeting and SWAST provided a letter to the committee confirming their support.

The Committee scrutinised the proposals and challenged the rationale behind why only two options were being taken to public consultation. Explanation was given as to the fact that these were the only viable options following appraisal of the options.

Concern was raised about the impact any decision may have on neighbouring hospitals outside of Somerset. The Committee were assured that Dorset are undertaking a similar exercise and are aware of the options being examined in Somerset.

The Committee challenged some of the data in the report. One example was the way physiotherapy services in Yeovil Hospital were noted. The fact that the physiotherapist at Yeovil were not dedicated Stroke practitioners did not mean there was no physiotherapy at Yeovil rather that the covered more generalist roles.

There was also an assertion that the length of stay was reduced in a specialist hyperacute unit yet the report to did not appear to have evidence to justify that.

The Committee were concerned that there did not appear to be a direct communication to Somerset County Councillors and detailed information of what events were taking place across the county so that Councillors can encourage participation. They felt that 500 responses since 27th January appeared to be rather low.

> ***The Somerset Scrutiny for Policies Adult sand Health Committee:***
> ***Agreed to look out for communications and encourage constituents to attend open meeting, complete the on-line survey and given feedback to the consultation.***

20 April 2023: Somerset Councillors Engagement Session. The purpose of the meeting was to provide a forum for discussion for councillors who represent the population of Somerset and formed part of the Consultation sequence of events. The agenda for this session included:

- Part 1:
  - Why change is needed
  - What changes are proposed and how these
  - Clarity on the process of being in consultation and what happens next once the public consultation comes to a close on 24th April
- Part 2:
  - Opportunity for Question and Answer session

The notes from this meeting were captured and provided to ORS to form part of the consultation process.

31 May 2023: Scrutiny Committee Meeting – a report was provided taken which described the next steps following the public consultation on the future of acute hospital-based stroke services. Alongside the report, we presented a summary of the current stroke services, why they needed to change how we had considered the options for change and the impact of these changes on patients. Councillors requested a more in-depth presentation following a petition submitted to the Full Council Meeting from Quicksilver Community Group. A subsequent decision was made by the Chair that this was not required.

The Somerset Scrutiny for Policies Adults and Health Committee:

- ***Asked for a further update on the consultation and findings.***
- ***That this be put on the agenda for the next meeting and***
- ***That consideration given and further research is undertaken to the merits of securing a specialist stroke ambulance which has been trialled in some areas.***

31 August 2023: Briefing Paper was provided to Scrutiny Members providing an update on the progress of the programme of work, the role of scrutiny on scrutinising the proposals and the steps which the Scrutiny Committee could take if they felt the proposals were not in the best interest of the population. This briefing note was circulated to members via Somerset Council Democratic Services on 4 September 2023.

7 December 2023: Scrutiny Committee Meeting – a report was presented which provided an update, including a summary of the feedback received, following the 12-week public consultation on the future of acute hospital based stroke services and the next steps which were due to be taken. There was an opportunity for councillors to discuss and question some of the content of the report.

The Somerset Scrutiny for Policies Adults and Health Committee:

- ***Proposed that the committee resolve this is not the best proposal for the people of Somerset***
- ***It was proposed that the committee should write to the Executive to inform of their decision***

8 December 2024: Letter received

As set out in section 8.8.1, following the committee meeting, we received a letter from the committee acting chair, highlighting their belief that it is not in the best interests of all the residents of Somerset, with particular concern for those living in the rural parts of our County

> *Extract of letter from Scrutiny*
> *"The Committee feel very strongly that they have concerns that the proposal as it stands is not in the best interests of all the residents of Somerset. In particular there is a concern for those living in the rural parts of our County.*
>
> *Please on behalf of the Scrutiny Committee and Somerset residents make it clear to the Somerset NHS board this decision needs to be delayed and other options considered to safeguard the welfare of residents living in the south west part of the County".*

On receipt of this letter, the programme team considered their concerns and wrote back, highlighting the work that has been undertaken over a number of years to appraise viable options and identify a preferred option, the approach that had been taken during consultation to reach isolated and rural areas, the work that was been done to consider key areas such as increased travel times and access to public transport alongside the completion of an EIA to consider who would be impacted by the proposed change and this was used to understand both the impact and who needed to be engaged as part of a formal consultation.

A meeting was held with councillors on 17 January 2024 to provide the opportunity to answer questions regarding the proposals and to try and alleviate the concerns Scrutiny had. Not all councillors were fully satisfied with the proposal and it was stressed that the Scrutiny Committee would take an active role in scrutinising the implementation of the proposal to ensure it resulted in improved outcomes for the people of Somerset.

13.4.2. Dorset Council People and Health Scrutiny Committee

At key points in the reconfiguration process we have engaged with the Dorset Council People and Health Scrutiny Committee as the changes impact the Dorset population who use YDH services. This has included the following:

19 July 2022 – attended Scrutiny Committee to share the plans to reconfigure stroke services in Somerset, including the process we were following and our engagement approach

10 January 2023 - Update from NHSE Stage 2 Assurance and confirm with Dorset options to go to ICB Board for recommendation to go to public consultation

9 March 2023 - Request from Dorset HOSC for Somerset attendance to answer any questions should they be raised.

11 December 2023 - ORS Consultation Feedback, DMBC and ICB Decision

> "The Committee was content with the consultation and the work completed and thought the consultation was robust.
> Members requested a written update following a decision being made by Somerset ICB".

13.5. Somerset ICB internal governance

Somerset ICB finance committee

The Finance Committee, recognising it was not its role to consider the medical case for the proposal, reviewed in detail the financial implications underpinning Option A stroke business case alongside the baseline costs of continuing the present arrangements.

13.6. Stakeholders in the Somerset system

Staff engagement

The programme manager spent time in both Taunton and Yeovil to talk to staff about the proposed changes and get their feedback on the 9 options that we started with and the shortlisted 4 options that went to the Clinical Senate Review.

Time was spent with specific senior staff and managers to update on progress and a workforce group was attended by the programme manager to help with clarification of the options and maintain momentum.

Visits were made during the consultation period to encourage staff to respond to the public consultation.

A stroke conference was held in September 2023 where the programme manager gave a presentation to staff from both Taunton and Yeovil's stroke services and to answer any questions they had. This gave an opportunity for more junior staff to hear the proposals and as the programme manager stayed for the day, staff were able to ask further questions.

Ad hoc visits have been made to both stroke units over the last six months for staff to be able ask further questions and raise concerns.

Since the consultation closed, Dr Rashed, Consultant Stroke Physician at YDH proposed an

alternative option to maintain Hyperacute Stroke Care services at YDH. A meeting was held on 17 January with Dr Rashed to understand the proposal for an alternative model and his concerns on the proposed clinical model. Having reviewed the proposals, we believe the model of a single medical delivery team is the one which made it through the shortlist of options and was presented to the Clinical Senate as part of the Clinical Review Panel (CRP) in September 2022. The CRP reviewed the option and concluded that they were unable to provide assurance that this was a sustainable model. The CRP questioned whether this option should remain within the business case. *The Panel were not satisfied that simply rotating the workforce, would allow the system to deliver the outcomes required* and therefore this option was removed prior to public consultation.

