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Bwrdd Iechyd Prifysgol
Bae Abertawe
Swansea Bay University
Health Board



Meeting Date	22 February 2022		Agenda Item	4.2
Report Title	Update on Stroke Performance and HASU development			
Report Author	David West, Directorate Manager, Medicine			
Report Sponsor	Inese Robotham, Chief Operating Officer			
Presented by	Craigie Wilson, Deputy Chief Operating Officer			
Freedom of Information	Open			
Purpose of the Report	<ul style="list-style-type: none"> To provide the Committee with an update on Stroke performance. This report includes plans and timescales for improving Stroke performance. This report includes an update on the establishment of a HASU. Based on performance up to 31st December 2021 			
Key Issues	<ul style="list-style-type: none"> Compliance against the 4 Hour access target for admission to the Acute Stroke Unit remains challenging due to system wide pressures. High compliance of OT/PT/SALT assessments within 24 hours. High level of swallow assessment compliance. Consistently high thrombolysis rates and this has been recognised by the Delivery Unit. Reducing door to needle time for Thrombolysis is an area for improvement. Further reductions in time to CT head will be addressed by HASU. 			
Specific Action Required <i>(please choose one only)</i>	Information	Discussion	Assurance	Approval
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recommendations	Members are asked to: <ul style="list-style-type: none"> NOTE THE CONTENT OF THE REPORT 			

Update on Stroke Performance and HASU development

1. INTRODUCTION

This report aims to provide the Committee with an update on Stroke performance in Swansea Bay UHB. As a result of the pandemic and the pressures on acute hospitals, such as Morriston, the access targets for stroke have been challenging to improve. This report will illustrate Health Board's performance and provide comparative information on other Welsh stroke centres.

Work has been ongoing throughout 2021-22 to recommence the Highly Acute Stroke Unit (HASU) business case planning that had commenced prior to the pandemic. It is hoped an updated HASU business case will be submitted to Management Board in March 2022 with a view to commencing recruitment later this year.

The report also provides an update on the performance from both rehabilitation sites. The flow to both these units has been affected by the pandemic and the new COVID transfer procedures. In line with the Health Board's "Changing for the Future" plans there is a work stream currently scoping the provision of stroke rehabilitation services with a view of consolidating them onto a one site. This would enable the specialist workforce to be focussed on one rehabilitation site, with a view to providing a 7 day service.

2. BACKGROUND

2.1 Stroke Performance

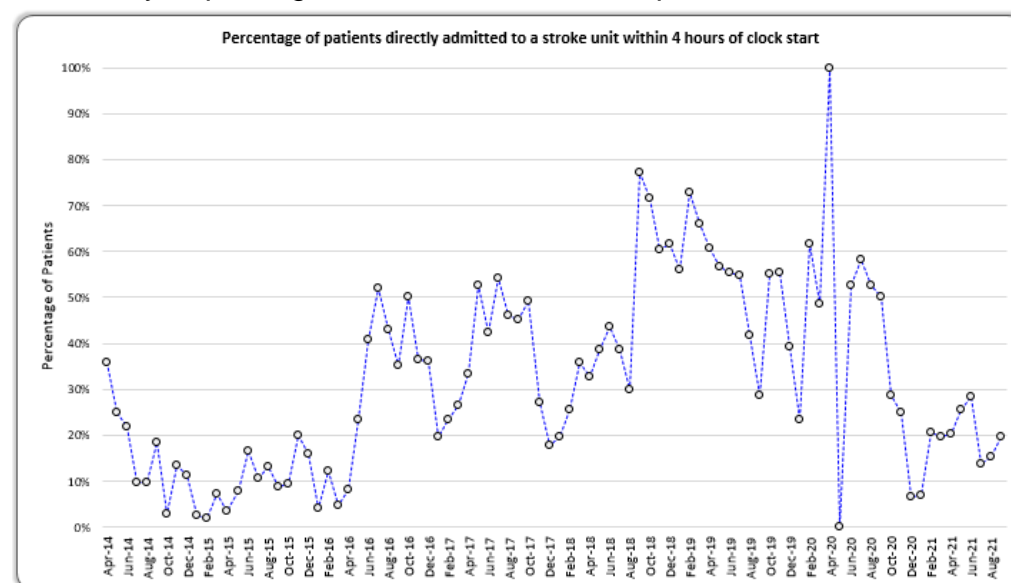
Summary of main Stroke Quality Improvement Measures for December illustrated below:

Morrison

December 2021 Quality Improvement Measures		
Quality Improvement Measures	Aspiration	Score
Urgent Intervention		
Percentage of all Stroke Patients Thrombolysed	N/A	27.0%
Thrombolysed patients Door To Needle <=45 mins	90%	10.0%
Percentage of patients scanned within 1 hour of clock start	N/A	35.1%
Percentage of patients directly admitted to a stroke unit within 4 hours of clock start	95%	16.7%
Percentage of applicable patients who were given a swallow screen within 4 hours of clock start	95%	78.4%
Urgent Assessment		
Percentage of patients assessed by a stroke specialist consultant physician within 24 hours of clock start	95%	97.3%
Assessed by one of OT, PT, SALT within 24 hours	95%	91.9%
Percentage of applicable patients who were given a formal swallow assessment within 72 hours of clock start	95%	100.0%
Inpatient rehab		
Percentage of applicable patients who spent at least 90 % of their stay on stroke unit	N/A	0.0%
Compliance (%) against the therapy target of an average of 25.7 Minutes of OT across all patients*	N/A	67.8%
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	N/A	81.2%
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	N/A	45.6%
Discharge Standards		
Percentage of applicable patients screened for nutrition and seen by a dietitian by discharge	N/A	80.00%
Percentage of applicable patients discharged with ESD/ Community Therapy Multidisciplinary Team	N/A	51.19%
Percentage of applicable patients discharged with ESD	N/A	47.62%
Percentage of applicable patients discharged with Community Therapy Multidisciplinary Team	N/A	3.57%
Proportion of applicable patients assessed at 6 months	N/A	0.00%

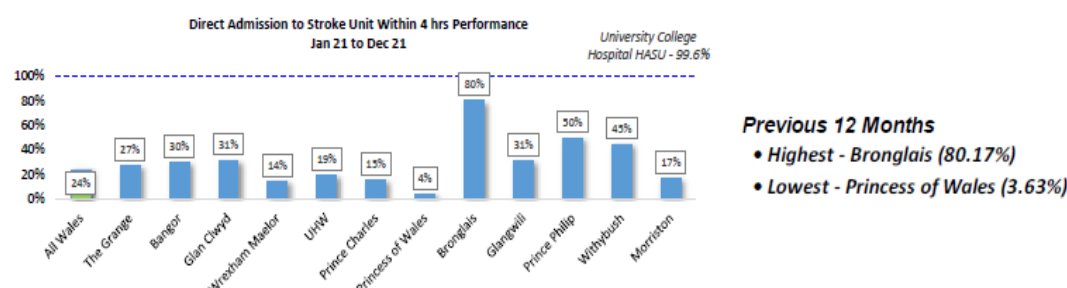
4 Hour Admission to Acute ASU

Access to dedicated stroke beds is impacting on performance with only 16.7% admission within 4 hours for December 2021. This is a slight increase from 13.3% in November 2021 and 0% in October 2021. Compliance remains low around the 4-hour target having fallen during the pandemic. Performance is discussed weekly in the Stroke performance meeting held at Morrison alongside clinicians, ED staff and bed site managers. System wide pressures such as delayed transfers and limited availability of packages of care continue to impact of overall flow.

