

Business case for the enhancement of Acute Stroke Services in Lancashire and South Cumbria

Presented by: Lancashire and South Cumbria Integrated Stroke and
Neurorehabilitation Delivery Network (ISNDN) Board
members

Audience: Cumbria HOSC – 4 October 2021

Integrated Stroke Delivery Networks

Providing improved stroke outcomes in every ICS

Patient information and engagement is consistent throughout the single system via a patient passport

Data and information are digital, interactive and accessible to all across the whole system

Systems are aligned across the full pathway with strong clinical and network leadership

Modernised and upskilled workforce are recruited in line with system need

Prevention

Urgent care

Acute care

Rehabilitation

Long term support

Primary Care with Primary Care Networks (PCNs)

Community Pharmacy

999/111 Ambulance Service
Comprehensive Stroke Centres/
Acute Stroke Centres

Acute Stroke Centres

Inpatient stroke rehabilitation

ESD services

Social care

Primary care
Community services

Voluntary sector

Social care

Improved detection, primary and secondary prevention

Improved training and technology

Increased availability of thrombectomy and stroke thrombolysis

Clear transfer pathways

Seven day nursing and therapy services

Comprehensive ESD and needs based community stroke rehabilitation

Seven day services

Comprehensive rehabilitation and personalised care and support for as long the person needs it.

Over 10 years, thousands of premature deaths will be avoided, tens of thousands of disabilities will be prevented or lessened, and hundreds of thousands will benefit from better integrated person-centred care

Review of Stroke Services in LSC

What	Who	When
National peer reviews at all sites	Professor Tony Rudd, National Clinical Director for Stroke	2018
National team carrying out regional stroke GIRFT visit	Drs Deb Lowe and David Hargroves, GIRFT Clinical Leads	2019
Case for Change produced	Stroke Programme	2019
Workforce gap analysis	Stroke Programme	2019
Business case development for integrated stroke community teams	CCGs	2020
Creation of Integrated Stroke and Neurorehabilitation Delivery Network (ISNDN)	ICS	2020
National team regional visit re rehabilitation data	Rebecca Fisher, National Lead for rehabilitation	2021
CQC visits to local teams	CQC	2019 onwards

Key findings

7,473 people attended a hospital A&E department in LSC with either stroke or stroke mimic symptoms in 2019/20.

There were 3,615 patient admissions for acute stroke care and 652 deaths due to stroke in 2019/20.

None of the hospitals in LSC currently provide hyper-acute stroke care or in-patient stroke rehabilitation 7 days a week, 24 hours a day in line with national expectation or ISNDN ambition.

Thrombolysis rates in LSC is 8.9%, below the national ambition of 15%

Thrombectomy rates in LSC is 2%, well below the national ambition of 10%

The average length of stay in hospital across the 4 Providers in 2019/20 was 25 days (admission through to discharge). This is well above the LOS found in London (16 days) and Greater Manchester (17 days) stroke services.

There is a significant shortfall in medical, nursing and allied health professional staffing in all LSC acute stroke services compared to the RCP national minimum staffing standards.

The current configuration is not delivering positive patient experience as reflected through the engagement exercises with stroke survivors and carers in the development of this business case

Case for Change - Quality

Unwarranted variation in clinical outcomes on the Sentinel Stroke National Audit Programme (SSNAP).