13.7. Neighbouring system partners

Following the development of the PCBC the programme manager has had regular meetings with DCH and has visited their stroke unit to meet staff and see the stroke unit.

A conversation with the RUH to update them on the refreshed modelling, options and to discuss any concerns was held with the programme manager, clinical lead and managers. This was helpful in identifying some concerns around access to community stroke services.

Ad hoc meetings have been held with SWASFT particularly where their input was required to ensure that they were happy with the modelling approach. SWASFT have confirmed their support.

Formal letters were sent at the PCBC stage and support received from all parties. Subsequent letters have been sent to confirm any impacts of the DMBC and gain support.

13.8. Wider external stakeholders

The Integrated Stroke Delivery Networks (ISDNs) are the key vehicle for transforming stroke care across the country.

The West of England ISDN has supported the Somerset work and has given advice when required particularly around their views of how organisations implement the updated 2023 National Stroke Clinical Guideline and the introduction of 24/7 thrombectomy in the West of England and Wessex ISDN's.

13.9. ICB legal duties

When considering the DMBC, the ICB Governing Body should satisfy itself that the ICB has met its legal duties. The table below demonstrates how the ICB has met these legal duties as set out by Bevan Brittan (*completed following review of PCBC*).

Legal Duties		**Assessment**
1	***Duty to promote NHS Constitution* - Section 14Z32 NHS Act** The ICB is under a duty both to exercise its commissioning functions with a view to ensuring that that health services are provided in a way that promotes the NHS Constitution and promote awareness of the NHS	**Yes** The proposed changes are in line with the NHS Constitution and upholds both the seven principles which guide the NHS in everything it does and is in line with the core NHS values which underpin these principles. https://www.gov.uk/government/publications/the-nhs-constitution-for-england

	Constitution among staff, patients and the public.	
2	***Duty to exercise functions effectively, efficiently and economically -*** **Section 14Z33 NHS Act** The ICB is under a duty to exercise its functions effectively, efficiently and economically.	**Yes** The ICB has identified that there is currently a poor correlation between the money spent on stroke and the outcomes achieved, and there is an opportunity to reduce the long-term care costs associated with stroke by improving the outcomes in the hyperacute phase (Section 4 – the case for change). The DMBC sets out the revenue and capital and equipment costs involved in each of the preferred two options for change, and financial modelling for the preferred recommended option. The delivery of benefits relating to a reduction in long term health and care needs relating to stroke care will enhance productivity and value for money of the preferred option.
3	***Duty to secure improvement of service -*** **Section 14Z34 NHS Act** The ICB is under a duty to exercise its functions with a view to securing continuous improvements in the quality of services provided to individuals for or in connection with the prevention, diagnosis or treatment of illness. In particular, to secure continuous improvements in the outcomes of the services in terms of their effectiveness, safety and patient experience.	**Yes** The preferred proposals will improve outcomes in both quality of care and access to specialised care in the region. This can be found in the summary of the evidence in Section 11 of the DMBC.
4	***Duty to reduce inequalities -*** **Section 14Z35 NHS Act** The ICB is under a duty to exercise its functions, having regard to the need to the need to: (a) reduce inequalities between patients with respect to their ability to access health services; and; (b) reduce inequalities between patients with respect to the outcomes achieved for them by the provision of health services.	**Yes** The EIA identified that in the preferred option, there will be a negative impact on those carers/relatives who are older people or live in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours of care whilst receiving Hyperacute Stroke Care.. It is not possible to mitigate all the negative impacts on protected groups which have been identified in this EIA. The impacts that remain are predominantly: • For patients who will have an increased ambulance travel time following a stroke.

		This will be mitigated by an improved clinical model of care which will improve outcomes for stroke patients. • On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience ~~an~~ increased travel during the first 72 hours to visit loved ones in a HASU which is different from the current HASU in YDH. The impacts set out have been mitigated in part through the preferred option maintaining the ASU at YDH and plans to reduce impact for patients and their carers in the first 72 hours of care, alongside plans to swiftly repatriate patients back to an ASU once they are medically fit to do so. In considering this negative impact which remain, we have sought to balance this against the improvement to patient outcomes which by implementing the clinical model which is contained within the DMBC. The new clinical model will ensure compliance with 2016 best practice guidelines, enable greater equity of access to specialist treatment, help address the existing workforce issues and create a service which is sustainable over the long term. During the implementation phase of this project, we will continue to look for ways to mitigate the negative impacts of this change. The EIA is a live document which will continue to be updated throughout the implementation phase of this project. It will continue to be refreshed with ongoing monitoring and evaluation of the change being monitored through the Key Performance Indicators, complaints and other outcome data as part of the governance processes to monitor the impact on specific groups who may have been disadvantaged due to the change. We will continue to look for ways to mitigate the negative impacts of this change. The EIA can be found in the appendices to the DMBC
5	***Duty to promote involvement of each patient -*** **Section 14Z36 NHS Act**	**Yes** An extensive process of continuous public engagement and involvement has been

	The ICB is under a duty in the exercise of its functions to promote the involvement of patients, and their carers and representatives, in decisions which relate to: (a) the prevention or diagnosis of illness in the patients, or (b) their care of treatment.	undertaken which with stroke survivors and their carers, VCFSE organisations, staff working in stroke services, wider hospital staff and the general public. Details of this continuous public engagement and of the public consultation can be found in Section 8 and 13.6 of the DMBC. We conducted a 12 week public consultation. The public consultation used a range of methods and channels to ensure local people, patients, their families and carers, health and care staff, partners and key stakeholders were aware of and able to engage and respond to the consultation. We sought to reach a broad range of people. This included extensive targeted engagement across our people and communities including people with protected characteristics, deprived communities and other seldom-heard groups to capture and understand a broader range of views as possible on the proposals. Details of how we reached people during the public consultation and how this feedback has been used to inform the development of the recommendations can be found in the appendices. A communications plan has also been developed to ensure patients are made aware of the changes and continue to be engaged in the implementation phase. Please see section 14..
6	***Duty as to patient choice -*** **Section 14Z37 NHS Act** The ICB is under a duty, in the exercise of its functions, to act with a view to enabling patients to make choices with respect to aspects of health services provided to them.	*Not applicable to hyperacute stroke services, since it is an urgent care service and therefore excluded by regulation 40 of the Standing Rules Regulations 2012*
7	***Duty to obtain appropriate advice –*** **Section 14Z38 NHS Act** The ICB is under a duty to obtain appropriate advice to enable it to effectively discharge its functions, from a persons who have a broad range of professional expertise in (a) the prevention, diagnosis or treatment of illness, and (b) the protection or improvement of public health.	**New duty on ICBs** **Yes** In 2019, a review of the Somerset Stroke Services was undertaken by a wide ranging group of clinicians and experts who considered the stroke pathway from prevention to living with a stroke. These included individuals from Somerset CCG, SFT, YDH, SWAST, Somerset County Council and VCFSE. The Somerset Strategy for Stroke was developed.