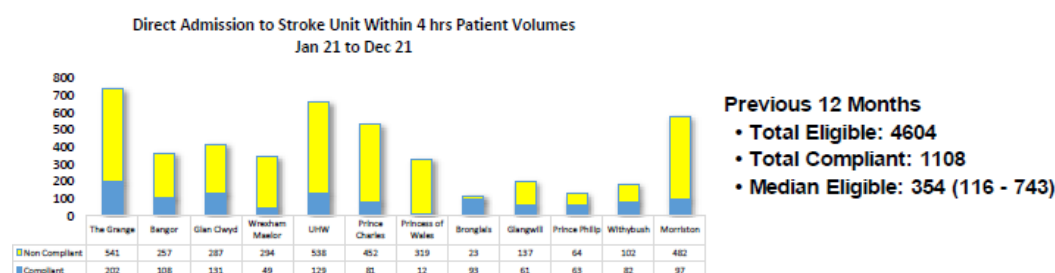


4-hour access issues are also affecting the other major admitting sites in Wales, such as UHW, POW and Prince Charles hospitals. SBUHB performance is in line with these other sites. Sites dealing with smaller volumes of stroke patients such as Bronglais, Prince Phillip and Withybush have much higher access rates as demonstrated below.

Site comparison for the proportion of patients directly admitted to the stroke unit within 4

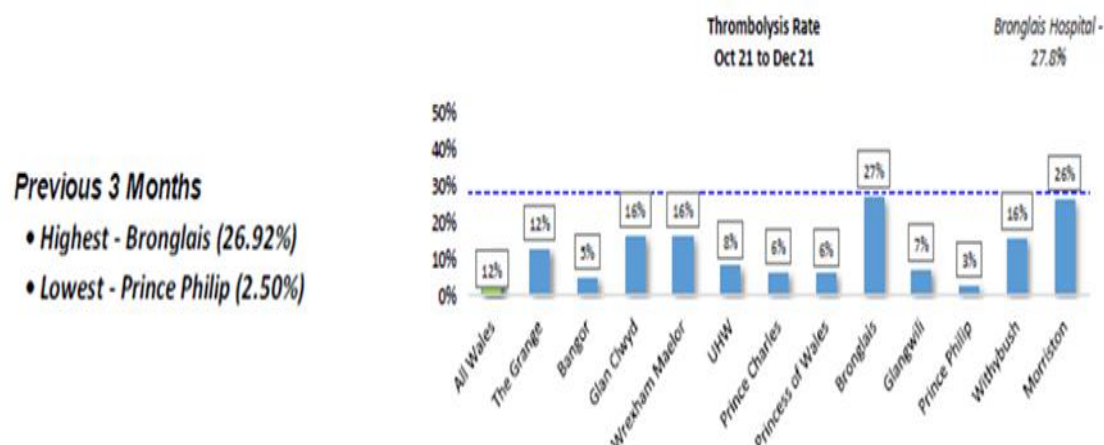


Site comparison for the volume of patients directly admitted to a stroke unit within 4 hours of clock start



Thrombolysis rates

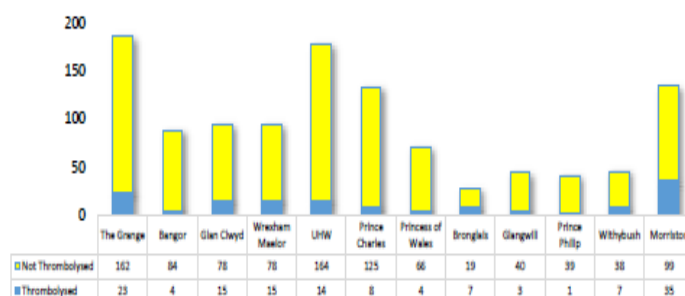
Thrombolysis rates remain comparably consistently high (26%) for the volume of stroke patients Morriston accepts as illustrated by the graphs below. This was recognised as a strength by the Delivery Unit during November 2021.



