Healthier Together
Improving health and care in Bristol, North Somerset and South Gloucestershire

System Transformation Reserve Funding – Business Case

Guidance notes in blue

Business case reference:	STR-BC-ACC-PLNSSN1	**Date:**	
Business Case title	Integrated Community Stroke Services – North Somerset		
Author & job title	Sian Barry – Director Stroke Programme Ceridwen Massey – Assistant Director Specialist Services, Sirona Emma Richards – Clinical and Operational Lead for Neuro, Sirona Philippa Cozens, Sirona Andy Clark, Divisional Ops Director, NBT Linda Matthews, General Manager, NBT		
Outcome: *To be signed once approval is granted*	**Approval/requirement for further information** Section to be completed by finance/business planning		
Financial summary	**In year spend**	**Recurrent cost implications**	
Funding source:	System Transformation Reserve		
Cost of delivery – Non - recurrent revenue requirement (£):	£796,898	£1,050,889	
Cost of delivery - Capital requirement (£):	£60,000		
Annual depreciation cost (£)	N/A	Please provide an annual cost	
Annual Public Dividend Capital (PDC) costs (£)	N/A	Please provide an annual cost	
Annual Cost for consumables (£)		Please provide an annual cost	
Value of activity to be delivered (average tariff prices)	54 patients will be supported by ICSS with expected cycle of 60 contacts per patient = 3,240 contacts Average cost per contact will be £86		

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BRIEF SCHEME OVERVIEW	The BNSSG Stroke Programme has been supported by the Healthier Together Partnership Board and the CCG to be the subject of public consultation during Summer 2021. A full decision making business case will be produced with a final proposal for a reconfigured stroke services to be presented in February 2022. The Programme seeks to improve stroke services across three streams: i) emergency care, ii) ongoing hospital care, and iii) rehabilitation through sub-acute inpatient facilities and at home. Following decision making the formal implementation phase of the programme will commence from March 2022 to support earlier implementation and phase recruitment and a 'test and learn' cycle of key elements of the pathway, transitional monies are sought to support: • early pump-priming of Integrated Community Stroke Service (ICSS) - test & learn pilot in North Somerset; • early pump-priming of HASU implementation of 24/7 specialist stroke rota for thrombolysis at Southmead; • workforce development for the One Stroke Team supporting CPD, recruitment & retention; and • scoping and enabling works to support development of estate options for community inpatient facilities and SDEC pathway The proposals contained within this bid have been considered and assessed to ensure that early implementation does not pre-empt the continuing public consultation; should a positive decision on the stroke business case not be forthcoming in February 2022 further System decision making will be required to determine continuation and fudnign of recruited staffing. **Thrombolysis** Southmead is the preferred site for the Hyper-Acute Stroke Unit (HASU) in the proposed Stroke model. This will centralise first line emergency treatment for BNSSG patients and re-direct ambulance pathways to Southmead. Transitional monies are sought to implement a 24/7 specialist stroke-led thrombolysis service at Southmead. The proposal would provide a 24/7 stroke led thrombolysis service consisting of a resident stroke specialist Registrar and ANP, and supported by an On Call Stroke Consultant with thrombolysis being delivered on the ward. Currently there is variation in how this critical treatment for stroke is delivered. In-hours thrombolysis is delivered by the specialist stroke team with a median time of delivery of 40 minutes (Dec 2019-Nov 2020). Out of hours delivery is led by the Emergency Department with a median time of 70 minutes. The British Association of Stroke Physicians (BASP) states that Door to Needle should be within 30 mins for 50% of cases of thrombolysis, and 100% within 60 mins. Out of hours Southmead is the lead stroke site for BNSSG taking patients diverted from BRI 11pm-8am 7 days a week and patients from North Somerset between 5pm and 9am Monday to Friday and at weekends.

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	Through these proposals, there is the opportunity to improve quality and performance by introducing thrombolysis infusions on the ward following bolus administration in ED. This would reduce pressure on ED capacity and improve ED performance with the time from ED arrival to admission on a stroke ward reduced and improved patient experience.

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Integrated Community Stroke

The development of consistent, integrated community services (ICSS) are a core requirement to support the full stroke model enabling release of acute capacity to provide immediate intensive emergency treatment and supporting patient flow.

It is therefore proposed to begin early implementation of the ICSS in North Somerset during Winter 2021/22 to provide support to Weston General Hospital. A phased roll out of service development is proposed, commencing in the North Somerset locality and supporting Weston General Hospital. This recognises the underlying inequity of service in the locality (where there is no formal ESD provision).

The pilot would require a total of 16.6 WTE (inclusive of backfill) incorporating therapists (7.26WTE), nursing (1.2 WTE), rehab assistants (6.3WTE) and management and admin (1.83WTE) recruitment and costs would be apportioned for PYE from October-December (phase 1) and January– March 2022 (phase 2). Recruited staff would be additional resource to existing community (pathway 1) provision in North Somerset (5.3WTE). A total caseload of 54 patients will be supported by the Team across both phases (27 phase 1; 54 phase 2).

Resourcing is required to support the implementation of the pilot and a cycle of 'test and learn' development including project manager, recruitment support and digital enablement.

The ICSS while included within the consultation documents to seek feedback on the proposal is not subject to formal public consultation as it does not represent a 'significant service change' requiring consultation under Regulations.

Workforce Development

Implementation of the recommended stroke pathway will require a significant programme of work including: development of a recruitment and retention strategy and plan, staff consultation planning, development of a competency framework and shared job specifications across acute and community workforce to support.