		This DMBC addresses one element of the stroke pathway – it sets out the future configuration of acute hospital-based stroke services, which includes hyperacute stroke and acute stroke services. The stroke reconfiguration programme has been led clinically by Dr Rob Whiting, Stroke Physician at SFT, supported by Dr Bernie Marden, Chief Medical Officer at Somerset ICB. In considering all the potential options to improve the hospital-based stroke services, a Clinical Reference Group reviewed these and developed a longlist of options (described in section 12 of the PCBC). This longlist of options was reviewed by a range of expert groups to develop a shortlist of options by applying hurdle criteria. These included: • Experts by Experience • Stroke Teams at all three hospitals impacted by the change (MPH, YDH and DCH) • SWASFT • Emergency Departments at MPH and YDH The four shortlisted options were assessed by a Clinical Review panel of the South West Clinical Senate in September 2022. The panel deemed that two of the options would not address the reasons set out in the Case for Change and provided assurance for two options that were consistent with a strong clinical evidence base: HASU at SFT only and All HASU and ASU beds at a single hospital site - SFT. The proposal for the improving stroke services was developed by the Somerset Stroke Steering Group, a multi-organisational group across Somerset and Dorset. This was supported by a strong governance process comprising of a number of key groups. Stakeholders involved in the Somerset Stroke Programme are listed in the appendices. The key groups included; **Patient and Public Stakeholder Reference Group** consists of key voluntary sector organisations and people with lived experience.

		The group provided feedback on our developing solutions and offered their perspectives and insights on how we can inform and engage local people in the hyperacute stroke public consultation. The group informed the development of the proposals and supported us to plan the consultation activity and materials. **Somerset Stroke Steering Group** is a partnership of clinicians, people with lived experience of stroke and other health and social care staff from across Somerset as well as colleagues from Dorset. They were responsible to design a new clinical model of acute hospital-based stroke services that meets both clinical best practice and one that is grounded in what matters most to people, through consideration of public consultation feedback and delivers the best outcomes for patients. The steering group were supported by a clinical reference group (comprised of stroke clinicians, clinicians from services impacted by the change, VCFSE, and an expert by experience) which was established to consider the clinical evidence and develop best practice pathways for the stroke service. **Stroke Project Board** is a cross organisational group comprising of partners from organisations which are impacted by the proposed changes to stroke service and includes representatives from Somerset ICB, SFT, DCH, Dorset ICB, SWAST and Health Watch. Its purpose is to ensure that feedback received during the consultation is considered, new clinical evidence and guidelines are considered, deliver this Decision Making Business Case along with recommendations to the ICB Board. **Somerset Collaboration Forum** The Collaboration Forum is a way of facilitating collaboration between the constituent organisations within the Somerset Integrated Care System (ICS) to drive the delivery of the overall health and care strategy that is established by the Integrated Care Partnership (ICP). The Collaboration Forum supported the interactions and dependencies between the stroke programme and other programmes that are responsible for delivering our strategic aims. **Somerset ICB Board** is the Decision Making Authority on this DMBC and will make the final

		decision. They have also considered and approved the PCBC which commenced the start of the public consultation and the decision to progress with a preferred option.
8	***Duty to promote innovation* – Section 14Z39** The ICB is under a duty to promote innovation in the provision of health services	**New duty on ICBs** **Yes** The proposals support the delivery of improved stroke care as set out in the National Clinical Guidelines 2016 for stroke care. In considering how the proposed option will work practically, innovative approaches to communication developed during Covid-19 pandemic have been adopted.
9	***Duty in respect of research* – Section 14Z40** The ICB is under a duty to facilitate or otherwise promote research on matters relevant to health service, and the use in the health service of evidence obtained from the research.	**New duty on ICBs** **Yes** The proposals will continue to provide data to the SSNAP database. The Sentinel Stroke National Audit Programme (SSNAP) is a major national healthcare quality improvement programme based in the School of Life Course and Population Sciences at King's College London. By having stroke services concentrated on fewer sites, the opportunity to undertake research is greater.
10	***Duty as to promoting education and training* - Section 14Z41 NHS Act** The ICB is under a duty, in the exercise of its functions, to have regard to the need to promote education and training.	**Yes** The PCBC identified additional training opportunities as part of the reconfiguration of acute stroke service within the preferred option C (single HASU at Taunton) The DMBC has considered workforce planning in detail and workforce plan incorporates the following elements; Workforce training and development is the key to unlocking the workforce challenge by changing to a “skills and capabilities” model rather than one solely based on professional qualifications which allows greater flexibility in the range of workforce solutions available for an existing workforce. The Somerset Stroke Framework is designed to describe and support the development of the skills and knowledge that all health care professionals and support staff require to deliver high quality care as part of the Somerset Stroke

		Pathway in both the hospital and community setting. The Stroke Framework, supported by the Stroke Specific Educational Framework (SSEF) aims to provide a structured and standardised approach to education and training for those working within, and affected by, stroke. It is the intention that as they move towards a one team approach with the Somerset stroke framework and the SSEF will be used to deliver a specific stroke development competency programme for all those staff working within the stroke pathway. Continuous Personal Development (CPD) − or more specifically workforce development – offers staff career progression that motivates them to stay within the stroke service and, just as importantly, equips them with the skills to operate at advanced levels of professional practice and to meet patients' needs of the future. Advanced practice roles for both nursing and therapists offer opportunities to improve clinical continuity; provide mentoring and training for less-experienced staff; and offer a rewarding, clinically facing career option for experienced staff. They also enable consultant medical staff to work at the top of their licence. To deliver the "skills and capabilities" workforce model we will use available resources to enable mapping of competencies for our staff that not only ensures they are fully equipped to undertake their current role, but also gives them a clear and objective plan to develop and extend their role. This is key to upskilling our stroke workforce. A consistent approach will be applied across both sites where work is of a similar nature to ensure that staff competencies are developed equitably, and this have already started for the trainee ACP posts which will standardise competencies across the two sites. Where the frequency of Stroke supported activities are less (i.e., YDH where no HASU is present) the rotational approach to supporting competency development for the ACP's will be used to ensure that staff are able to maintain core skills to be able to respond to any walk in or inpatient strokes and be able to support the delivery of specialist advice and treatment options.

