Lincolnshire COUNTY COUNCIL Working for a better future		THE HEALTH SCRUTINY COMMITTEE FOR LINCOLNSHIRE	
Boston Borough Council	East Lindsey District Council	City of Lincoln Council	Lincolnshire County Council
North Kesteven District Council	South Holland District Council	South Kesteven District Council	West Lindsey District Council

Open Report on behalf of Andrew Crookham
Executive Director - Resources

Report to	**Health Scrutiny Committee for Lincolnshire**
Date:	**10 November 2021**
Subject:	**Lincolnshire Acute Services Review – Stroke Services**

Summary:

On 13 October 2021 the Committee agreed its approach to its consideration of the NHS's consultation on the Lincolnshire Acute Services Review. This included consideration of two of the four strands of the review at this meeting, with the remaining two on 15 December 2021.

The Committee also established a working group, which would support the work of the Committee, and give detailed consideration of the consultation materials. As part of its consideration the Committee is requested to consider whether it wishes to highlight any areas, which the Working Group might explore.

Actions Requested:

(1) To consider the details on the Lincolnshire Acute Services Review of Stroke Services.

(2) To highlight any areas which the Committee's working group might wish to explore in further detail.

1. Background

On 30 September 2021, the consultation on the Lincolnshire Acute Services Review was launched. On 13 October the Committee considered an introductory item and agreed its approach to the consultation.

2. Stroke Services

Dr Abdul Elmarimi, a Consultant in Stroke Medicine, from United Lincolnshire Hospitals NHS Trust, is due to attend the meeting to present information on this topic. To facilitate the Committee's consideration, pages 37-41 of the consultation document, which relate specifically to Stroke Services, are attached as Appendix A to this report. Chapter 12 of the Pre-Consultation Business Case provides further detail and is attached at Appendix B. It should be noted that chapter 12 of the PCBC in turn refers to the following documents, all of which are available at: Pre-Consultation Business Case Appendices:

- Appendix F – Temporary Covid-19 Pathway (Update to United Lincolnshire hospitals NHS Trust Board on 6 July 2021.
- Appendix I – Quality Impact Assessments
- Appendix J - Equality Impact Assessment

3. Consultation and Conclusion

The Committee is invited to consider the presentation on the detailed elements of the Lincolnshire Acute Services Review.

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Extract (Pages 37 – 41) from Lincolnshire NHS Public Consultation Document – Relating to Four of Lincolnshire's NHS Services – Stroke Services
Appendix B	Chapter 12 of the Pre-Consultation Business Case for the Lincolnshire Acute Services Review – Preferred Option for Stroke Services

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

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Stroke services

What are we asking you to consider?

We want you to tell us what you think about our preferred change proposal to develop:

- A 'centre of excellence' in Lincolnshire for hyper-acuteand acute stroke services at Lincoln County Hospital
- Which would be supported by enhancement of thecommunity stroke rehabilitation service across the county, so it can support stroke patients with morecomplex needs

What are the services and how are they organised (pre COVID-19 temporary changes)?

Hyper-acute and acute stroke services are provided fromhospitals that treat the sickest of patients:

- Hyper-acute stroke services care for people in hospitalin the first 72 hours (it may be less) after their admission for a stroke, when more specialist 'critical' care is needed
- Acute stroke services care for people in hospital afterthe first 72 hours of having a stroke (including in- hospital rehabilitation) and until they are ready to bedischarged to another service and/or go home

These hospital stroke services are provided by highly trained and skilled doctors, nurses and therapists who specialise in looking after people who have had a stroke. They work as a multi-disciplinary team to provide the mostappropriate care tailored to the needs of individual people.

Two key hospital services for the treatment of strokes are:

- Thrombolysis: a 'clot busting drug'. Only strokes caused by blood clots (about 85% of all strokes) could be considered for thrombolysis, which is appropriate to under 20% of these strokes only. It istime critical, as can only be given within 4.5 hours ofstroke onset
- and

Mechanical thrombectomy: 'clot retrieval' througha procedure where a 'guide wire' is used to remove the clot causing the stroke, usually used inconjunction with thrombolysis. This is a relatively new procedure only available in a small number ofhospitals, the nearest of which is Queen's Medical Centre in Nottingham. It is not currently available in Lincolnshire

In addition, these hospital stroke service teams also run transient ischaemic attack (TIA) or 'mini stroke' clinics (in outpatient services), where patients whose symptoms have resolved but are still thought to be 'high risk' will be seen the next day by a stroke consultant and have appropriate investigation and results for the patient all in the same day.

Prior to the temporary changes made in response to COVID-19, United Lincolnshire Hospitals NHS Trust (ULHT) provided hyper-acute and acute stroke services,as well as TIA clinics from Lincoln County Hospital and Pilgrim Hospital, Boston. Grantham and District Hospital does not provide these services. If patients with a suspected stroke present at Grantham and District Hospital they are rapidly transferred to the most appropriate site.

A summary of stroke service provision at ULHT's hospital sites 'pre COVID-19' is set out below.

Lincoln County	· Hyper-acute stroke service including Thrombolysis · Acute stroke service · TIA clinics
Pilgrim Hospital	· Hyper-acute stroke service including Thrombolysis · Acute stroke service · TIA clinics

Please see earlier section for description of temporary changesin response to COVID-19

Working alongside the Lincolnshire hospital-based stroke services is the Lincolnshire community stroke rehabilitation service. This service aims to reduce the length of stay of patients within hospital stroke units, to improve the patient and carer experience followinga stroke, and to offer a seamless transfer of care for patients from hospital to home.

