Meeting Date	**28 June 2022**	**Agenda Item**	**4.1**
Report Title	Update Report on Stroke Performance		
Report Author	David West, Directorate Manager, Medicine		
Report Sponsor	Inese Robotham, Chief Operating Officer		
Presented by	Craige Wilson, Deputy Chief Operating Officer		
Freedom of Information	Open		
Purpose of the Report	To provide the Committee with an update on: • Stroke performance including access targets; • Recruitment; • Computerized tomography (CT) access; • Establishment of a HASU; • Quality Improvement Measures (QIM) information, based on performance up to 30th April 2022 (May 2022 not yet available).		
Key Issues/Themes	• Inability to maintain ring fenced Stroke beds. • Confirmation of Advance Nurse Practitioner (ANP) funding awaited to recruit as well as funding for Neurology Consultant funding. • Compliance against the 4 Hour access target for admission to the Acute Stroke Unit remains challenging due to system wide pressures. • High compliance of Occupational Therapy (OT), Physiotherapy (P), Speech and Language Therapy(SALT) assessments within 24 hours. • High level of swallow assessment compliance. • Consistently high thrombolysis rates and this has been recognised by the NHS Wales Delivery Unit. • Further reductions in time to CT head will be addressed by HASU.		
Specific Action Required ***(please choose one only)***	**Information**	**Discussion**	**Assurance**	**Approval**
	☒	☐	☒	☐
Recommendations	Members are asked to: • **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 is ongoing to develop the Hyper Acute Stroke Unit (HASU) business case. A SBUHB only business case was at an advanced stage but is now being revised with a regional view due the needs to recruit neurologists to support the stroke consultant rota and develop a Functional Neurology Disorders (FND) service. HDUHB and SBUHB will work together under the banner of the ARCH programme to develop a regional HASU service.

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 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 April 2022 illustrated below:

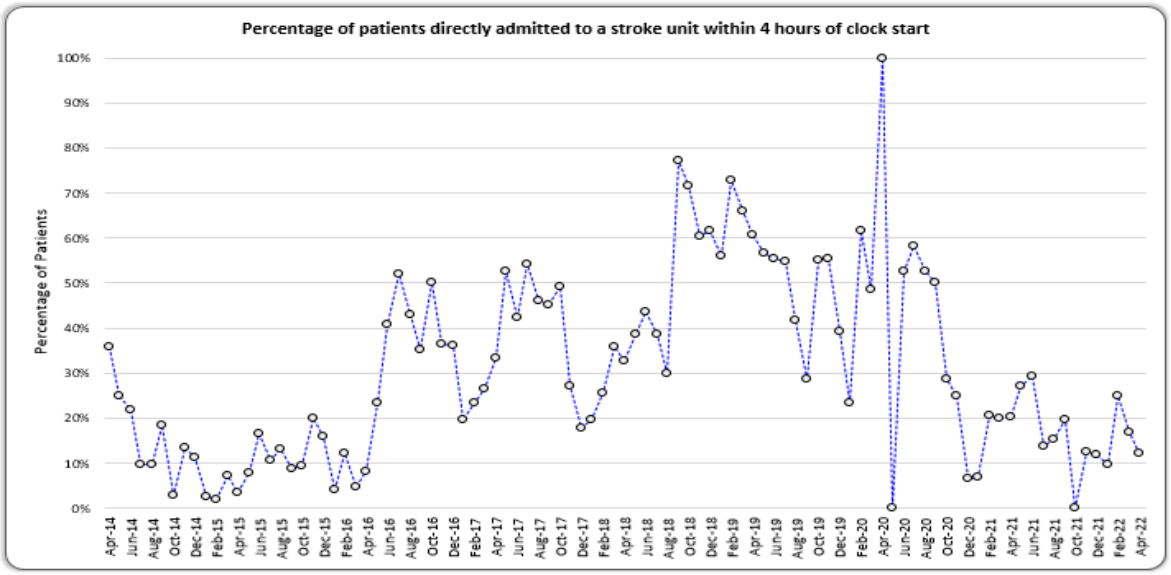
Morriston

April 2022 Quality Improvement Measures

Quality Improvement Measures	*Aspiration*	*Score*
Urgent Intervention		
Percentage of all Stroke Patients Thrombolysed	*N/A*	**27.6%**
Thrombolysed patients Door To Needle <=45 mins	*90%*	**12.5%**
Percentage of patients scanned within 1 hour of clock start	*N/A*	**34.5%**
Percentage of patients directly admitted to a stroke unit within 4 hours of clock start	*95%*	**12.1%**
Percentage of applicable patients who were given a swallow screen within 4 hours of clock start	*95%*	**75.9%**
Urgent Assessment		
Percentage of patients assessed by a stroke specialist consultant physician within 24 hours of clock start	*95%*	**100.0%**
Assessed by one of OT, PT, SALT within 24 hours	*95%*	**91.4%**
Percentage of applicable patients who were given a formal swallow assessment within 72 hours of clock start	*95%*	**85.0%**
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*	**91.7%**
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	*N/A*	**75.8%**
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	*N/A*	**40.9%**
Discharge Standards		
Percentage of applicable patients screened for nutrition and seen by a dietitian by discharge	*N/A*	**62.50%**
Percentage of applicable patients discharged with ESD/ Community Therapy Multidisciplinary Team	*N/A*	**43.52%**
Percentage of applicable patients discharged with ESD	*N/A*	**40.74%**
Percentage of applicable patients discharged with Community Therapy Multidisciplinary Team	*N/A*	**2.78%**
Proportion of applicable patients assessed at 6 months	*N/A*	**0.00%**

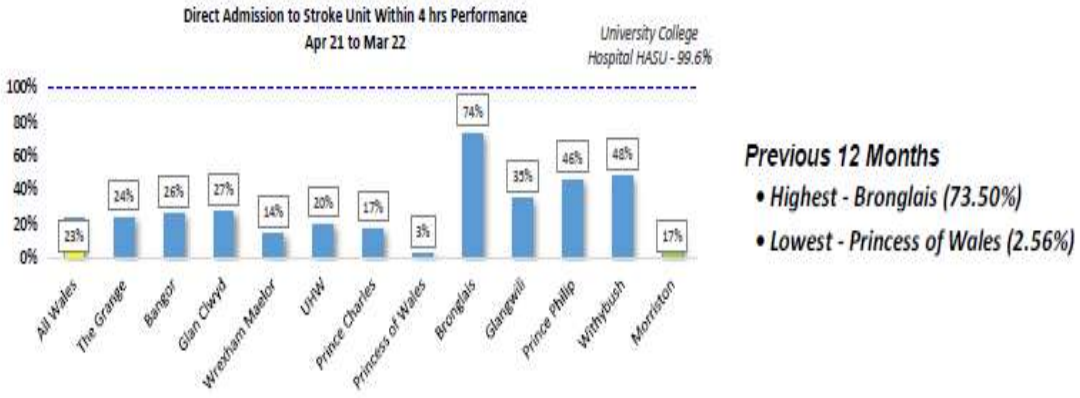
4 Hour Admission to Acute ASU

Access to dedicated Stroke beds continues to impact on performance with 12.1% of patients meeting the target of admission within 4 hours for April 2022. This is a slight decline from 16.9% in March 2022 and 25% in February 2022. Compliance remains low around the 4-hour target having fallen during the pandemic. Performance is discussed weekly in the Stroke performance meeting held at Morriston 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.

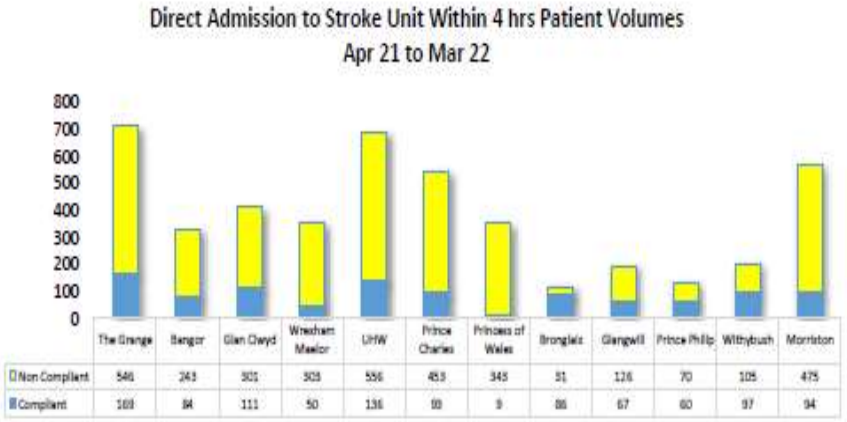


4-hour access issues are also affecting the other major admitting sites in Wales, such as UHW, POW and Prince Charles hospitals. SBUHB performance is in line with these other sites. Sites dealing with smaller volumes of Stroke patients such as Bronglais, Prince Phillip and Withybush have much higher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