Previous 3 Months

- Total Strokes: 1128
- Total Thrombolysed: 136
- Median Strokes: 91 (26 - 185)

Thrombolysed Patient Volumes
Oct 21 to Dec 21



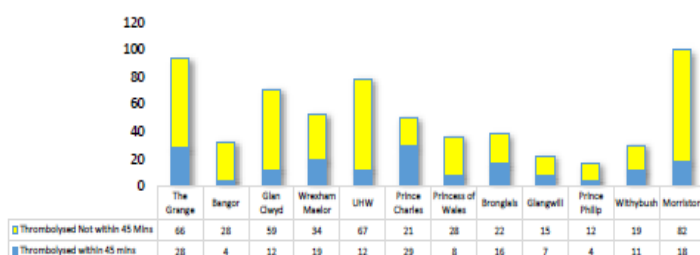
Thrombolysis door to needle time >45 minutes.

A high volume of patients suffering a stroke receive thrombolysis at Morriston but these patients require observation when given this treatment. Clinical nurse specialists and doctors are not always able to leave a thrombolysed patient to attend any other call or alert that goes off.

Increasing the CNS workforce as per the HASU plan will allow the Stroke CNS's to attend to other patients suffering a Stroke and reduce door to needle time.

Site comparison for the thrombolysed patients given thrombolysis within 45 mins of clock start

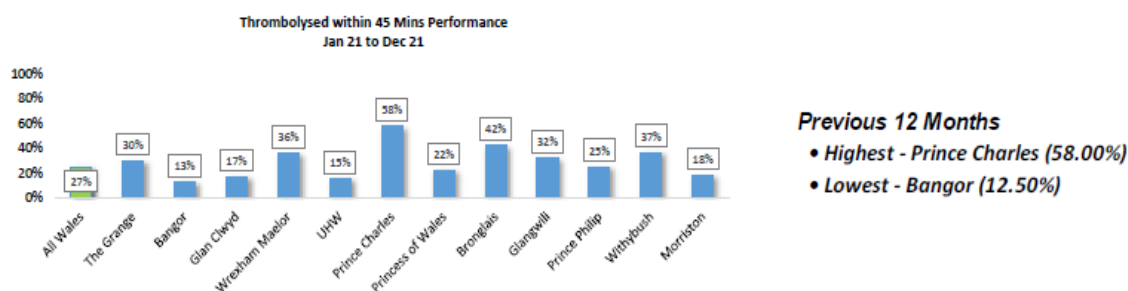
Thrombolysed within 45 Mins Patient Volumes
Jan 21 to Dec 21



Previous 12 Months

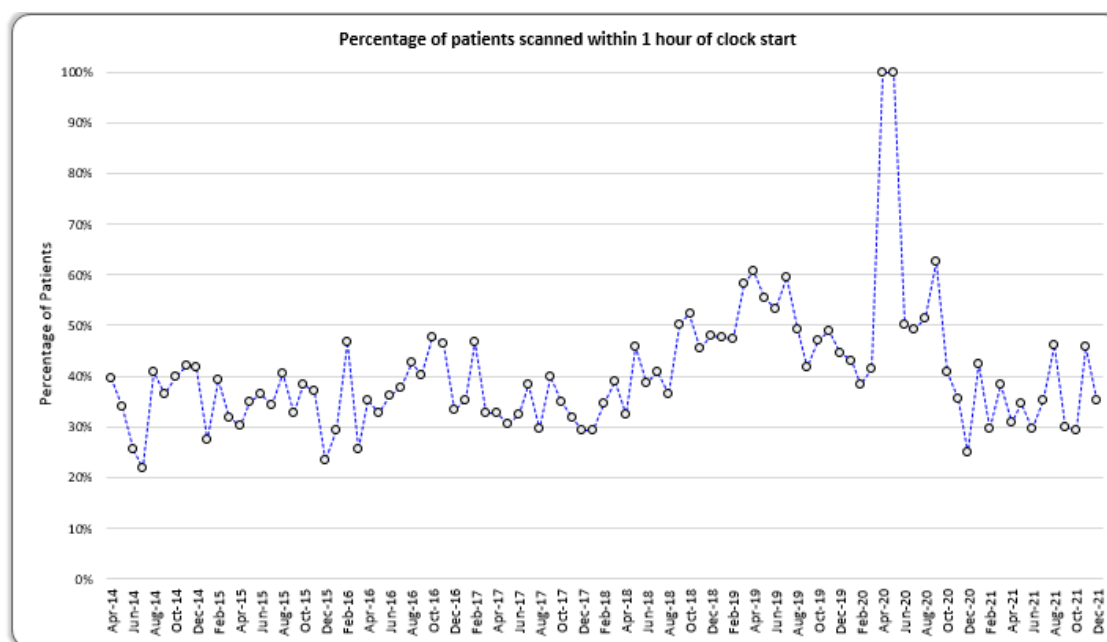
- Total Thrombolysed: 621
- Total Thrombolysed with 45 Mins: 168
- Median Thrombolysed: 44 (16 - 100)