To support this development and the desired integrated 'one stroke' team will also require a programme of team building and CPD events and training of staff to achieve the core competencies across the integrated pathway to ensure early transfers within the pathway are also core. This bid seeks funding for HR resource ((1xB6) within the central workforce support to the programme in addition to pilot implementation support outlined above and funding for training resources (events, courses etc).

Estates

The Stroke Programme includes provision of two sub-acute rehab units (SSARU) in the community as a constituent part of the integrated pathway. The Programme has committed to using existing or planned NHS facilities to site the SSARUs and has further stated that a SSARU will be provided for the North Somerset population on or at the Weston General Hospital site. The Programme does not seek capital for a new build. To enable scoping and planning of potential reconfiguration within existing footprints funding is sought for professional advisers and planning and potential pump-priming of estates development.

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SYSTEM TRANSFORMATION BENEFITS	The Stroke Progamme in its full model will mean: • Survival rates could improve by 1% - 15 lives saved • 70 people living independently at home (58 in BNSSG) • 68 new people living permanently in care homes avoided in (57 in BNSSG) • Equality of access to community services *(achieved by transformation bid)* • 7-8 days shorter LOS across inpatient stay *(achieved by transformation bid)* • 14 day shorter acute LOS • Meet the Long Term Plan ambition of 20% of all stroke patients receiving thrombolysis *(achieved by transformation bid)* • ED admissions for stroke reduced *(achieved by transformation bid)* • ED LOS for stroke reduced to 1-2hours *(achieved by transformation bid)*	
WORKFORCE PLANS AND IMPLICATIONS	The system needs a stroke workforce of sufficient numbers and skills to ensure that every stroke patient and survivor, regardless of where they live, gets the best quality treatment, care and support. A shortage of professionals trained in specialist stroke care is seen both nationally and regionally. To support the service to recruit successfully and enable the smooth transition from the current service configuration, a single clinical and managerial approach across BNSSG is recommended. It will support the delivery of an effective and efficient service which will be able to adapt to future requirements across the pathway, help retain existing specialist stroke staff and attract new people who want to work at the forefront of specialist stroke care in the UK. This business case seeks finding to support development of the one stroke workforce building competency frameworks, JDs and resourcing solutions including training, recruitment and retention. The workforce required to implement the workstreams identified for initial roll out are identified below.	
PRIORITISATION ASSESSMENT:	Please score each facet below and provide a narrative justification for the score. These will be used to prioritise spending in the event that the SG allocation does not cover the total cost:	
	Score	**Narrative**
Alignment with system priorities	1 Strong alignment	The BNSSG Stroke Programme is a core project of the BNSSG Acute Care Collaboration (ACC) which seeks to drive improvements in quality and outcomes across acute service provision and support improved interface with community locality services. The aim of ACC is to ensure safe, consistent, high quality and networked services across BNSSG as a means to improve clinical and financial sustainability, with reduced service and clinical variation and standardisation of care delivery. Local ambitions for stroke are captured in the Healthier Together Long Term Plan, which was developed in 2019 with the following "outcomes"/improvements for stroke care in BNSSG: • An increase in the number of people receiving high-quality specialist care, • Improved health outcomes through increased use of thrombectomy

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		• Improved care through developing and implementing a new model for stroke rehabilitation and re-ablement. The full BNSSG Stroke Programme has been supported by the Healthier Together Partnership Board and the CCG to be the subject of public consultation during Summer 2021. A full decision making business case will be produced with a final proposal for a reconfigured stroke services to be presented in February 2022. The development of consistent, integrated community services are a core requirement to support the full stroke model enabling release of acute capacity to provide immediate intensive emergency treatment and supporting patient flow. This project to implement an Integrated Community Stroke Service for the population of North Somerset will pump prime the expected future roll out of the full BNSSG Stroke Reconfiguration (subject to approval of a decision making business case) by addressing existing inequalities of service in North Somerset to support the early discharge and rehabilitation of patients after Stroke.
Risk of recurrent costs	3 Medium risk	The Stroke Programme is a System priority that has been approved for OBC and is out to public consultation. A Final decision making business case will be brought forward for consideration and approval by the System and CCG in Winter 2022. Piloting of implementation of the Integrated Community Stroke Service will require substantive recruitment with expectation of recurrent costs subject to the above decision making. Should the programme not be successful at the point of final decision there is risk of staff requiring re-deployment or redundancy. A risk assessment of this potential has assessed that there is likely to be sufficient demand for staff to enable redeployment. The proposal to implement 24/7 rota and support for Thrombolysis will also require substantive recruitment, however, prior to decision making these posts will be supported from existing staff and locum appointment while substantive recruitment is undertaken. Should the programme be successful in February and proceed to full implementation the costs of project support and workforce development included within this bid will be required recurrently in 2022/23. Recurrent costs of services are attached as appendix to this business case.
Impact on health inequalities	1 Significant positive impact	The CCG core objectives seek to • Improve the health and wellbeing of all our population • Reduce the impact of Health Inequalities on people's health and wellbeing The Stroke Programme recognises as its base case for change the inequality of stroke service provided to BNSSG residents and in particular North Somerset. The provision of stroke

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<td>services varies depending on where people live in BNSSG. Services are not organised in a way that is responsive to the needs of the population.

Some of the highest risk populations in BNSSG are the most disadvantaged by the current service configuration, which restricts access to specialist treatments available for stroke at Southmead Hospital and provides inconsistent rehabilitation support across BNSSG.