Previous 12 Months

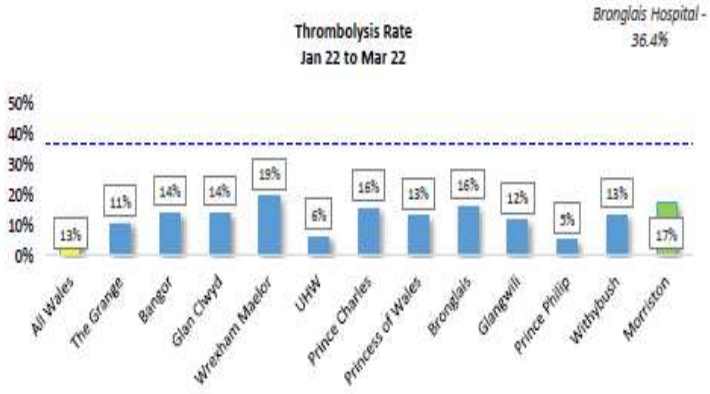
- **Total Eligible: 4608**
- **Total Compliant: 1056**
- **Median Eligible: 352.5 (117 - 715)**

Thrombolysis rates

Thrombolysis rates remain comparably consistently high (17.2% for April 2022) for the volume of Stroke patients Morriston accepts as illustrated by the graphs below.

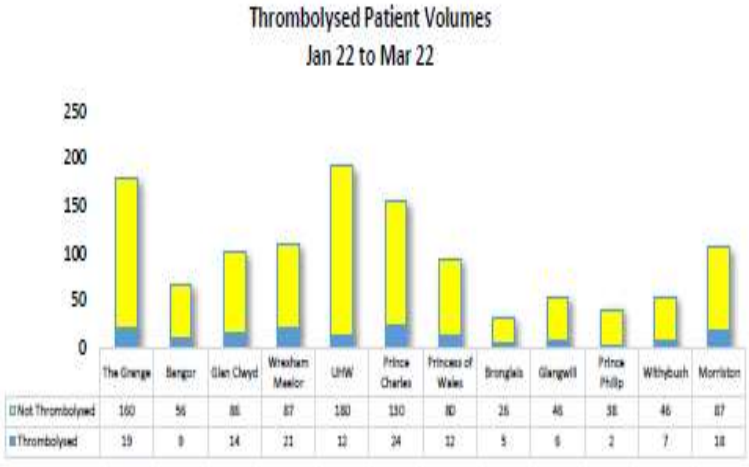
Previous 3 Months

- *Highest - Wrexham Maelor (19.44%)*
- *Lowest - Prince Philip (5.00%)*



Previous 3 Months

- **Total Strokes: 1171**
- **Total Thrombolysed: 149**
- **Median Strokes: 96 (31 - 192)**

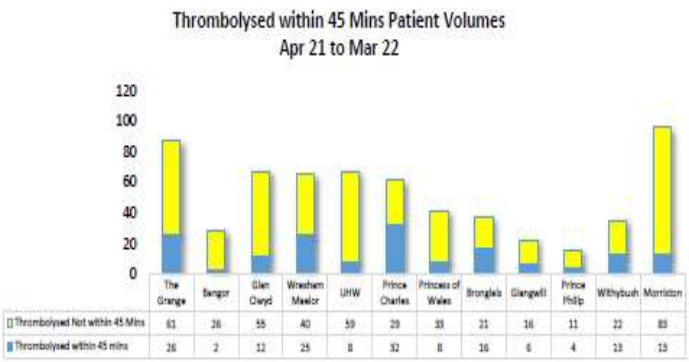


Thrombolysis door to needle time >45 minutes.