11	***Duty to promote integration* - Section 14Z42 NHS Act** The ICB is under a duty to exercise its functions with a view to securing that: (a) services are provided in an integrated way and; (b) the provision of health services is integrated with the provision of health-related services (services that may have an effect on health) and social care services where this would improve the quality of the services (including outcomes), reduce inequalities of access or reduce inequalities in outcomes.	**Yes** The DMBC provides for proposals to maintain the provision of integrated stroke services in Somerset. The Integrated Stroke Delivery Network (ISDN) is supporting the development of an integrated community stroke service (ICSS) model in Somerset.
12	***Duty to have regard to the wider effect of decisions (the 'Triple Aim Duty') -* Section 14Z43 NHS Act** The ICB is under a duty to have regard to the likely effects of its decisions in relation to (a) the health and wellbeing of the people of England (b) the quality services provided to individuals (c) efficiency and sustainability in relation to the use of resources	**New duty on ICBs** **Yes** The stroke strategy addresses the whole stroke pathway from prevention to living with a stroke. High blood pressure is the biggest single risk factor for stroke. Within the Somerset ICS, Hypertension identification and treatment has been prioritised. The proposed changes will improve the quality of service and the outcomes for people experiencing a stroke. The proposals will address the sustainability issues identified within the case for change.
13	***Duty as to climate change* - Section 14Z44** The ICB is under a duty to have regard to the need to (a) contribute towards compliance with section 1 of the Climate Change Act 2008 and section 5 of the Environment Act 2021 (b) adapt to any current or predicted impacts of climate change identified in the most recent report under section 56 of the Climate Change Act 2008	**Yes** The DMBC includes reference to evaluations the environmental impact of proposed option. There is also reference to how the reconfiguration of acute stroke services aligns with the Somerset Green Plan, with the key areas of focus and potential impact being travel, estates and facilities, and digitisation. The conclusion of the environmental impact assessment for the preferred recommended option is that overall, improved patient outcomes and reduced length of stay in acute hospital setting will reduce carbon emissions from the proposed changes compared to the increase in emissions from increased travel distances by ambulance or for visitors.

		A number of concluding actions and recommendations following actions are recommended as a result of this impact assessment document - these actions will be incorporated in to implementation planning and delivery. More information is in section 11.10 of the DMBC.
14	***Duty to involve the public* - Section 14Z45 NHS Act** The ICB is under a duty in relation to health services which it provides or commissions to make arrangements so as to secure that individuals to whom the services are being (or may be) provided are involved by consultation or otherwise at various stages including: (a) in the **planning** of commissioning arrangements; (b) in the development and consideration of **proposals for change**; and (c) in **decisions** affecting the operation of commissioning arrangements, **where implementation would have an impact on the manner in which services are delivered or the range of services available.**	**Yes** An extensive process of continuous public engagement and involvement has been undertaken which with stroke survivors and their carers, VCFSE organisations, staff working in stroke services, wider hospital staff and the general public. Details of this continuous public engagement can be found in Section 8 and 13.6 of the DMBC. We conducted a 12 week public consultation. The public consultation used a range of methods and channels to ensure local people, patients, their families and carers, health and care staff, partners and key stakeholders were aware of and able to engage and respond to the consultation. We sought to reach a broad range of people. This included extensive targeted engagement across our people and communities including people with protected characteristics, deprived communities and other seldom-heard groups to capture and understand a broader range of views as possible on the proposals. Details of how we reached people during the public consultation and how this feedback has been used to inform the development of the recommendations can be found in the appendices.
17	***Review and scrutiny by Local Authorities* - Section 244 NHS Act** and **Regulation 23 Local Authority (Public Health, Health and Wellbeing Boards and Health Scrutiny) Regulations 2013** The ICB is under a duty to consult with the Local Authority ("LA") about any proposals for a *substantial* development or variation of the health service in that Local Authority's area. ('*Substantial'* is not defined in the	The proposals within this DMBC are considered to be a substantial variation to the way in which stroke services are currently provided. We have maintained an ongoing dialogue with both Somerset Council Adults and Health Scrutiny Committee and where appropriate, with the Dorset Council People and Health Scrutiny Committee as the proposals also impact part of the Dorset population who use services at YDH. Details of the contact with these committees can be found in Section 8.8.1 and section 13.5.

	Regulations)	A meeting was held with councillors on 17 January 2024 to provide the opportunity to answer questions regarding the proposals and to try and alleviate the concerns Scrutiny had. Not all councillors were fully satisfied with the proposal and it was stressed that the Scrutiny Committee would take an active role in scrutinising the implementation of the proposal to ensure it resulted in improved outcomes for the people of Somerset.
18	***Equality Act 2010* -** **Section 149** Relevant Protected Characteristics: (a) age; (b) disability; (c) gender reassignment; (d) pregnancy and maternity; (e) race; (f) religion or belief; (g) sex; (h) sexual orientation. The ICB is under a duty, in the exercise of its functions to have due regard to three main aims: (a) to eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Equality Act; (b) to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and (c) to foster good relations between persons who share a relevant protected characteristic and persons who do not share it. In particular: (a) removing or minimising disadvantages suffered by persons with protected characteristics that are connected to that characteristic; (b) taking steps to meet the specific needs of persons with protected characteristics;	**Yes** The Equality Impact Assessment has been reviewed and updated throughout the process, supported and enabled by both the public engagement and consultation has been an integral part of the reconfiguration programme and commenced from the outset of developing the Somerset Stroke strategy in 2019, and our ongoing engagement with colleagues from Healthwatch, the Stroke Association, Public Health and our Lived Experience Group. The EIA identified that in the preferred option, there will be a negative impact on those carers/relatives who are older people or live in rural areas and more deprived areas in the south of the county (who would normally travel to YDH for their stroke care) as there would be increased travel during the first 72 hours of care whilst receiving Hyperacute Stroke Care.. It is not possible to mitigate all the negative impacts on protected groups which have been identified in this EIA. The impacts that remain are predominantly: • For patients who will have an increased ambulance travel time following a stroke. This will be mitigated by an improved clinical model of care which will improve outcomes for stroke patients. • On carers/relatives who are older people, those who live in rural areas and those who are in the more deprived areas in the south of the county (who would normally travel to YDH for their stroke care). This is because a proportion of patients carers/relatives would experience increased travel during the first 72 hours to visit loved ones in a HASU which is

	(c) encouraging persons with protected characteristics to participate in public life or in any other activity in which participation of such persons is disproportionately low; (d) tackling prejudice; and (e) promoting understanding. *Please note, compliance with this duty is often supported by an Equality Impact Assessment and some form of public engagement.* *In carrying out its consultation duties, the ICB must also ensure that it complies with its equality duties.* *In recent cases concerning Local Authorities, the court considered that the consultation process was flawed because of failure to consider the equalities duties. Important points to note from these cases are:* *(a) the purpose of equalities legislation is to require public bodies to give* ***advance consideration*** *to issues of discrimination before making any policy decision;* *(b) process is the key factor rather than outcome - it is not merely a 'box-ticking' exercise and there must be* ***'vigorous'*** *consideration; and* *(c) equality issues must be considered* ***during*** *the consultation process, carrying out an impact assessment after the consultation will be too late.*	different from the current HASU in YDH. The impacts set out have been mitigated in part through the preferred option maintaining the ASU at YDH and plans to reduce impact for patients and their carers in the first 72 hours of care, alongside plans to swiftly repatriate patients back to an ASU once they are medically fit to do so. In considering this negative impact which remain, we have sought to balance this against the improvement to patient outcomes which by implementing the clinical model which is contained within the DMBC. The new clinical model will ensure compliance with 2016 best practice guidelines, enable greater equity of access to specialist treatment, help address the existing workforce issues and create a service which is sustainable over the long term. During the implementation phase of this project, we will continue to look for ways to mitigate the negative impacts of this change. The EIA is a live document which will continue to be updated throughout the implementation phase of this project.