The ICSS in its full format will tackle health inequalities through providing a consistent service across BNSSG that is delivered at home and not dependent on ability to access hospital services. Access to intensive community stroke rehab at home for patients living in North Somerset will help to tackle current health inequalities. The below table summarises key national criteria that are currently not met by BNSSG stroke services with a disproportionate impact on North Somerset.

<table>
<tr><th>Current state</th><th>National Standard</th></tr>
<tr><td>Inconsistent, and in many places no 7-day provision of care and rehabilitation. Some areas do not have an adequate stroke specialist stroke service on discharge, for example across much of North Somerset.</td><td>RCP 2.7.1K: People with stroke should continue to have access to specialist services after leaving hospital.</td></tr>
<tr><td>Patients with stroke across BNSSG do not get the intensity or duration of therapy that is required to meet their goals. In some areas only 60% get the Physiotherapy they need, while in others only 50% get the OT and only 40% get the Speech and Language therapy that they need.</td><td>RCP 2.11: People with stroke should accumulate at least 45 minutes of each appropriate therapy every day for as long as they are willing and capable of participating and showing measureable benefit from treatment.</td></tr>
<tr><td>No community stroke rehabilitation beds, or dedicated community stroke ESD service in the southern part of North Somerset.</td><td>RCP 2.7.1K: People with stroke should continue to have access to specialist services after leaving hospital.</td></tr>
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<tr>
<td>Measure of project risk/ maturity/ uncertainty</td>
<td>1 Risks well defined & managed</td>
<td>The Stroke Programme has a full risk register that defines key risks associated with the Programme and mitigations to address these. The Risk Register is reviewed at every Programme Board and the supporting sub-groups of the Board that are tasked with managing those risks.</td>
</tr>
</table>

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		The full risk register is available to share upon request.
TOTAL	6	
VALUES ASSESSMENT	Briefly outline how the project supports the goals of Value Based Health & Care: • Allocating resources efficiently across our system so that we achieve the overall best possible outcomes The Stroke Programme PCBC finances have been reviewed by System DoFs and assessed as value for money. • Identifying and improving the outcomes and experience that matter to people • To address the case for change for Stroke, clinicians of all professions, people with livedexperience of stroke, voluntary sector workers, social care staff, and service managers have worked together to redesign the stroke service provided to people in BNSSG. The range of stakeholders involved is significant and includes key partner agencies, such as the Bristol Health Partners Stroke Health Integration Team, Bristol After Stroke, the Stroke Association and the West of England Academic Health Science Network. The outcome of the work is a stroke pathway for local people that is grounded in what matters most to people and delivering the best outcomes for patients. • Commissioning and delivering effective services that avoiding overuse of low value interventions (unwanted or not cost-effective) and underuse of high value interventions (deemed cost-effective but not taken up by those who would benefit) The Stroke proposals support the commissioning of effective services in line with nationally specified pathways, promoting reduced length of stay in acute beds and supporting patients to progress their rehabilitation at home. The Stroke Programme supports the spread of high value interventions (thrombectomy, thrombolysis, rehab at home etc).	

1. Background

The BNSSG Stroke Programme has been supported by the Healthier Together Partnership Board and the CCG to be the subject of public consultation during Summer 2021. A full decision making business case will be produced with a final proposal for a reconfigured stroke services to be presented in February 2022.

The Programme seeks to improve stroke services across three streams: emergency care, ongoing hospital care and rehabilitation through sub-acute inpatient facilities and at home.

2. Summary of the Stroke Programme Proposals

The BNSSG Stroke Programme proposes a transformed stroke service to realise the vision for local people that everyone in BNSSG will have the best opportunity to survive and thrive after stroke.

The proposals are designed to ensure that:

- Fewer people die from stroke each year
- Expert care is provided in hospital, home and the community
- Services are high-quality and sustainable for the future

A comprehensive new service model has been proposed. This model centralises hyper acute care for stroke patients at a single site in Southmead Hospital, which will have a “hyper acute stroke unit” (HASU) and become a “Comprehensive Stroke Centre” under the new National Stroke Service Specification. This means that ambulances would no longer convey people with suspected strokes

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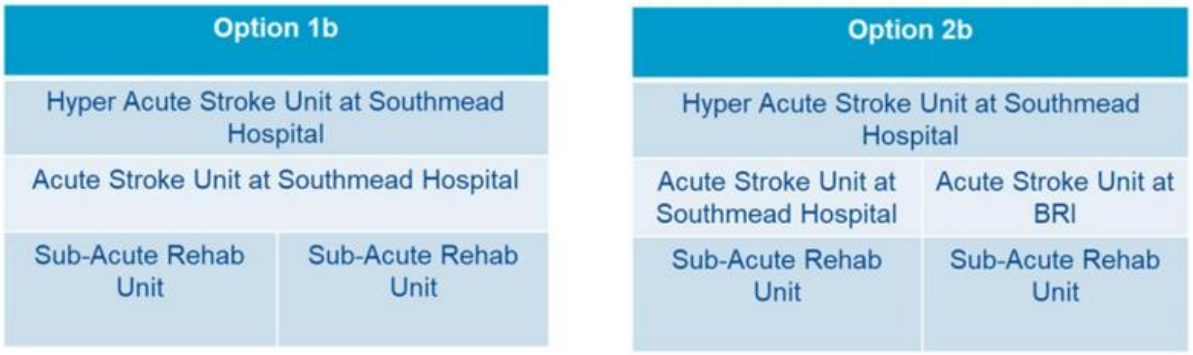
to Weston Hospital's A&E or the Bristol Royal Infirmary's (BRI's) A&E. There are two clinically viable options to consider for acute care following on from the hyper-acute episode:

- ***Option 1*** proposes that a single acute stroke unit (ASU) is established, coadjacent to the HASU, based at Southmead Hospital. In this Option, a specialist stroke workforce would be provided onsite at the BRI to support patients whose specialist needs mean that they cannot be transferred to the Southmead Hospital HASU/ASU (e.g. patients needing cardiac specialist support). The service model at Weston Hospital means that there are unlikely to be patients in that hospital who could not be transferred, therefore stroke patients in Weston Hospital would all transfer to Southmead Hospital.
- ***Option 2*** proposes that two ASUs are established, one would be co-adjacent to the HASU based at Southmead Hospital and one would be based within the BRI. The ASU based at the BRI would support patients who have other specialist needs that can only be provided on the BRI site. As above, stroke patients in Weston Hospital would all be transferred to Southmead Hospital for HASU care, but they would "step down" to the ASU at the BRI, as patients currently in the BRI catchment area would, once the HASU episode was complete.

Under the proposed changes many people will be supported directly home from hospital supported by a new integrated community stroke service (ICSS).

For those that need continued inpatient care in a stroke sub-acute rehabilitation unit (SSARU), care is desirable as close to home as possible. This has to be balanced against the available workforce. In order to balance the provision of local care, meet population health needs and ensure equity of access, with a model that consolidates the clinical workforce and is more affordable, it is proposed to establish a two SSARU model of care.

The below diagram summarises the proposed reconfiguration of services.



The development of the ICSS is viewed as a service improvement and is therefore not subject to formal public consultation. It is however a fundamental enabler of delivery of the proposed acute hospital changes. The improvements described have been co-designed with service users and members of the public. The ICSS will also address current inequity in provision of sub-acute stroke rehabilitation.

The Stroke Programme in its full implementation will require System investment above the baseline funding (£29.7m indexed to 20/21) of either £2.9m or £3.4m dependent on the option to be pursued following public consultation and development of the decision making business case.

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Following decision making in February the implementation phase of the programme will commence from March 2022 with the full pathway and reconfigured services operational from November 2022. However the programme is complex and requires significant workforce development and recruitment therefore transitional monies are sought to support:

- early pump-priming of HASU (Hyper-Acute Stroke Unit) - implement 24/7 specialist stroke rota for thrombolysis at Southmead;
- early pump-priming of key parts of the model will enable a test & learn pilot in North Somerset to implementation of new Integrated Community Stroke Service;
- workforce development for the One Stroke Team supporting CPD, recruitment & retention; and
- scoping and enabling works to support development of estate options for community inpatient facilities and SDEC pathway

The investments proposed within this business case are aligned to the funding model of the PCBC.

3. Pump-priming HASU - Thrombolysis

The revised Stroke pathway proposes that all patients with a suspected stroke will be taken to a single hyper-acute stroke unit (HASU). Ambulance crews and staff at other hospitals will have diagnosis support and a secure-video link to a Telemedicine team at the HASU. To maximise the benefits of these changes, this will be supported by public education on stroke symptom awareness, including non-FAST symptoms, to reduce the time taken for people to seek help after a stroke, increasing the number of people eligible for thrombolysis and thrombectomy treatment.

There is an increasing national evidence base indicating that the centralisation of hyperacute stroke services improves patient outcomes through better access to thrombectomy, thrombolysis and specialised acute care, leading to fewer deaths and less disability for survivors.

To address health inequalities, the local healthcare system needs to work closely with partners, including local authorities and the voluntary sector, to improve the availability of services in the most at risk communities. In stroke care, this includes making time-critical, life changing interventions, such as thrombectomy and thrombolysis, available equitably to the population of BNSSG.

Despite BNSSG having a supra-regional thrombectomy centre at Southmead Hospital, there is no designated Hyper Acute Stroke Unit (HASU) and suspected strokes are taken to the closest one of three acute hospitals: Southmead Hospital, Bristol Royal Infirmary (BRI) and Weston Hospital. Each of these hospitals provides consultant-led acute care, including thrombolysis. However, Weston Hospital does not accept suspected stroke patients conveyed by ambulance after 5pm (or at weekends) and the BRI does not accept patients after 11pm.

Treatment for stroke should be started as soon as possible and within 4.5 hours of the onset of stroke symptoms. Secondary transfer delays often mean this currently cannot be achieved for patients who are initially taken to a hospital outside of its thrombolysis operating hours.

AT Southmead the current service provision is for delivery of thrombolysis by a stroke specialist team during the day 0800-1930 with both Stroke Registrar and Consultant available, supported by Stroke Advanced Nurse Practitioners (ANPs) on site. From 1930 thrombolysis is led by ED middle grade doctors, and a Stroke ANP is available to support until 2130 only. The median number of overnight admissions per week was 4 for period July – Sept 2020. The ED middle grade is the senior clinician for decision making regarding thrombolysis during this time and from March 2020

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the Stroke Consultant On Call is available overnight for support. They are being called only where uncertainty has been recognised by the middle grade.