Site comparison of the proportion of thrombolysed patient given thrombolysis within 45 mins

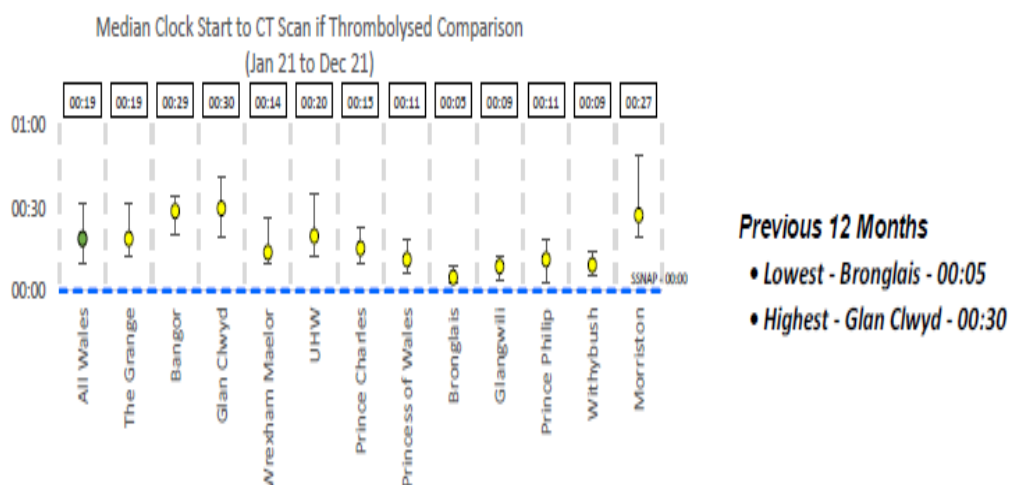


CT head within 1 hour

CT head scans <1hr were consistently improving prior to the pandemic. However, due to assessment delays and increasingly busy ED department, performance against this target has fallen back to where it was 2017-2018 but remains fairly consistent.



Site comparison of median time between clock start to CT scan if thrombolysed (hours:mins)



The plan to improve compliance against this measure, as part of the HASU business case, is the development of a collocated CT scanner so there is no delay for these patients.

The team are also exploring a trial of a dedicated doctor in ED for stroke; this drove up performance previously as part of a trial.

Other performance highlights

- High levels of compliance against urgent Assessment measures:
 - % of patients seen by a consultant in 24 hours – 97.3%
 - % of patients assessed by OT/PT/SALT – 91.9%
 - % of patients given a swallow assessment within 72 hours– 100%

Rehabilitation Performance

Rehabilitation services are currently provide on two sites – 10 beds in Singleton and 15 beds in Neath Port Talbot. Both sites have stroke beds co-located with other specialities, resulting in staff covering other areas. The tables below show the rehabilitation Quality Improvement Measures for December 2021. These measures focus on therapy input and the discharge process.