13.10. Legal advice and best practice support

Legal advice has been sought throughout the process and specifically in relation to reviewing the PCBC, consultation materials, reaching a preferred option and this DMBC.

We have worked with the Consultation Institute who have provided best practice advice and support throughout the process. The Consultation Institute is a global leader in consultation best practice and training.

14. Implementation

A governance model for the implementation planning and delivery phase is set out in section 14.3 below. This model incorporates structures and responsibilities for tracking and monitoring benefits of the proposed change.

Oversight and assurance of implementation and go-live will actively include milestones and go/no-go gateways before any decision is made for the proposed changes to go-live.

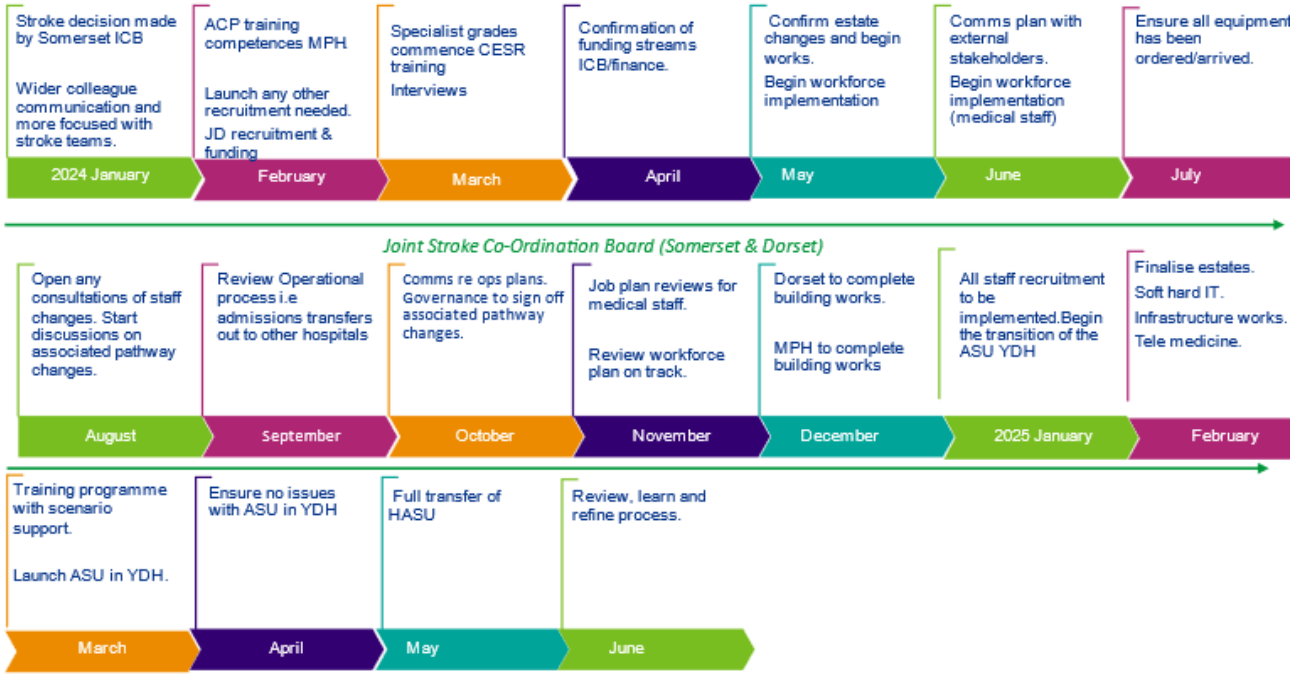
14.1. Implementation principles

Implementation of the preferred/recommended option has been mapped out at a high level and is based on a number of core assumptions;

- Best practice principles in stroke service reconfiguration will be applied, for example, ensuring services make a clear and definitive transition, rather than a phased approach to minimise risk of confusion
- Interdependencies will need to be carefully planned and closely managed to ensure a safe and well managed transition, particularly alignment and integration with Dorset County Hospital and Southampton linked to thrombectomy
- Interdependencies are also key with SWASFT colleagues
- Pathways and implementation will be closely considered to ensure effective and timely patient flows are in place and tested for the reconfigured service to go live
- The outline implementation timescales will need to be worked up in detail and mechanisms put in place to ensure close alignment between Somerset Foundation Trust and Dorset County Hospital, as well as with SWASFT. See the governance/implementation section for more detail on roles and mechanisms proposed to support implementation.

An outline implementation plan has been developed with an 18 month timescale. Activities are mapped out at a high level and will be refined during the implementation phase. Alignment and coordination between SFT and DCH, as well as SWASFT will be of critical importance.

Image: outline implementation plan



14.2. Implementation risks and mitigations

	Risk title and description	Potential mitigations
1	Risk **implementation timings** not aligned and coordinated between SFT and DCH	• Establish SROs and delivery teams for the change at both SFT and DCH • Establish detailed transition plans and readiness assurance checks for transition and switch-over to new model during implementation
2	Judicial Review or referrals to secretary of state **delays implementation** whilst challenges are conducted	• Continued communication and engagement with stakeholders • Work with HOSC to reduce risk of referral • If legal challenge is brought, identify and prioritise work that can happen during a referral or review period
3	Risk required **estates** changes will not be in operation in line with required timescale	• Detailed estates planning and delivery to form a core workstream for implementation • Regularly review and report estates and timeline risks and issues through the implementation governance to ensure all effective mitigations are in place
4	**Workforce availability** (recruitment and retention of specialist staff), competency and skill mix is inadequate to deliver new model of care	• Required workforce has been agreed • Joint implementation Workforce Group to be established through implementation planning and governance • Develop package for stroke leaders to support staff through the change • Development of a comprehensive recruitment strategy, attracting domestic and international workforce • Strong training and education offer and development of new and current staff
5	Different **digital patient systems** risks digital system integration which if not mitigated could result in issues with clinical safety and quality of patient care	• Detailed digital planning and delivery to form a core workstream for implementation • Regularly review and report digital risks and issues through the implementation governance to ensure all effective mitigations are in place • Continue to use shared ordercomms and PACS systems between YDH and MPH. • Continue to use ImageTransfer system for radiology to be transferred between trusts
6	Risk insufficient **workforce** to deliver the pathway or to current services during the transition processes –	• Workforce to form a core workstream for implementation • Continue communications and engagement with staff • Consider and implement approaches set out in the