The proposed centralised Stroke model seeks to ensure consistent access to specialist stroke care 24/7 with outreach and remote support from HASU to BRI and Weston where Stroke patients present at ED or are being treated in other specialist services. This will support both equality of access to immediate lifesaving treatment and reduce pressure on ED, where competing pressures in an ED admitting major trauma and tertiary neuroscience referrals, dedicating staffing to support timely thrombolysis is a challenge. Bristish Assocciation of Stroke Physicians (BASP) states that Door to Needle should be within 30 mins for 50% of cases of thrombolysis, and 100% within 60 mins.

At the weekend there is a Stroke Consultant and Registrar present to support twice daily ward rounds of high acuity patients on the hyper acute stroke unit including patients admitted following thrombectomy and thrombolysis. While this Consultant does provide advice to the middle grade team during the day, balancing busy acute admissions and the needs of high acuity patients on the ward compromises safety with timely review of post take ward round a clinical risk. This reliance on a busy ward based Consultant can also cause delays in decision making. BASP Stroke Medicine Consultant Workforce Requirements 2019-22 recommends that once a unit has >600 admissions per year the HASU Consultant should not cover acute admissions as well (NBT receives 900 admissions per annum and this will grow to 1500 following the proposed reconfiguration in 2022). The ED Consultant as a result tends to be the support to ED for thrombolysis calls at the weekend.

There is a negative impact on performance and outcomes as a result of this OOH pathway in thrombolysis with increased time to administration (known as ‘door to needle’), and overall time spent in ED. To address these risks, this business case aims to bolster OOH stroke specialist staffing to lead on thrombolysis 24/7. This will provide equitable access to specialist care, enhance patient safety, and improve outcomes and quality of care for those patients requiring this acute stroke service.

Pump-priming staffing to support 24/7 specialist stroke provision of thrombolysis at Southmead will begin the process of developing a HASU and address existing pressures and safety concerns (two serious incidents (Dec 2019 – August 2020) at Southmead involving patients and thrombolysis) within the existing pathway.

This initial investment will support achievement of the benefits outlined within the Stroke business case, in particular:

- Increasing the stroke specialist staffing OOH to provide a consistent thrombolysis team to attend all thrombolysis calls and provide the same quality standard of care 24/7.

- Improving timeliness of thrombolysis quality indicators (monitored by SSNAP) including time from ED arrival to Thrombolysis, Time from ED arrival to assessment by Stroke specialist nurse and Stroke Consultant.

- Improving SSNAP quality indicator regarding time from ED arrival to admission to stroke ward by supporting the training required to deliver thrombolysis on the ward.

3.1 Workforce

The investment in OOH staffing would require resident Registrar and Stroke ANP overnight to enable ED attendance and management of thrombolysis, alongside additional weekend Consultant cover to

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support senior decision making in treatment of acute admissions separate from the ward cover currently in place.

The table below summarises the proposed model of support to be implemented with transitional funds:

Option 3 Resident Registrar and ANP supported by Stroke Consultant (on call overnight and resident weekend daytime) – Thrombolysis infusion on ward.
Ensure stroke specialist led thrombolysis 24/7: 1930-0800 Stroke Registrar led thrombolysis supported by Stroke ANP. An ED nurse would still be needed to support thrombolysis admissions, but no reliance on ED Consultant or middle grade staffing. 2nd Stroke Consultant at the weekend to ensure a senior clinical lead for thrombolysis and thrombectomy referrals. 2000-0800 On Call Stroke Consultant available overnight for specialist decision making and telemedicine review. Thrombolysis infusion delivered on ward.
Pros Reduce demand on ED middle grade doctors, ED Consultant and ED capacity Improved ED performance as reduced time in department for stroke admissions receiving thrombolysis. Improve quality indicators regarding time to thrombolysis from arrival, and time to stroke specialist nurse review and time to stroke ward admission (SSNAP monitored). Use of existing On Call Stroke Consultant would ensure senior stroke specialist decision making 24/7. Use of imaging and telemedicine support to stroke specialist team. Ensure adequate Consultant staffing at the weekend to manage HASU workload and acute admissions.
Cons Investment required to enhance workforce above baseline.

The existing Stroke Consultant On Call would provide overnight senior specialist support for thrombolysis but would need some investment for telemedicine. Although senior clinical advice can (and is currently) given via the phone with imaging access, care and safety of patients is enhanced if the senior stroke clinician is able to see the patient virtually. This would be particularly useful in those cases where there is diagnostic uncertainty. This model for using telemedicine in stroke to enhance the delivery of thrombolysis has been adopted by the East of England Stroke Telemedicine Stakeholder Partnership for nearly a decade and is a key enabler of the Stroke Programme and support to be provided from HASU to other sites. This has been positively evaluated with findings published by NICE in 2019. The South West North ISDN is exploring telemedicine care further so this approach would coincide with the wider strategic context of stroke specialist care delivery.

This business case seeks investment of £60k for an appropriate telemedicine solution.

The introduction of a 2nd Consultant at the weekend would extend the continuity of care for patients and mirror the Consultant staffing present during the week, again embedding quality and promoting patient safety. This would require 1WTE additional.

The workforce requirements of an overnight middle grade team would include a further 2.0WTE Registrar staffing to support a compliant Registrar rota (1:17) and 2.6WTE Stroke ANP.

For delivery of thrombolysis on the ward, an investment of 1WTE B7 Professional Development lead is required to ensure clinical expertise is embedded within the nursing team. This will reduce demand

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on ED nursing, and improve their overall performance as patients would be admitted to the stroke unit sooner. It will also positively impact the ward, enhancing recruitment and retention as nurses are upskilled and supported in developing specialist acute stroke care and a competency framework established for each ward team member of staff. This provision would provide education to the increasing stroke ward team and release senior staff to support the Stroke ED to ward pathway.

