



Improving stroke services in Bristol, North Somerset and South Gloucestershire

Staff Backgrounder: Facts and Figures

Patient numbers for the HASU at Southmead Hospital

- Across Bristol, North Somerset and South Gloucestershire, there are c.1,500-1,700 confirmed strokes per year.
 - Allowing for stroke mimics (approximately 500 per year) and thrombectomy (approximately 200 per year), the total expected stroke and suspected stroke activity is approximately 2,400 patients per year.
- Detailed modelling, using Ambulance activity data as its source, projects that an additional 23 patients with suspected stroke

will be diverted or transferred to Southmead Hospital each week as a result of the proposed changes.

- This includes 15 patients from BRI and 5 from Weston General Hospital transferred/diverted to Southmead; the remaining patients are the projected increase in thrombectomy as the service is developed in accordance with the Thrombectomy Plan.
- A further 8 non-ambulance patient arrivals are projected to arrive at Southmead Hospital including mimics.
- This means a total projected increase in suspected strokes (mimics), stroke and thrombectomies arriving at Southmead of 27 patients per week.

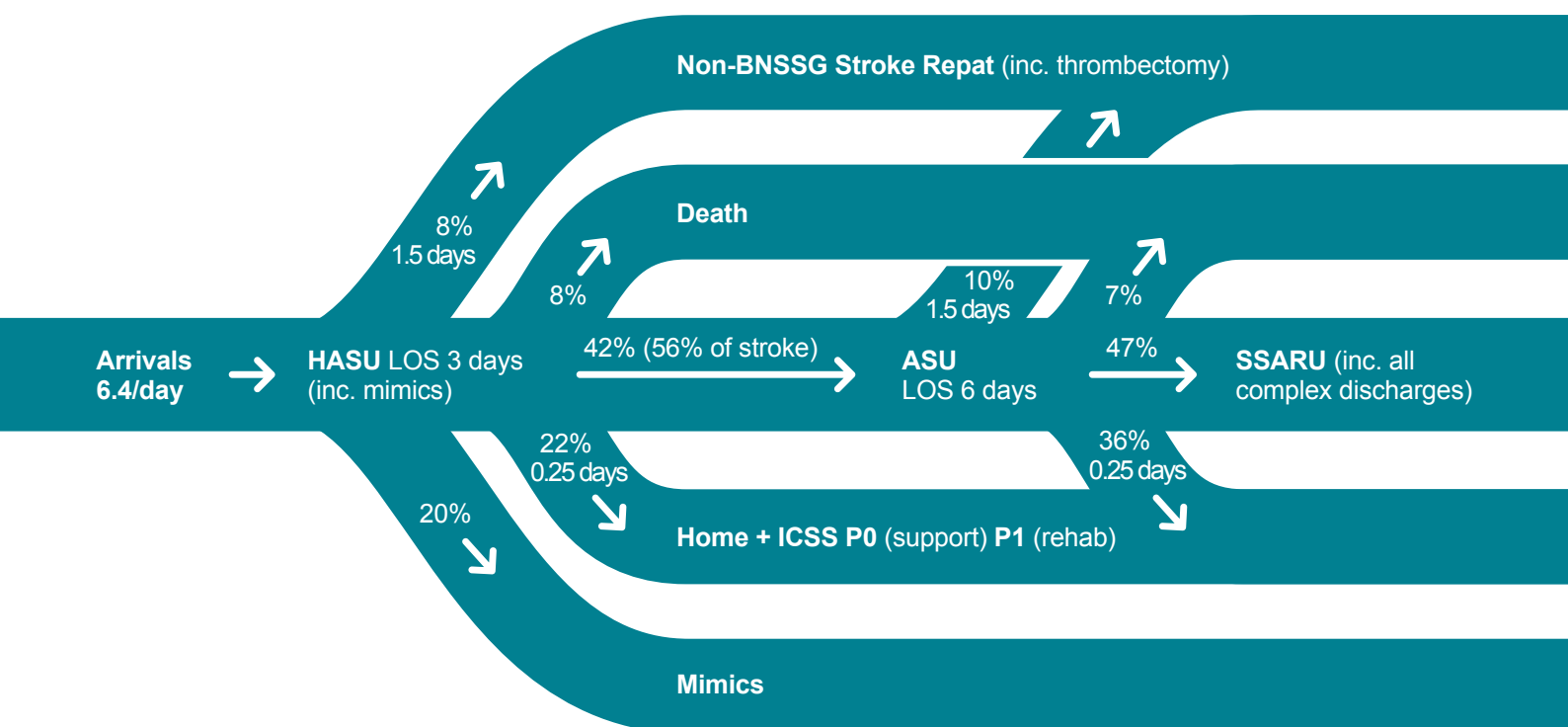
Pathway modelling

- Not all suspected stroke patients will enter the stroke pathway.
- An estimated 15% are expected to be removed from the pathway in ED as immediate specialist assessment on arrival at Southmead Hospital will permit early recognition of non-stroke “mimics” and referral to the Acute Medical take, or appropriate specialty, without delay.