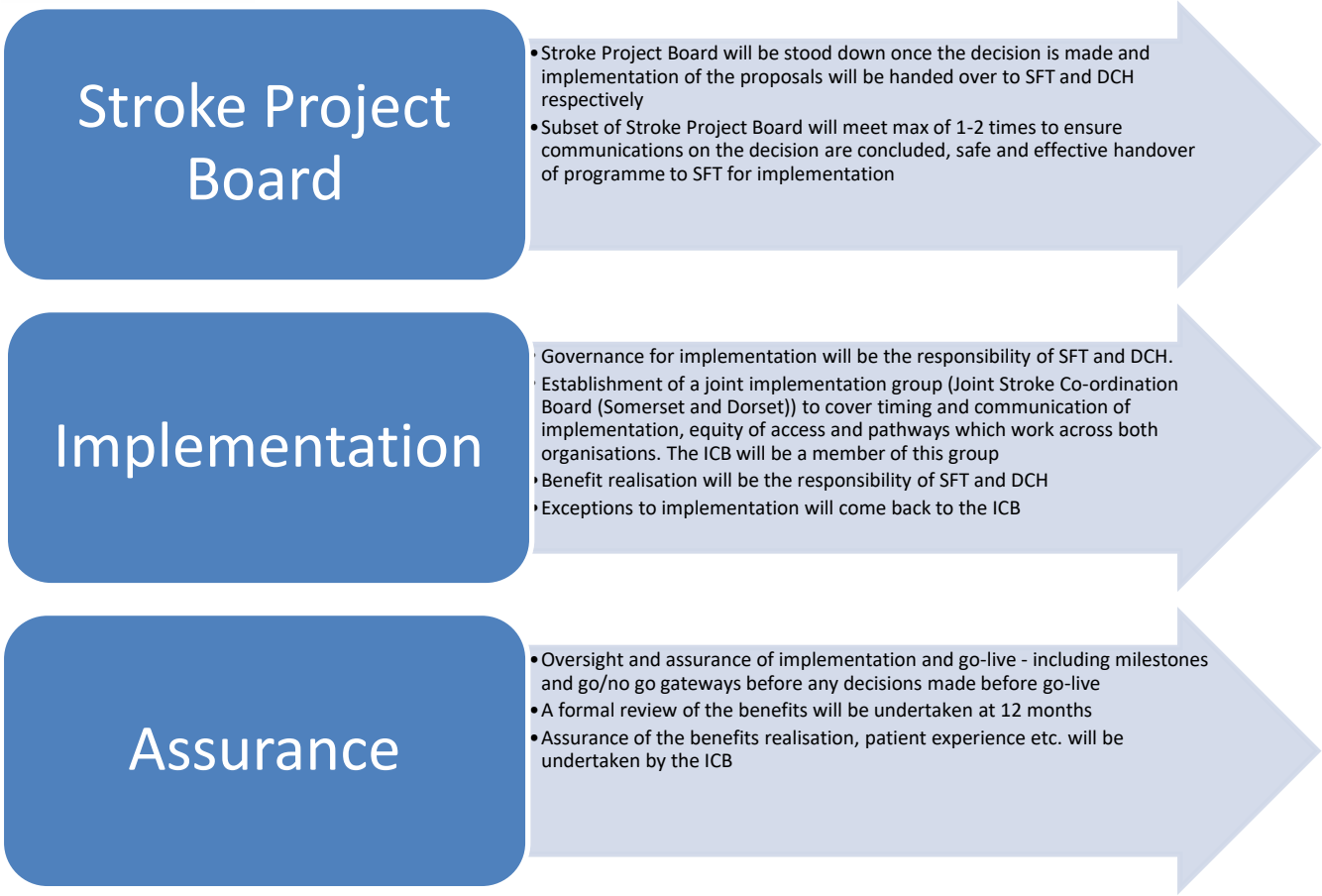
		workforce plan to support recruitment and retention throughout
7	**Clinical quality** or service standards not maintained prior to implementation and not monitored post implementation	• Maintain existing effective clinical governance systems • Continue regular operational review of service standards with partners e.g. SWASFT • Agree KPIs and plan for staged and safe transfer to the planned change model • Ensure quality metrics are tracked post-change so any undesirable trends e.g. sudden dip in performance as a result of increased activity can be identified early – for SWASFT, SFT and DCH • Continue regular governance and SSNAP audit meetings to monitor and address performance issues
8	**Somerset SSNAP scoring position** may deteriorate both during transition and in live model when SSNAP scoring approach updated from April 2024 to reflect the 2023 Stroke guidelines (not the 2016 guidance which is a core assumption for this programme).	• Continue regular governance and SSNAP audit meetings to monitor and address performance issues • Develop business case and action plan for therapy staffing against 2023 guidelines
9	**Services destabilise** before transition – particularly at YDH	• Continue communications and engagement with staff • Maintain existing effective clinical governance systems • Regularly review and report clinical risks and issues through existing organisational mechanisms, and through the implementation governance to ensure all effective mitigations are in place • Recent recruitment of additional substantive stroke consultant at YDH
10	**Low resource capacity** or availability in the Somerset system risks the timeline being unachievable or compromises the quality of implementaiton planning and readiness due to competing demand on their resources	• Scope and implement governance arrangements for implementation phase including clear roles and responsibilities and resources identified in each organisation to manage implementation • Regularly review and report clinical risks and issues through existing organisational mechanisms, and through the implementation governance to ensure all effective mitigations are in place
11	**Patient confidence** is lost during implementation leading to patient confusion and dissatisfaction	• Develop detailed communications and engagement plan for implementation phase that specifically considers engagement with and messaging to patients

		• Continue to track patient outcomes and publicise good news stories • Ensure quality metrics are tracked post-change so any undesirable trends can be identified early
12	**Confusion for ambulance services** as to which site to transport patients to during implementation and transition	• SWASFT form a key part of implementation governance and planning • Put in to practice a key principle of implementaiton planning and agree clear dates that transition and switch-over will take place in order to reduce risk of confusion • Ensure effective communications re:referral and conveyance plan (including system for pre-alert)
13	**Communications with patients and family and friends** about the implemetation of and switch-over to the new model are unclear and cause confusion	• Detailed work on travel and transport support actions to form a core workstream for implementation • Assign allocated lead to deliver on the actions scoped in the DMBC, the EIA, and through detailed implementation planning • Work with VCSFE on implementation actions to support clear messaging and effective dissemination, particularly around travel and transport or visiting mitigations e.g. digital connections, developing and designing communications matierals to aid signposting to approparei serivces e.g. travel and transport support • Commuications implementation plan in place and regualrly updated to ensure communications to the public is clear and widely circulated.

14.3. Governance arrangements for implementation

The Somerset Stroke Programme will transition to an implementation phase to focus on the detailed planning and delivery of the reconfigured model of acute hospital based stroke services, and the terms of reference and membership of the stroke programme delivery and governance groups will be reviewed.

The proposed governance arrangements for implementation are set out below;



14.4. Communication and engagement

Implementation Communications and Engagement Plan
Following the decision to progress with the final recommendations, an ongoing programme of communications and engagement relating to the implementation of the changes will take place. This will build on the existing relationships already established during the pre-consultation and consultation phases.

The delivery of the communications and engagement work post implementation is dependent on close working with the provider Trust and the NHS Somerset communications and engagements teams. For the implementation phase of the stroke review communications and engagement work will be particularly dependent on the Trust to deliver HR information, support and advice, and for communications and engagement leads to ensure regular information is cascaded through established channels.

This plan will be developed and reviewed as the programme of implementation progresses.

Aims:

- Ensure key audience groups are informed and can engage with us about the implementation of the reconfiguration of urgent stroke services in Somerset.
- Help to build confidence in, and support for the implementation plans and the new stroke services in Somerset.
- Ensure that once the new service is live, patients, carers and the public understand how they should access stroke services.