3.2 Finance and Investment

A total full year investment is required of £471k all related to pay as set out below. This business case seeks part year funding (Oct-Mar 2022) with recurrent funding in 2022/23 to October 2022 when the full reconfiguration is completed (subject to decision making).

	FYE £k	**PYE £k (assumed start October 2021)**
2.6 WTE ANP Band 7	156	78
2.0WTE Registrar	126	63
1.0 WTE Consultant	130	65
1 WTE B7 Professional Development Lead	59	29
Total investment required	**471**	**235**
		Capital £k
Telemedicine (non recurrent capital)		60

This business case seeks investment of £60k for telemedicine solutions to support the On Call Consultant overnight with complex decision making where seeing a patient virtually will be of benefit.

4. Integrated Community Service

The development of consistent, integrated community stroke services (ICSS) are a core requirement to support the full stroke model enabling release of acute capacity to provide immediate intensive emergency treatment and supporting patient flow. It is therefore proposed to begin early implementation of the ICSS in North Somerset during Winter 2021/22 to provide support to Weston General Hospital.

The Integrated Community Stroke Service (ICSS) will be a specialist service working across BNSSG to deliver the highest quality care and rehabilitation for people following stroke through an appropriate pathway.

The proposed service has been co-designed with people impacted by and with lived experience of stroke and is in line with the draft NHS England and Improvement (NHSEI) National Stroke Service Model.

The ICSS will work in partnership with stroke survivors and their families to achieve the best possible health and wellbeing outcomes, enabling people to become as independent as possible at home and in their local community, and supporting them to confidently manage their long term recovery once active rehabilitation has ended. The service will also ensure that people who require long-term care or palliation following stroke will have access to the support that they need.

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A key feature of the ICSS will be timely and seamless transfer of care from an acute hospital into the community. Early discharge and longer term rehabilitation will be delivered by the same service to support the service user and their family at home, and throughout their rehabilitation journey, improving continuity of care and eliminating multiple handovers and waiting times for other generic community services.

The ICSS will deliver streamlined, coordinated, equitable care and rehabilitation across BNSSG, improving health and wellbeing outcomes and providing a positive and motivating experience for service users and their families and carers. The service will support people to have the highest quality of life possible, close to home.

4.1 The Model

The core of a clinically effective “ICSS at Home” service is a multi–disciplinary team (MDT), which will be comprised of:

Occupational Therapy	Rehabilitation Support Workers
Physiotherapy	Psychology
Speech and Language Therapy	Dietitian
Nursing	Voluntary Sector
	Social Worker

ICSS at Home will have pathways in place to access stroke consultant support and other community services including Social Care, Primary Care Networks, Integrated Network Teams, Health and Wellbeing hubs and specialist services to ensure all health and social care needs are addressed

ICSS assessment and goal setting will begin prior to hospital discharge integrating with assessments already started in hospital. The ICSS service will provide Therapy or Rehab Support Worker visits daily over 7 days a week, as appropriate for each individual. These visits will support rehabilitative practice of activities of daily living, such as personal care and meal preparation and to deliver tailored rehabilitation programmes. Visits for personal care and meal preparation may be provided by in-house support staff or ring-fenced stroke skilled social care reablement workers.

Service users will be streamed into either high, medium or low intensity pathways with the following expected service delivery. The model is based on an average of 6 weeks of core visits and an average length of stay of 12 weeks in the team.

High intensity	**4 visits a day for core visits and up to 2 rehab/nursing visits**
Medium intensity	**1 or 2 visits a day for core visits and rehab/nursing**
Lower intensity	**1 or 2 visits per week or less for rehab/nursing**

ICSS will work across 7 days but with reduced therapy cover at weekends and bank holidays and be integrated with both social care and the voluntary sector.

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In preparation for full reconfiguration of community stroke services post-decision making (April 2022) a stepped roll out of an ICSS service in North Somerset is proposed, based on the design laid out in the PCBC and ICSS service specification.

4.2 Transitional Implementation

Planning for the early implementation indicates the need for a phased roll out in order to test the new model and mitigate risks to the wider system.

The pilot implementation will implement the core elements of the service specification. This will include:

- Facilitation of early discharge from acute hospitals including in-reach to Weston General Hospital
- An average of 6 weeks of intensive visits to support with washing, dressing and meal preparation with rehab support workers up to 4 times a day
- Longer term rehabilitation of people after stroke by stroke specialist clinicians based on individual goals and encouraging self-management
- Assessment and ongoing rehabilitation, management or advice and support from specialist physiotherapists, occupational therapists, speech and language therapists and nurses supported by rehab support workers
- Support 7 days a week for core visits with reduced therapy cover at weekends and bank holidays
- Continuing work towards integration with social care and the voluntary sector
- Secondary prevention advice and GP liaison with 6 week nursing review in place in phase 2

The elements that will not be included in the early roll out are as follows:

- Psychology and Dietetics are modelled to work across both the SSARUs and ICSS at home flexibly according to demand in the future model so therefore not part of the early implementation
- 6 month and 12 month reviews are to be carried out by the voluntary sector and primary care respectively so will not be part of the early implementation
- In the future model there is the expectation that staff will work across SSARU and ICSS at home if it supports discharges or liaison or may flex across BNSSG according of each locality's demands. Although close liaison would continue between ICSS at home and the acute services this would not be fully in place.
- Referral processes, digital solutions, patient held documentation and operational systems are likely to be trialled during the early implementation phase and therefore may change when full implementation takes place
- The bedded stroke rehab not being in place will impact how quickly discharges can be facilitated
- Provision of rehabilitative care to be provided by support workers in this early implementation but the provider of these in the future model is not yet determined

4.3 Integration

The service will work to improve integration between health and social care services. Through joint working, education and training, there will be a stroke skilled workforce who will work in partnership with community and charitable sector organisations to meet people's longer term recovery and reintegration into their local community.