- The programme modelling projects that a total of 6.4 patients will enter the stroke pathway every day (45 per week) at Southmead Hospital following the proposed changes.
- As part of preparing the Decision Making Business Case, our data is being refreshed from its 2018/19 baseline to 2019/20 (to avoid COVID impact). A growth/inflationary assumption will be used to bring the data to 2021/22.

Bed modelling

- We have used the activity modelling assumptions along with other assumptions (e.g. mortality rates, repatriation and conversion along the pathway) to model our bed needs; the below diagram summarises the assumptions made in planning acute capacity requirements.



- What this means in terms of actual bed requirements is different depending on:
 - Option 1 (1 HASU, 1 ASUs, 2 SSARUs)
 - Or Option 2 (1 HASU, 2 ASUs, 2 SSARUs).

- Across acute and rehab there is a baseline of 102 beds utilised for stroke patients – 51 acute and 51 rehab – across all sites.

2018/19 Actual beds used	Weston	NBT	UHB (inc. SBCH)	Other	Total
Acute	6	31	14	–	51
Acute based Rehab	6	27	12	6	51
Total Beds	12	58	26	6	102
Community Stroke Care Contacts	11,340 (15 visits per patient)				

- The proposed changes will result in the below bed bases by option

Future state beds predicted - Option 1	Weston*	NBT	UHB (inc. SBCH)	Total
HASU	0	22	0	22
ASU	0	22	0	22
Total	0	44	0	44

Future state beds predicted - Option 2b	Weston/North Somerset*	NBT/South Glous	UHB (inc. SBCH)	Total
HASU	0	22	0	22
ASU	0	14	9	23
Total	0	36	9	45

- In both options, 42 beds will be provided for inpatient community rehabilitation across 2 Stroke Sub-Acute Rehab Units (SSARUs).
 - One SSARU will be located on the Weston General Hospital site and will have at least 12 beds; the second site for a SSARU is being consulted on.

*The specialist sub-acute stroke rehabilitation unit (SSARU) is not referenced in the table above, but it is proposed that 1 SSARU is based on the Weston General site (see below for more info) and the second site is to be decided following the consultation.

- For Weston General Hospital this means that while there are no acute (HASU or ASU beds) in the future state model, the same number of beds will be dedicated to stroke patients on the Weston site in the future model as there are currently.
- In total in Option 1, there will be a reduction of 16 beds across acute and rehab and in Option 2, a reduction of 15 beds.
 - This reduction in bedded capacity is offset by a significant increase in out of hospital/at home support from the Integrated Community Stroke Service.
 - The reduced bed base is supported by the assumptions made regarding length of stay in the acute settings that can be achieved from the pathway.
- We have undertaken stochastic modelling of the activity and bedded capacity; this type of modelling forecasts the probability of various outcomes under different conditions, using random variables. This modelling has demonstrated that demand will be met by capacity 99% of the time; however we are continuing to review the data and test sensitivity to stress test the model for the decision making business case.

Growth

- Within the Pre-Consultation Business Case (PCBC) we have projected an increase in demand for stroke service's in line with national assumptions to 2035. This assumes growth of 2.4% per annum in the incidence of stroke as forecast by the British Association of Stroke Physicians.
- There are opportunities across a number of areas to manage the expected growth over the first 3-5 years following implementation within the planned bed base.
 - This is one of the major benefits of the proposed clinical model, which could not be achieved if stroke provision continued in a non-integrated way across BNSSG.
- Under the proposed reconfiguration, all stroke patients will be treated within a specialised HASU, ASU or rehabilitation beds, according to clinical need. Additional resources will be available to ensure that all patients who need it receive high quality specialist community rehabilitation.
- The proposed reconfiguration will be robust enough to be able to respond to small increases in patient demand. The large increases in stroke demand predicted by 2035 are in line with increases in patient demand predicted across the NHS, due to an ageing population. These large increases in demand for NHS services will need to be responded to as part of a general response to the changing health needs of an ageing population; further consideration will be given to this as the programme progresses.