Singleton

December 2021 Quality Improvement Measures		
Quality Improvement Measures	Aspiration	Score
Inpatient rehab		
Percentage of applicable patients who spent at least 90 % of their stay on stroke unit	N/A	0.0%
Compliance (%) against the therapy target of an average of 25.7 Minutes of OT across all patients*	N/A	65.8%
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	N/A	112.5%
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	N/A	11.6%
Discharge Standards		
Percentage of applicable patients screened for nutrition and seen by a dietitian by discharge	N/A	0.00%
Percentage of applicable patients discharged with ESD/ Community Therapy Multidisciplinary Team	N/A	0.00%
Percentage of applicable patients discharged with ESD	N/A	0.00%
Percentage of applicable patients discharged with Community Therapy Multidisciplinary Team	N/A	0.00%
Proportion of applicable patients assessed at 6 months	N/A	0.00%

**If this measure is blank this means that there were no patients that required therapy in the last 3 months*

Neath Port Talbot

December 2021 Quality Improvement Measures		
Quality Improvement Measures	Aspiration	Score
Inpatient rehab		
Percentage of applicable patients who spent at least 90 % of their stay on stroke unit	N/A	0.0%
Compliance (%) against the therapy target of an average of 25.7 Minutes of OT across all patients*	N/A	48.7%
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	N/A	84.9%
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	N/A	26.1%
Discharge Standards		
Percentage of applicable patients screened for nutrition and seen by a dietitian by discharge	N/A	0.00%
Percentage of applicable patients discharged with ESD/ Community Therapy Multidisciplinary Team	N/A	#DIV/0!
Percentage of applicable patients discharged with ESD	N/A	0.00%
Percentage of applicable patients discharged with Community Therapy Multidisciplinary Team	N/A	#DIV/0!
Proportion of applicable patients assessed at 6 months	N/A	0.00%

**If this measure is blank this means that there were no patients that required therapy in the last 3 months*

The above tables show the rehabilitation Quality Improvement Measures for December 2021. These measures focus on therapy input and the discharge process. The table show variation in the percentages of therapy input across the two sites. Both tables also show 0% in the discharge standards, however this is not a true reflection of the process.

The 0% reflects that there were no discharges from the rehabilitation sites in December due to pressures across the social care system. The Early Supported Discharge (ESD) percentage is included in the rehabilitation sites, although the percentage for this is always low as this service is aimed at those with a mild/moderate stroke so the majority of patients are referred to this service from the acute site. This was 51% in December, well above the recommended 40%.

There are a number of key factors that are being scoped in the rehabilitation work stream. The key areas of focus for stroke include;

- One rehabilitation site providing a 7 day therapy service and simplifying the pathway for service users

- Expansion of the ESD team into a community stroke team to ensure all patients can receive community based intervention as required
- Developing the Life after Stroke service to meet the needs of all stroke survivors
- Provide timely access to rehabilitation services to ensure effective flow through the HASU

Life After Stroke (LAS) Service

The Life After Stroke service offers all stroke survivors a follow up appointment, no later than 6 months post discharge. The service offers a variety of options for service users to engage with the service, including telephone consultations, virtual appointments and face to face clinics. The service is based around individual needs, and advice and information is tailored to the patient's goals. To date 96% of those offered an appointment take it up.

LAS continues to use service user feedback to evaluate the service and evolve in relation to feedback.

Summary of DU performance reports



Acute Stroke
Monitoring Templat



Stroke_PDF_All
Wales.pdf



Stroke_PDF_Morriston.pdf

Appendix 1, 2 and 3

Summary of Improvement Measures in Place

Appendix 4



Improvement
Plan.docx

2.2 HASU DEVELOPMENT

Current Service

The current Swansea Bay Stroke pathway consists of 3 sites:

- 24 acute stroke unit (ASU) in Morriston. These beds are not ring-fenced and the ward always has a cohort of medical beds, approx. 8 on average.
- 10 rehabilitation beds on Ward 4, Singleton hospital. These beds are co-located with ortho-geriatrics
- 15 rehabilitation beds on Ward C, Neath Port Talbot. These beds are co-located with general rehab/discharge planning beds.