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The ICSS will establish close working links with colleagues in acute care as well as with the BNSSG Primary Care Networks, Integrated Network Teams, Wellbeing Hubs and other specialist community services supporting service users to access other relevant services providing wrap around care and ensuring all health and social care needs are addressed.

4.4 Integrated Working - Acute

ICSS clinicians will work collaboratively with the Acute teams at the earliest opportunity to determine the most appropriate community pathway for patients and seek to transfer patients safely out of hospital as early as medically appropriate and enabling home-based rehabilitation support and care as much as possible.

They will use information gathered from hospital teams to identify the most appropriate location for discharge to meet an individual patient's on-going needs, with the aim of providing the right support, at the right time, in the right place for your recovery.

4.5 Quality

The ICSS service will provide a consistently high standard of specialist care and is being designed to meet the majority of relevant NICE guidelines and quality standards, National Clinical Guidelines (RCP Stroke Guidelines and BASP guidelines) and SSNAP standards.

Intensity of input following hospital discharge will be according to clinical needs and with the same intensity and expertise that they would receive in hospital (NICE QS2 statement 4).This will enable service users to be supported at home safely, with input from the ICSS alongside other support as is available in individual circumstances e.g. family members.

4.6 Implementation

Proposed implementation will be in 2 phases – Oct 21-Jan 2022 and Feb-Mar 2022. A total caseload of 54 patients will be supported to discharge and rehab at home during the pilot.

	Deliverable	**Timescales**
Phase 1	Recruitment into core clinical roles (see below)	Aug- September 2021
	Caseload review to inform pilot	Aug – Oct
	Comms regarding changes to pathway (to include primary care)	Oct – Sept
	Partial implement new service to cover NS postcodes	Oct-Dec
	Release ESD resource currently covering postcodes in N Somerset	Oct- Dec
	Develop plan to best use released ESD resource in Bristol and South Gloucestershire	Aug-Sept
Phase 2	Recruitment of remaining staff (see below)	Oct-Dec
	Increase of therapy provision at weekends to full 5:2 model as described in specification	Jan-Mar
	Accept referrals from pathway 3 and GP referrals	Jan-Mar
	Commence Nurse led 6 week reviews	Jan-Mar

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	Increase caseload to full capacity	

4.7 Workforce

Implementing the new model in NS will require consideration around factors for workforce.

- The new proposal will require significant Project Management support, additional resource has been included in the costings
- Recruitment resource will, be required to ensure we attract the appropriate specialist, national adverts will be required
- Given the workforce challenges in NS recruitment for this service needs to be done in line with wider recruitment programmes in the community, particularly for RSW so as not to destabilise the D2A pathways. This will involve working with partners across the system.
- Consideration also needs to be given to portfolio roles where staff work across a number of pathways, ensuring that they retain the appropriate skills to work in the stroke service.

A full recruitment and workforce plan will be developed as part of the project set up. However, the proposed workforce investment required is outlined below. Note the pilot model will incorporate existing community specialist staff working in North Somerset; the investment required is therefore net of these existing funded posts. All staffing WTE proposals are inclusive of 21% allowance.

4.8 Finance

The below table summarises the transitional funding requirement for implementation of the pilot ICSS service in North Somerset**.**

A total transitional investment of £518k is proposed this is inclusive of pay, non-pay and additional start up costs – these are shown separately below. A further £131,000 of start up costs for Bristol and South Glos ICSS have been included within the costing for 2022/23 but are not shown in the table below.

The recurrent costs of the North Somerset service (net of costs deemed out of scope of the pilot) for the period April –October 2022 are also shown.

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Pay Costs	Band		WTE with back fill	Nov -Jan	Feb - Mar	2021/22 Total		2022/23 Recurrent Apr - Oct
OT	7		1.21	17,682	11,811	29,493		35,432
OT	6		1.21	3,633	15,933	19,566		47,800
OT	5			0	6,650	6,650		19,949
PT	7		1.21	17,682	11,811	29,493		35,432
PT	6		1.21	5,737	17,336	23,073		52,009
PT	5			-8,482	995	-7,488		2,984
SLT	7		1.21	17,294	6,511	23,805		19,533
SLT	6			-5,164	5,420	256		16,261
SLT	5		1.21	10,951	3,990	14,940		11,969
Nurse - Registered	7			0	9,925	9,925		29,775
Nurse - Registered	6		1.21	13,692	8,314	22,007		24,943
Psychology	8a			0	0	0		0
Psychology	4			0	0	0		0
Psychology Counsellor	6			0	0	0		0
Rehab Assistants	3		5.04	36,819	40,571	77,390		121,714
Additional Rehab Assistants	*3*		*1.28*	9,342	12,456	21,797		37,367
Admin	3		0.83	5,296	3,531	8,826		10,592
Head of ICSS	8a		1.00	15,780	10,520	26,300		31,560
Voluntary Sector Stroke Key Worker	4			0	13,988	13,988		41,965
Pathway 1 Baseline				-18,208	-12,138	-30,346		-36,415
Total pay costs			**16.62**	**122,053**	**167,623**	**289,676**		**502,870**
Non Pay						29,971		51,661
Total Direct Costs						**319,646**		**554,531**
Indirect Costs						23,102		40,329
Corporate Costs						19,638		33,978
Estates Costs						14,635		25,550
Total Costs						**377,021**		**654,389**