A high volume of patients suffering a Stroke receive thrombolysis at Morriston but these patients require observation when given this treatment. Clinical Nurse Specialists (CNS) and doctors are not always able to leave a thombolysed 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.

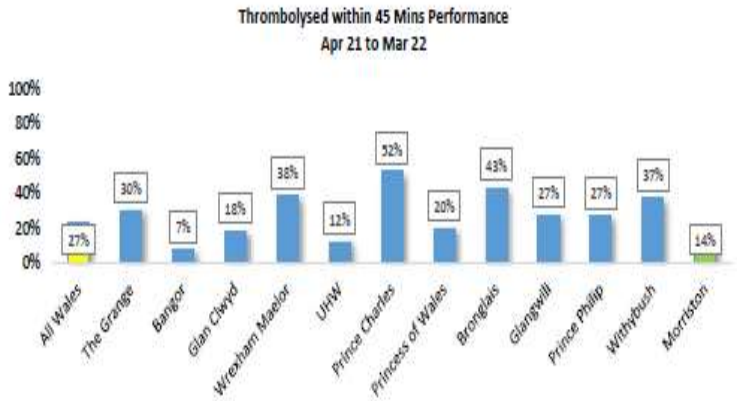
Site comparison for the thrombolysed patients given thrombolysis within 45 mins of clock start



Previous 12 Months

- **Total Thrombolysed: 621**
- **Total Thrombolysed with 45 Mins: 165**
- **Median Thrombolysed: 51 (15 - 96)**

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

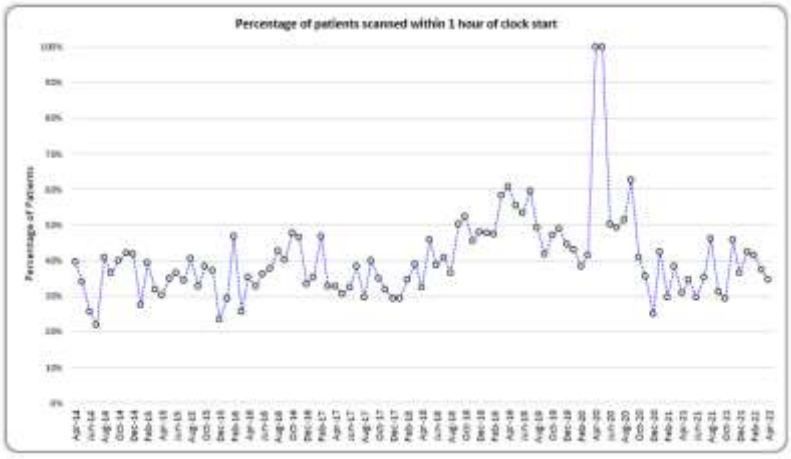


Previous 12 Months

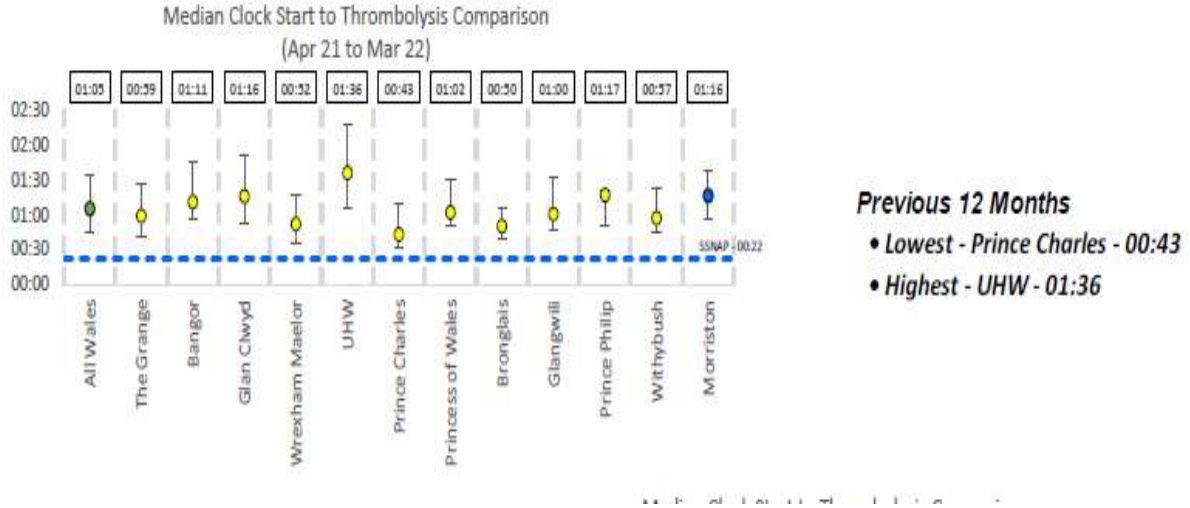
- ***Highest - Prince Charles (52.46%)***
- ***Lowest - Bangor (7.14%)***