	Lancashire & South Cumbria																		
Site	Oct 15- Dec 15	Jan 16- Mar 16	Apr 16- Jul 16	Aug 16- Nov 16	Dec 16- Mar 17	Apr 17- Jul 17	Aug 17- Nov 17	Dec 17- Mar 18	Apr 18- Jun 18	Jul 18- Sep 18	Oct 18- Dec 18	Jan 19- Mar 19	Apr 19- Jun 19	Jul 19- Sep 19	Oct 19- Dec 19	Jan 20- Mar 20	Apr 20- Jun 20	Jul 20-Sep 20	Oct 20- Dec 20
National	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Blackpool Victoria Hospital	E	E	E	D	E	E	C	D	D	C	D	D	C	C	C	D	D	D	D
Royal Blackburn Hospital	E	D	D	D	C	C	B	A	A	A	A	A	A	A	A	A	A	A	B
Royal Preston Hospital	C	C	D	D	D	C	B	B	B	C	B	C	B	C	A	B	A	A	B
Furness General Hospital	D	D	D	D	C	C	C	C	D	D	C	B	C	C	C	C	C	D	D
Royal Lancaster Infirmary	D	D	D	D	D	D	D	D	C	C	C	C	C	C	D	D	D	D	E
Pendle Community Hospital - Marsden Stroke Unit	No Data	No Data	D	D	C	D	B	B	No Data	C	A	A	B	B	B	A	B	B	B
Chorley and South Ribble Hospital	C	B	C	C	D	D	B	B	No Data	B	A	B	A	A	A	B	A	A	A

The ISNDN ambition is for our Providers to achieve SSNAP 'A' scores.

Case for Change – UHMB Patient Experience

Poor patient experience reported at RLI (in worst case scenarios)	What should happen – RCP Clinical Standards for Stroke
Arrival to CT scan 1 hour and 10 minutes	Asap from arrival – within hour
Symptoms onset to needle time 3 hours and 50 minutes	Asap within 4.5 hours
Door to needle time 2 hours 30 minutes	Asap from arrival – within hour
Time to thrombectomy-not considered	Within 6hrs from onset of stroke
Time to stroke nurse assessment 3.5 hours	At the ED front door
Time to stroke consultant assessment 25 hours	Within 12 hrs
Time from arrival to stroke unit 5 hours 40 minutes	Within 4 hours

New Operational Delivery Model in 2023/24

3 Acute Stroke Centres offering 24 hour stroke specialist care available 7 days a week – Preston, Blackburn and Blackpool; 72 hours then repatriate

Stroke triage nursing and ambulatory care pathways in all hospital sites providing urgent stroke care to better manage/refer stroke mimic presentations and protect stroke beds

In-patient Stroke Rehabilitation Units available at all hospitals including Furness and Lancaster - 7 day working

Triage, treat and transfer from Furness General Hospital to Preston Comprehensive Stroke Centre

Direct divert ambulance transfer to Preston for people typically attending the Royal Lancaster Infirmary

Appropriate ambulance cover patient repatriation to local in-patient stroke rehabilitation units after first 72 hours

Integrated Community Stroke Rehabilitation Teams in all localities

Operational Impact

Increase in stroke admissions at Preston Comprehensive Stroke Centre – ED, Diagnostics and Stroke Ward

Estimated 3 ambulance transfers on average per day from Cumbria/Morecambe Bay to Preston (analysis being undertaken by NWS on day/time trends)

Increased stroke service staffing establishment at both Furness General Hospital and Royal Lancaster Infirmary

Improved patient flow from early supported discharge to Integrated Community Stroke Rehabilitation Teams

Carer/family impact

Transport to and parking at Preston
Comprehensive Stroke Centre for up to 72 hours

Accommodation options in Preston

Information updates on their loved one's health

Travel times to Preston Comprehensive Stroke Centre for people normally attending Royal Lancaster Infirmary

From this location to Royal Preston Hospital	Travel time (not blue lights and sirens)
Ambleside	1hr 4 minutes
Windermere	53 minutes
Sedburgh	52 minutes
Grange-over-sands	52 minutes
Kendal	46 minutes
Milnthorpe	38 minutes
Morecambe	34 minutes
Carnforth	32 minutes
Lancaster	32 minutes
Garstang	22 minutes