Set Up costs			**£**
Project Manager	8A	1 wte	38,289
Project Support/Comms	6	1 wte	28,057
Uniforms			1,736
Recruitment	6	1 wte	28,057
Recruitment	5	1 wte	22,619
IT Emis Project Support	5	1 wte	22,619
Total set up costs			**141,377**

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4.9 Benefits and Outcomes

Improving stroke services across BNSSG is a key priority for the system, the wider benefits are detailed in the PCBC. In relation to the early implementation of aspects of the new model, benefits include:

- Equity of service delivery to NS residents – the current model of Stroke care highlights a significant inequity which can be rectified with this approach
- Opportunity to test the new model in phased way – by phasing the implementation we will be able to learn what works well in the new model and ensure clear preparation for the roll out to other areas.
- Improved retention of stroke workforce in North Somerset
- Appropriate use of small stroke resource currently in place. By increasing capacity there is the ability to provide a more responsive service and more intensive rehab
- Improved clinical outcomes for service users in North Somerset
- Reduced length of stay in Weston General Hospital stroke beds
- Bed days released to acute provider – test and learn pilot to validate impact of ICSS
- Improved service user feedback for service users in North Somerset
- Reduced need for long term social care provision
- Reduction in level of disability following rehabilitation
- Improved quality of life measures

4.10 Risks & Mitigations

The table below details the high level risks and mitigations:

Risk Type	Risk	Mitigation
Human factors	Recruitment/transfer of stroke service will impact on demand and capacity to other services	Phased recruitment, capping internal applicants, rotations, portfolio roles
Human factors	No dietitian role in early implementation may impact on capacity in existing community dietetic services	Community dietitian to provide advice and support to clinicians in stroke team or covered by home management service for enterally fed service users. This is as in current provision.
Clinical	No defined access to consultant advice and support may impact on ability to manage service users with complex medical needs e.g. seizures/syncope, tone etc	Formal agreement with Weston for ad hoc advice and support requirements Specialist nurse to liaise with consultant and GP
Clinical	Delays to/declined provision of dosette boxes and rehab support workers being unable to prompt medication may lead to delays in discharge	Sirona-wide medicines management training Close liaison with community pharmacy
Clinical	Change in referral process to stroke service may result in stroke survivors not accessing new stroke pathway	Provide appropriate internal and external comms to Weston and existing Sirona teams involved in stroke care

5. System Workforce Development and Estate

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Transitional funding is sought to support development of the One Stroke Workforce. An integrated workforce operating across traditional organisational barriers and to shared pathways and governance processes is key to releasing the benefits of the proposed model.

A programme of work is outlined in the Stroke Programme implementation plan that incorporates: development of core competency framework for stroke, individual role-based competencies and JDs, recruitment and retention strategy and approaches to employment and change proposals for staff consultation.

This workstream will be overseen by the Stroke Workforce Group with representatives from all organisations however additional resource to support the group is required to ensure key timelines are adhered to.

The Stroke Programme includes provision of two sub-acute rehab units (SSARU) in the community as a constituent part of the integrated pathway. The Programme has committed to using existing or planned NHS facilities to site the SSARUs and has further stated that a SSARU will be provided for the North Somerset population on or at the Weston General Hospital site. The Programme does not seek capital for a new build.

To enable scoping and planning of potential reconfiguration within existing footprints funding is sought for professional advisers and planning and potential pump-priming of estates development.

The business case seeks the following investment to support these initiatives.

Requirement	**2021/22**	**2022/23**
1 x B6 HR Support	£23,500	£30,500
Non-pay: staff CPD events, training, communications etc		
Estate Scoping Professional Fees	£20,000	TBC
Total	**£43,500**	**£30,500**

6. Conclusion & Summary Investment

The table below summarises the total investment sought to support the key aims of:

- early pump-priming of HASU (Hyper-Acute Stroke Unit) - implement 24/7 specialist stroke rota for thrombolysis at Southmead;
- early pump-priming of key parts of the model will enable a test & learn pilot in North Somerset to implementation of new Integrated Community Stroke Service;
- workforce development for the One Stroke Team supporting CPD, recruitment & retention; and
- scoping and enabling works to support development of estate options for community inpatient facilities and SDEC pathway

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		PYE 2021/22	PYE 2022/23
Thrombolysis	Pay	235,000	235,000
	Capital -Telemedicine	60,000	
Total		**295,000**	**235,000**
Integrated Community Stroke Service	Pay	289,676	502,870
	Non Pay	29,971	51,661
	Indirect Costs	23,102	40,329
	Corporate Costs	19,638	33,978
	Estates Costs	14,635	25,550
Total		**377,021**	**654,389**
Integrated Community Stroke Service - Set Up		**141,377**	131,000
Workforce Development	Pay	£23,500	£30,500
Estate - Scoping	Fees	£20,000	TBC
Total		**£43,500**	**£30,500**
Total		**£856,898**	**£1,050,889**

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