



Stroke Programme

Hyper-Acute Stroke Services Resilience
Review

Desktop Scenario Modelling

Background and Context

Resilience: “The ability to provide high quality and sustainable hyper-acute stroke services to patients”

Progress:

- Review commenced end of September 2015
- Current State Assessment completed and recommendations shared with HF Board in March
- Progressing onto the next stage of the review – ‘Options Development’

The current state assessment involved two steps:

1. Developing a baseline of hyper-acute stroke service provision and taking a snapshot of the current quality and performance of these services to identify gaps in service resilience;
2. Testing elements of the sub-regional system to ensure that it is resilient for the future through a desktop scenario modelling exercise.

Overview of the model

Population inputs

CCG population forecasts and prevalence of stroke (age/gender)

Capacity/Staffing inputs

Bed capacity /staffing Information (Nursing and Therapy) , SAF Standards

Activity inputs

HRGs

Travel times

SUS activity

Scenario variables

Demand

Mimics

AF interventions

Hypertension interventions

Supply

Bed Occupancy Rate - HASU and Post-HASU

Length of stay – Whole pathway, Mimics and HASU

HASUs in place

Model for the capacity, staffing and cost of Stroke up to 2020

This sheet		BTHT	
Source of stroke incidence data		SUS	
Interventions to include	Actual F Distribution	Included	Included
HASU closure	Hypertension	Included	Excluded
Length of Stay	Closure year	2017	2017
	HASU closure date	2 days	2 days
	Full pathway LOS	Default values	Default values

Projected Strokes		Trust: BTHT					
Years (Projections)		2015	2016	2017	2018	2019	2020
1. Projected Number of strokes without interventions							
TOTAL		472	403	407	410	502	514
2. Projected number of strokes prevented by interventions							
Atrial Fibrillation		0	20	41	81	63	70
Hypertension		0	0	36	23	27	25
Sub-total strokes prevented		0	20	67	85	97	101
TOTAL projected number of strokes with int		472	453	439	410	410	413
3. Scenario - Trust is unable to provide HASU							
Selected closed trust projected strokes		296	280	270	254	255	262
Of that would be diverted to chosen provider		27,705	27,705	27,705	27,705	27,705	27,705
Number that would be diverted to that provider		230	218	209	180	181	204
4. Disposed number of strokes post interventions and scenario							
Admitted to hospital		702	671	640	608	614	624
Stroke bed days/year (full pathway)		804	7773	7382	7040	7040	7091
Stroke bed days/year (outbound diverted HASU patient)		0	0	0	0	0	0
Stroke bed days/year (inbound diverted HASU patient)		400	450	420	295	287	403
Total stroke bed days/year		856	6213	7802	7435	7436	7494
Stroke HASU only bed days/year (all patients)		1404	1242	1280	1215	1217	1225
Number of occupied stroke beds required/day		22.28	21.38	20.23	19.25	19.29	19.43
Number of physical stroke beds required/day		26.12	25.07	23.88	22.63	22.66	23.24
Number of physical stroke HASU beds required/day		1.00	1.00	1.00	1.00	1.00	1.00
Number of stable stroke bed capacity spare/day		160	249	357	451	451	432
Surplus (if/when <=) stroke bed capacity (%)		7%	8%	8%	8%	8%	7%
Number of occupied stroke HASU beds required/day		3.05	3.48	3.51	3.33	3.33	3.37
Number of physical stroke HASU beds required/day		4.53	4.32	4.13	3.52	3.52	4.00
Number of physical stroke HASU bed capacity spare/day		5.52	5.09	4.10	4.63	4.63	4.73
Number of stable stroke HASU bed capacity spare/day		6.27	5.38	5.71	5.42	5.43	5.40
Surplus (if/when <=) HASU bed capacity (%)		54%	54%	54%	54%	54%	54%

Outputs

Forecast number of strokes admitted to HASU, by year, to 2020

Workforce/capacity changes by Provider 2020

Forecast additional costs to Commissioners/ income to Providers due to increase in strokes and repatriation

Exclusions

Medical staffing information

Broader Public Health interventions

Future changes in Best Practice Tariff

Changes in incidence of Stroke