In order to achieve these aims the stroke programme will:

- provide information in a timely manner, in a range of formats and via a range of channels, appropriate to the needs of different audiences;
- make sure public information is consistent and clear; written and spoken in ‘plain English’ avoiding jargon and technical information;
- communicate in a way that protects and enhances the reputation of the Somerset stroke review; and,
- review, evaluate and adapt as needed, the approach to communicating and engaging to ensure the needs of all audiences are met.

Accountable bodies
The organisations involved are:
Lead organisation:

- NHS Somerset

Partner organisations:

- SFT
- DCH
- Somerset Council

Key stakeholders:
Stroke staff are a key priority; their ongoing commitment and support for stroke services is vital to ensuring the delivery of safe and effective stroke care during the implementation phase.
It is important to ensure that staff:

- have an opportunity to engage and be involved in plans as they are developed, coproducing solutions where appropriate, and hear first about any decisions, implementation plans and timelines;
- are aware of the HR process, understand how their roles may be impacted and understand what options are available to them; and,
- know where to go for further detailed information about their own job and their employee rights.

Key stakeholders:

- Somerset people and communities
- Stroke SFT staff
- SFT staff
- ICS colleagues
- Public and Patient stakeholder group
- Stroke support groups
- Healthwatch Somerset
- Somerset HOSC
- Dorset HOSC
- Councillors
- MPs
- Union reps
- VCFSE organisations.

Our approach

We will use a range of communication channels to reach different key audiences.

There are several existing communications channels available that will be used to share information and engage with audiences. Where appropriate and necessary, new channels or communications tools will be developed.

Existing communications channels will be continued to be used, capitalising on the increased engagement achieved through these channels during the public consultation as a key way to share information and engage with audiences. These channels include:

- Websites: NHS Somerset website, Our Somerset website, SFT website. we will also ask partners to share information across their platforms.
- Social media: NHS Somerset, Our Somerset and SFT social media channels, we will also ask partners to share information across their platforms.
- Our Somerset monthly newsletter.
- Internal communications: we will utilise existing internal communication and engagement channels to inform and engage with staff.
- Partner organisations: information will be shared with partner organisations and stakeholders to enable them to share information across their channels.
- Meetings: public and stakeholder meetings will take place as appropriate during key stages of the implementation phase.
- Media: we will provide updates to the media at key milestones during the implementation phase.

High-level overview:

This plan will be developed and reviewed as the programme of implantation progresses.

- **Phase 1: decision making** – a separate communications plan has been prepared following the decision-making meeting, this will include public meetings to communicate the decision and enable stakeholders to ask questions.
- **Phase 2: planning** – during this planning phase for implementation, staff and stakeholders will be engaged and informed in different areas as implementation plans progress.
- **Phase 3: Pre-go live phase:** information will be widely communicated on the changes which will take place and what this will mean.
- **Phase 4: go live** – practical messages, awareness raising will continue to information people of the changes of what this means for them. This will include key messaging around recognising the signs of a stroke and messages around prevention.

Ongoing evaluation of communications and engagement activity will be undertaken to gauge its impact and effectiveness. The approach will be adapted as necessary, for example to address any newly emerging concerns or challenges, or to target specific groups that are identified as needing additional information or not having been engaged sufficiently.

15. Conclusions and recommendations

This Decision Making Business Case has presented and summarised the extensive work undertaken as part of the Somerset Stroke Programme, and sets out the information required for Somerset ICB Board to make informed decisions about the future configuration of stoke services in

Somerset. It is a technical document that builds on the Pre Consultation Business Case and presents the next phase of evidence assessment and analysis, following formal public consultation.

The Stroke Programme has galvanised stakeholders from all backgrounds and professions around a shared vision for stroke care in Somerset. Delivering the recommendations within this DMBC will deliver our vision for stroke care that is:

"Stroke patients in Somerset will receive timely acute interventions and receive access to world-class services, regardless of where they live"

The document has been developed with significant clinical and public involvement. Further engagement will continue through the implementation phase to ensure that the changes deliver improved outcomes and experience of care.

The clinical model proposed has been developed by the clinicians involved in the Stroke Steering Group using best practice guidance and maps the journey from pre alert by the ambulance through the hyperacute and acute stroke phases. It incorporates the standards required at each part of the pathway including patients who may walk into YDH emergency department or who may have a stroke as an inpatient.

Recommendation
It is proposed that the ICB Board **approve** the proposed clinical model which comprises of:

- A single Hyperacute Stroke Unit to be located at Musgrove Park Hospital in Taunton
- Two Acute Stroke Units located at Musgrove Park Hospital, Taunton and Yeovil District Hospital
- One county TIA service operating seven days a week at Musgrove Park Hospital, Taunton and weekday service Yeovil District Hospital

16. Appendices

Appendix 1 - Consultation activity report

Appendix 2 - Consultation findings report

Appendix 3 – Stroke Consultation Material Examples

Appendix 4 - Clinical and workforce model (slides)

Appendix 5 – Demand and Capacity modelling

Appendix 6 - Geospatial outputs

Appendix 7 - Workforce plan

Appendix 8 – Stroke Environmental Impact Assessment

Appendix 9 – Equalities Impact Assessment (EIA)

Appendix 10 - Somerset Stroke benefits framework

Appendix 11 – Review of Clinical Senate recommendations

Appendix 12 - Stakeholders

Appendix 13 – Letter of Support – RUH

Appendix 14 – Letter of Support – SWASFT

Appendix 15 – Letters Dr K Rashed

Appendix 16 – Letters Somerset Scrutiny Health & Adults Committee

17. Glossary and Abbreviations

Term / Abbreviation	Definition
A&E	Accident and Emergency department (interchangeable with ED)
ACP	Advanced Clinical Practitioner
ASU	Acute Stroke Unit
BaNES	Bath and North East Somerset
BASP	British Association of Stroke Physicians
BAU	Business As Usual
BNSSG	Bristol, North Somerset, and South Gloucestershire
BSW	BaNES, Swindon, and Wiltshire
CCG	Clinical Commissioning Group
CCU	Coronary Care Unit
CESR	Certificate of Eligibility for Specialist Registration
COVID	Coronavirus Disease
CPD	Continuous Personal Development
CT	Computerised Tomography
DCC	Direct Clinical Care
DCH	Dorset County Hospital
DMBC	Decision Making Business Case
DPIA	Data Privacy Impact Assessment