Benefits of Proposed Changes

Benefit type	Measurement
Reduce mortality	Save 32 more lives each year across LSC; 5% mortality reduction seen in London and Greater Manchester following reconfiguration of 24/7 hyper acute stroke units (Ref 1)
Improved clinical outcomes	Increase in LSC thrombolysis rate from 8% to 15%; n=140 extra patients per year Increase in LSC thrombectomy rate from 2% to 10%; n= 198 extra patients per year
Reduce disability after stroke	361 more stroke patients will be discharged with reduced disability/dependence, MRS score < 2. (Ref 1) ; 1 in 5 patients will achieve functional independence following thrombectomy (Ref 2)
Positive patient experience	Improved qualitative patient feedback at hospital discharge and 6 months review
Reduced societal cost - NHS	£4,100 saving for each extra patient thrombolysed (Ref 2) at least same again could be assumed for thrombectomy £2.33 million saved in reduced length of hospital stay of 3 days per patient
Reduced societal cost – Social Care	Social care savings of £6,900 and 0.26 QALYs gained in total for each extra patient thrombolysed (Ref 2); at least same again could be assumed for thrombectomy

1. Evaluation of reconfigurations of acute stroke services in different regions of England: A mixed methods study (2019), NIHR
2. Stroke Pathway Evidence Based Commissioning (2020) Kings College London
3. SSNAP Technical Report (2016) – Cost and Cost Effectiveness Analysis, NHS England

Phased investment plan

Year	Enhancement	Capital	Revenue	Total
2021/22	<ul style="list-style-type: none"> Complete full integrated community stroke rehabilitation recruitment – ELHT and LHT only Blackpool hospital estate modification to enable provision of ambulatory care Recruit stroke triage nurses – LTH, BTH and FGH Enhance stroke specialist workforce to deliver 7 day ambulatory care – LTH, BTH, RBH and FGH Expand thrombectomy service workforce at LTH to meet anticipated increase in activity <p style="text-align: right;">Year total</p>	£750,000	<p>£943,100</p> <p>£242,900</p> <p>£606,700</p> <p>£484,900</p>	£3,027,600
2022/23	<ul style="list-style-type: none"> Enhance workforce to deliver 6 day in-patient rehabilitation – all Trusts Additional Acute Stroke Centre equipment <p style="text-align: right;">Year total</p>	£2,330,400	£2,395,600	£4,726,000
2023/24	<ul style="list-style-type: none"> Expansion of Acute Stroke Centre workforce to deliver 24/7 service – BTH, LTH and RBH Additional Acute Stroke Centre estates & equipment Enhance workforce to deliver 7 day in-patient rehabilitation – all Trusts Enhance NWS resource to complete 4.5 patient transfers per day from UHMB to Preston <p style="text-align: right;">Year total</p>	£3,036,200	<p>£6,150,000</p> <p>£996,200</p> <p>£1,100,000</p>	£11,282,400
	TOTAL INVESTMENT	£6,116,600	£12,919,400	£19,036,000

Assuring the preferred option

The clinical model and the phased investment plan have been assured in multiple stages:

Clinical	Financial
North West Clinical Network & Senate January 2020	ISNDN Board Mar 2021
Joint Committee of CCGs Feb 2020	Finance Advisory Committee April 2021
ISNDN Network Board Mar 2021	Provider Collaborative Board April 2021
Provider Collaborative Board April 2021	Finance Advisory Committee May 2021
	Strategic Commissioning Committee July 2021

Engagement thus far

Forum	Date
Local stroke survivors and carers	Summer 2018 Summer 2021 Currently taking place
Local Providers – Clinicians and Operational Managers	Monthly
Local Health Overview and Scrutiny Committees	September 2019 September/October 2021
LSC ICS Finance Advisory Committee	9 April 2021, 14 May 2021
LSC ICS Executive Board	Feb 2021
LSC ISNDN Board	4 March 2021, 8 April 2021 6 May 2021
LSC Collaborative Commissioning Board	13 April 2021
North West Clinical Networks and Senate	January 2020
NHS England National Stroke Leadership Team	Monthly
NHS England and Improvement – Service change stage assurance process	19 April 2021

Questions & Committee feedback

To inform the next steps, engagement and the future implementation of the programme