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 thrombolysis (hours:mins)



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

In addition, we are currently in the process of recruiting ANP's who can prescribe and administer thrombolysis treatment and this will extend cover into weekends and evenings improving the measure.

Other performance highlights

- High levels of compliance against urgent Assessment measures:

  - % of patients seen by a consultant in 24 hours – 100%
  - % of patients assessed by OT/PT/SALT – 91.4%
  - % of patients given a swallow assessment within 72 hours– 85%

Rehabilitation Performance

Rehabilitation services are currently provided 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 April 2022. These measures focus on therapy input and the discharge process.

Singleton

April 2022 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	37.8%
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	N/A	25.2%
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	N/A	38.7%
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

April 2022 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	68.7%
Compliance (%) against the therapy target of an average of 27.3 Minutes of PT across all patients*	N/A	72.8%
Compliance (%) against the therapy target of an average of 16.1 Minutes of SALT across all patients*	N/A	24.0%
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*

The above tables show the rehabilitation Quality Improvement Measures for April 2022. 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 April 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.

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.

3. RECRUITMENT

Recruitment into Acute Stroke Services.

Stroke ANP roles.
Two candidates have been identified to apply for Stroke ANP roles. An SBAR has been submitted to BCAG requesting funding be made available in order to proceed to advert; this has now been approved.

Recruitment to these roles will enhance out of hours' provision and increase compliance against SSNAP measures.

Hybrid Neurology/Stroke Consultants
Funding for a further 3 Neurology consultants has been requested and is also linked to the FND case between HDUHB and SBUHB. Ongoing recruitment to Neurology posts must support the Stroke rota and when numbers allow a dedicated 24/7 Stroke rota will be initiated. This is a long term aspiration.

4. 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%

HASU was until recently being progressed as a Swansea Bay only model. This model and the accompanying business case will be revised accordingly. Under the ARCH programme Alison Shakeshaft, Director of Therapies and Health Sciences (HDUHB) will take the lead on developing these proposals in conjunction with SBUHB. The first meeting has already taken place between the two Health Boards and this work will progress at pace to develop a business case for a Regional HASU within three months. However, establishment of the HASU will probably take in the region of two years because of the need to recruit the appropriate medical and nursing staff.

5. 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 paper.

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 outlied 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)

6. FINANCIAL IMPLICATIONS

The main financial implications for Stroke over the coming months are related to the HASU business case. Costings to date will need to be revised to represent the Regional model.

ANP nurse funding approved to recruit to build up the workforce, consultant funding required to recruit 3 Neurologists with administrative support

7. 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	☒
	Co-Production and Health Literacy	☐
	Digitally Enabled Health and Wellbeing	☐
	Deliver better care through excellent health and care services achieving the outcomes that matter most to people	
	Best Value Outcomes and High Quality Care	☒
	Partnerships for Care	☒
	Excellent Staff	☒
	Digitally Enabled Care	☐
	Outstanding Research, Innovation, Education and Learning	☐
Health and Care Standards		
(please choose)	Staying Healthy	☐
	Safe Care	☒
	Effective Care	☒
	Dignified Care	☒
	Timely Care	☒
	Individual Care	☒
	Staff and Resources	☒

Quality, Safety and Patient Experience

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.

HASU development will only improve patients experience long term and address areas where SBUHB can improve.

Financial Implications

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.

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.

Legal Implications (including equality and diversity assessment)

No implications to note.

Staffing Implications

Some implications with regards to increasing staff numbers in future to adequately staff the unit.

This will require input from recruitment and HR support to ensure we attract candidates to posts advertised.

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	V1
Appendices	