DTN	Door to Needle (Time)
ED	Emergency Department (interchangeable with A&E)
EIA	Equalities Impact Assessment
ESD	Early Supported Discharge
FAST	Facial dropping, Arm weakness, Speech difficulties, and Time
FFMF	Fit for My Future Programme
GIRFT	Getting It Right First-Time programme
HEAT	Health Equity Assessment Tool
HASU	Hyper Acute Stroke Unit
HEE	Health Education England
HOSC	Health Oversight Scrutiny Committee
ICB	Integrated Care Board
ICS	Integrated Care System
ICSS	Integrated Community Stroke Service
ISDN	Integrated Stroke Delivery Networks
MEND	Miami Emergency Neurologic Deficit
MDT	Multidisciplinary Team
MPH	Musgrove Park Hospital
MRI	Magnetic Resonance Imaging
NHS	National Health Service
NHSE	NHS England (merged with NHSI 01/07/22)
NICE	National Institute for Health and Care Excellence
ONS	Office for National Statistics
OOH	Out Of Hours
ORS	Opinion Research Services
PA	Programmed Activities
PCBC	Pre-consultation Business Case
QIA	Quality Impact Assessment
RUH	Royal United Hospital Bath
SCW	NHS South, Central and West Commissioning Support Unit
SFT	Somerset NHS Foundation Trust
SRU	Stroke Rehabilitation Unit
SSEF	Stroke Specific Education Framework
SSNAP	Sentinel Stroke National Audit Programme
SWASFT	South Western Ambulance Service NHS Foundation Trust
TIA	Transient Ischaemic Attack
VCSE	Voluntary, Community and Social Enterprise

WTE	Whole Time Equivalent
YDH	Yeovil District Hospital

Key term	Definition/Description
Advanced Clinical Practitioner (ACP)	Advanced Clinical Practitioners come from a range of professional backgrounds such as nursing, pharmacy, paramedics and occupational therapy. They are healthcare professionals educated to Master's level and have developed the skills and knowledge to allow them to take on expanded roles and scope of practice caring for patients. (As per Health Education England HEE definition)
Artificial Intelligence (AI)	Artificial Intelligence (AI) is the use of a non-human software package to interpret brain imaging, even if the imaging is also subsequently interpreted by a radiologist.
Carer	A person (commonly the patient's spouse, a close relative or friend) who provides on-going, unpaid support and personal care at home.
Commissioners	Funding bodies of NHS services.
CT angiogram	Uses a CT (computerised tomography) scanner to produce detailed images of both blood vessels and tissues in various parts of the body.
CT scan	A CT (computerised tomography) scan X-rays the body from many angles. The X-ray beams are detected by the scanner and analysed by a computer. The computer compiles the images into a picture of the body area being scanned. These images can be viewed on a monitor or reproduced as photographs.
Direct clinical care (DCC)	Refers to the time a doctor spends on direct patient contact and/or management. DCC is work directly related to preventing, diagnosing, or treating illness, including emergency work carried out during or arising from on-call work.
Door-to-needle time (DTN)	Term that refers to the time from arrival at hospital or onset of stroke (for inpatient strokes) to the time a patient is thrombolysed.
Getting It Right First Time (GIRFT) [67]	Getting It Right First Time (GIRFT) is a national programme designed to improve medical care within the NHS by reducing unwarranted variations. By tackling variations in the way services are delivered across the NHS, and by sharing best practice between trusts, GIRFT identifies changes that will help improve care and patient outcomes, as well as delivering efficiencies such as the reduction of unnecessary procedures and cost savings.
Hyperacute stroke unit (HASU)	Some stroke services designate the most intensive treatment as hyperacute. This would be where patients are initially treated and usually for a short period of time, i.e., up to three days.
Long Term Plan[68]	The NHS long Term Plan launched in January 2019. It is sets out a plan for the NHS to improve patient care and health outcomes in the future.
Median	The median is the middle point of a data set; half of the values are below this point, and half are above this point.
Multi-disciplinary	A team or service which is composed of staff from different healthcare professions with specialist skills and expertise.

[67] https://gettingitrightfirsttime.co.uk/

[68] https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf

	The members work together to ensure patients receive comprehensive, coordinated treatment.
Organisational Audit	Audit of the service organisation, particularly relevant in stroke audit due to the evidence supporting organised stroke services.
Out of hours (OOH)	In hours is between 08.00-18.00 Monday to Friday. Out of hours is all days and times outside this range
Programmed activities (PA) sessions	PA sessions are a 4-hour unit of time (one half day), 10 of which comprise a consultant's work week. In contrast to supporting professional activities, programmed activities are dedicated to direct clinical care (DCC).
Secondary Prevention	Measures to prevent recurrence of the same illness.
Sentinel Stroke National Audit Programme (SSNAP)[69]	The Sentinel Stroke National Audit Programme (SSNAP), which assesses the care provided for patients during and after they receive inpatient care following a stroke. SSNAP measures the process of care (clinical audit) against evidence-based quality standards referring to the interventions that any patient may be expected to receive. These standards are laid out in the latest clinical guidelines, including the Royal College of Physicians National Clinical Guideline for Stroke (2016) and the NICE Clinical Guideline on Acute Stroke and TIA (NG128, 2019), and include: • Whether patients receive clot busting drugs (thrombolysis), • Interventions for clot retrieval (thrombectomy), • How quickly they receive a brain scan or • How much therapy is delivered in hospital and at home.
Service centralisation	The reorganisation of many stroke services into fewer, highly specialised hospitals that focuses on acute stroke care. For example, London and Greater Manchester have a centralised stroke service which means a stroke patient will be taken to a dedicated specialist stroke unit rather than their nearest hospital.
Sessions	A term used to describe a junior doctor's time. One session represents half a day.
Specialist community rehabilitation team (CRT)	A specialist community rehabilitation team refers to a stroke specific service delivered by specialist professionals within a multi-disciplinary team working in the community delivering rehabilitation services within a patient's home. A community rehabilitation team (CRT) will cater for patients following inpatient rehabilitation or transfer from early supported discharge (ESD).
Specialist early supported discharge (ESD) team	An early supported discharge team refers a stroke specific service delivered by specialist professionals within a multidisciplinary team. They provide rehabilitation and support in a community setting with the aim of reducing the duration of hospital care for stroke patients and enabling them to return home quicker.
Stroke mimic	A patient assessed by the stroke team as a suspected stroke but whose final diagnosis was not a stroke.

[69] Sentinel Stroke Audit Programme Annual Report 2022 – HQIP

Swallow screening	Swallow screening refers to a process which broadly identifies the safety of patient's swallow ability. This screening process, which may be performed by any member of the team trained to do this, acts to establish whether the patient requires further formal assessment regarding the patient's ability to swallow (either fluids or solid foods).
Telemedicine	The remote diagnosis and treatment of patients by means of telecommunications technology
Thrombolysis	The use of drugs to break up a blood clot.
Transient Ischaemic Attack (TIA)	A transient ischaemic attack is less severe than a stroke in that all the symptoms disappear within a day (and often last for less than half an hour). It is also referred to as 'mini stroke'.
Trusts	In the context of the UK's National Health Service (NHS), trusts are organisational units, e.g., hospital trusts, community trusts, primary care trusts or combinations thereof. In this report it usually refers to hospitals.
Whole time equivalent (WTE)	The whole time equivalent (WTE) of staff is the number of hours staffing disciplines are contracted to work within a typical working week. For example, a WTE number of 1.0 means that the person is equivalent to a full-time worker (and works e.g., 37.5 hours per week); while a WTE of 0.5 signals that the worker is half-time (and works 18.75 hours). This should not be confused with the number of individuals, which is the number of people (bodies) a service must deliver those hours.