The lack of ring fenced beds and all wards having co-located beds provides a challenge to the staff working on those areas, bed capacity is limited by the pressures of unscheduled care demand.

HASU Model

The HASU model being proposed by the clinical team in SBUHB would bypass ED and individuals with suspected stroke would be triaged in stroke specific area within the Enfys (Acute Medical Assessment Unit) footprint. This would create a specialist area for suspected strokes to be diagnosed without increase demand within ED. Enfys (AMAU) is planned to have an appropriate ambulance bay for all medical patients

The following details the assumptions agreed to date

- Stroke Team will meet patient on arrival to provide immediate assessment and diagnosis 24/7
- Immediate access to CT scan
- Immediate access to Thrombolysis (if appropriate)
- Immediate access to HASU bed via ED
- HASU will link with the All- Wales Thrombectomy pathway (currently Bristol)
- Max 24 hour waiting time for MRI scan, Doppler, Holter monitoring, Vascular and Cardiology review
- Robust pathways and SOPs for Stroke Mimics
- 36% of stroke mimics will require admission to a HASU bed
- All strokes and the 36% mimics will have a 3 day length of stay within HASU
- Bed occupancy rate has been set at 85%
- SBUHB resident only (this does not include patients from other HB)
- The 18 beds will be ring fenced for stroke – HASU = 12 ASU = 6

Next steps

Finalised costings are being worked through with the desire to take the business case to the next Management Board in March 2022 for approval. Following approval recruitment.

3. GOVERNANCE AND RISK ISSUES

Two main areas of risk highlighted below. The inability to admit patients in a timely manner into the Acute Stroke unit and also the lack of dedicated rota and on call staffing which affects assessment times as highlighted in the report.

The SSNAP QIMs are clinically meaningful targets and therefore the implications of not meeting the SSNAP QIMs is potential significant patient harm, including development of post stroke complications (such as aspiration pneumonias, DVTs etc), delayed recovery and death.

The stroke patients who do access the acute stroke unit (ASU) are reviewed initially by the stroke MDT but then looked after by a medical team (not trained in stroke) on a medical ward until a bed becomes available on ASU. Ad hoc advice and support is provided to the medical team but the staffing constraints and workload on ASU and ED front door doesn't allow for regular input on the outlying stroke patients. Consequently every effort is made to transfer such patients to ASU at earliest opportunity available.

ID	Title	Risk (in brief)	Rating (current)	Controls in place	Assurances in Place
2901	Inability to admit patients in a timely manner to the Acute Stroke Unit	Patients who suffer a Stroke should be admitted to an Acute Stroke Unit (ASU) from ED within 4 hours. This is Ward F at Morriston. Due to site pressures often space is occupied by non-stroke patients and there is no room in ward F meaning patients are outlaid to areas lacking in the expertise to manage this condition optimally. Risk of major harm to patients from lack of timely assessment/admission and rehab facilities	20	- Weekly stroke scrutiny meetings, quarterly board meetings. - Improvement plan developed but no benefit realised until site pressures and placement of medical/stroke patients is addressed.	- Ring-fencing of beds to be stuck too not overruled from site or on call teams - Increased outflow from ward F i.e. more rehab beds off site, quicker routes to packages of care.
2147	Potential significant harm due to lack of Senior Stroke Medicine On-call rota	The acute stroke service in Morriston Hospital manages the care of approximately 700 confirmed stroke patients per annum. Of this cohort, around 120 patients will receive thrombolysis following a diagnosis of ischaemic stroke. The thrombolysis service in Morriston Hospital is delivered by the on-call medical registrar on a 24/7 basis with no stroke consultant oncall. The senior cover is key in complex cases to minimise risk to patients and also in improving care given to any acute stroke admissions. The failure to have senior stroke consultant in put carries the following potential risks: •Potential for significant patient harm (including death) as a result of not having access to specialist opinion when required. •Delayed access to thrombolysis compromises patient outcome and rehabilitation potential. •Incorrect delivery of thrombolysis can result in a brain bleed and potential death. •Delayed or incorrect patient management can also compromise eligibility for wider life-saving interventions (such neuro-surgery or mechanical thrombectomy). •Inappropriate management of intracranial bleeds can result in increasing mortality and morbidity	12	Revised thrombolysis clinical documentation Frequent training of the medicine middle grades delivered by the stroke consultants	ongoing discussion with HASU Regional Stroke Services Group to develop future acute stroke service specification (including on-call arrangements)

Appendix 5



Stroke Risk
Register.xlsx

4. FINANCIAL IMPLICATIONS

The main financial implications for Stroke over the coming months are related to the the HASU case.

5. RECOMMENDATION

The committee is asked to note the content of the report.

Governance and Assurance		
Link to Enabling Objectives (please choose)	Supporting better health and wellbeing by actively promoting and empowering people to live well in resilient communities	
	Partnerships for Improving Health and Wellbeing	<input checked="" type="checkbox"/>
	Co-Production and Health Literacy	<input type="checkbox"/>
	Digitally Enabled Health and Wellbeing	<input type="checkbox"/>

Deliver better care through excellent health and care services achieving the outcomes that matter most to people		
	Best Value Outcomes and High Quality Care	<input checked="" type="checkbox"/>
	Partnerships for Care	<input type="checkbox"/>
	Excellent Staff	<input checked="" type="checkbox"/>
	Digitally Enabled Care	<input type="checkbox"/>
	Outstanding Research, Innovation, Education and Learning	<input type="checkbox"/>
Health and Care Standards		
<i>(please choose)</i>	Staying Healthy	<input type="checkbox"/>
	Safe Care	<input checked="" type="checkbox"/>
	Effective Care	<input checked="" type="checkbox"/>
	Dignified Care	<input checked="" type="checkbox"/>
	Timely Care	<input checked="" type="checkbox"/>
	Individual Care	<input checked="" type="checkbox"/>
	Staff and Resources	<input checked="" type="checkbox"/>
Quality, Safety and Patient Experience		
<p>The paper highlights challenging areas of the Stroke pathway but also highlights areas where SBUHB is doing really very well against a difficult picture faced nationally by all Health Boards.</p> <p>HASU development will only improve patients experience long term and address areas where SBUHB can improve.</p>		
Financial Implications		
<p>The financial implications for Stroke services are mainly related to HASU development. Development of a HASU will require significant investment as outlined in the business case.</p> <p>Development of a dedicated CT facility to improve scanning times can be part funded from a Stroke legacy fund which currently contains around £400,000.</p>		
Legal Implications (including equality and diversity assessment)		
No implications to note.		
Staffing Implications		
<p>Some implications with regards to increasing staff numbers in future to adequately staff the unit.</p> <p>This will require input from recruitment and HR support to ensure we attract candidates to posts advertised.</p>		
Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)		

Briefly identify how the paper will have an impact of the “The Well-being of Future Generations (Wales) Act 2015, 5 ways of working.

- **Long Term** – Providing enhanced Stroke Services for the SBUHB region.
- **Prevention** – Enabling timely intervention in patient’s pathways resulting in better outcomes for Stroke survivors.
- **Integration** – Integrating with other hospital sites to ensure rehabilitation pathways are utilised.
- **Collaboration** - Acting in collaboration with any other areas such as other hospital sites, tertiary organisations such as the Stroke Association and
- **Involvement** – Stroke performance is monitored weekly by a range of staff from different backgrounds as well as being scrutinized before a regular executive board.

Report History	
Appendices	Appendices 1-5