What are the challenges and opportunities for stroke services?

This section sets out the challenges and opportunitiesfor stroke services and what we hope to achieve by making changes.

Challenges

- The national best practice is that hyper-acute stroke units should admit a minimum of 600 patients a year – below this level doctors and nurses in hospital stroke services risk becoming deskilled. This in turn means patients may not get the best or safest care inthe future:
    - Lincoln County Hospital admits around 670 strokepatients a year and Pilgrim Hospital, Boston around 500 stroke patients a year
    - Even when considering growth in the size and theageing of the local population over the next five years, Pilgrim Hospital, Boston is highly unlikely toadmit 600 stroke patients a year, every year
- We need more doctors, nurses and therapists to deliver the existing hospital stroke services, but therearen't enough locally and nationally:
    - This means there are significant problems staffingour hospital stroke services – and we have alreadyseen temporary closures of some of our services because there aren't enough doctors or nurses available

Both the Lincoln County Hospital and Pilgrim Hospital,Boston stroke services have struggled to consistently perform well in the national audit of service quality and performance, despite the skills and dedication of our staff. This is reflective of the challenges set out above

Opportunities

By making changes, we can look to ensure:

- High quality hyper-acute and acute stroke services aredelivered in Lincolnshire in a sustainable way for the long term, by:
    - Ensuring hospital stroke services are based onnational clinical evidence
    - We achieve a balance between access and ensuring the long term sustainability of services
    - Our hospital stroke services receive over 600 strokepatients a year so that our doctors and nurses here in Lincolnshire maintain and develop theirspecialist skills and expertise
    - Improving the ability of hospital stroke services toattract and retain talented and substantive staff by building a strong, high quality and successful service, reducing our reliance on temporary, expensive staffing solutions
    - Stroke patients spend the minimum time necessaryin a hospital bed, by ensuring community services have the right skills and capacity to support stroke patients at home, or as close to home as possible
- Patients are more likely to receive timely assessment,treatment and diagnosis when they arrive at hospital
- Patients are more likely to see the right specialist, firsttime, 24/7 and receive the best possible care
- Health outcomes and the overall patient experienceare improved

- Reduced burden of stroke on patients, families, carers and the wider health economy through better outcomes for patients

- More working age patients will be able to return to work, and lead more fulfilling lives

We know that this approach already works well in other services in the county. Through the establishment of the Lincolnshire Heart Centre at Lincoln County Hospital, Lincolnshire residents already have first-hand experience of the benefits to patient care that can be achieved by bringing together and consolidating highly specialist clinical expertise into a centre of excellence.

The feedback from engagement about stroke services and how we have used it

There has been ongoing engagement with the public throughout the Lincolnshire Acute Services
Review programme, particularly through the 'Healthy Conversation 2019' engagement exercise.

Some consistent themes in relation to hospital stroke services, including some specifically related to those living in the Boston area, have been shared by the public and stakeholders throughout our engagement to date:

- Consolidation of hospital stroke services in order to provide specialist, expert standards of care is reasonable, however this needs to be balanced against the possible negative impacts of increased travel times, which needs to be mitigated

- It is important that patients should be able to undergo rehabilitation and ongoing care nearer their homes

- Specific to the Boston area:

    - Concerns about ambulance service response times to Lincoln County Hospital and treatment not being started within 60 minutes

    - Concerns about a loss of services at Pilgrim Hospital, Boston and overburdening the Lincoln County Hospital site

We have consistently looked to take into account all public and stakeholder feedback throughout our work.

What is our preferred proposal forchange?

Our preferred proposal for change is to establish a 'centre of excellence' for hyper-acute and acute stroke services at Lincoln County Hospital, which would be supported by increasing the capacity and capability of the community stroke rehabilitation service. TIA clinics would be unaffected at Pilgrim Hospital, Boston.

This would mean hyper-acute and acute stroke services would be consolidated at Lincoln County Hospital and no longer be provided from Pilgrim Hospital, Boston.

It is anticipated the change would affect, on average, 1 to 2 patients a day. These patients would receive hyper- acute and acute stroke services at an alternative hospital.

A key part of our process to evaluate options to tackle the challenges we face was to hold a clinically- led health system stakeholder workshop and four workshops with randomly selected members of the public.

For Stroke Services two solutions remained following the shortlisting of options:

- Consolidate hyper-acute and acute stroke services on the Lincoln County Hospital site, supported by an enhanced community stroke rehabilitation service

- Provide hyper-acute and acute stroke services from Lincoln County Hospital and Pilgrim Hospital, Boston, supported by a combined medical on-call rota

Attendees at the workshop were asked to think about the advantages and disadvantages of the two proposalsagainst agreed criteria.

The table below summarises the level of stakeholderand public support for each change proposal.

Support for options for hyper-acute and acute stroke services		
Support for change proposal	**Stakeholder Workshop**	**Public Workshops**
Consolidated on Lincoln site	61%	64%
Provided from two sites – Lincoln andBoston	27%	26%
No preference	12%	10%

Impact Analysis

As we have developed our proposals we have considered the quality and equality impact of the proposal for change for stroke services.

Through our equality impact assessment, we identifiedtwo groups of people, one of which is defined by a protected characteristic, which may be more likely to be impacted positively or adversely by this proposal.
These groups are age and those who are economically disadvantaged.

Our observations from these assessments are set out opposite. We will continue to review and develop these,including the impact on different groups of people within our population, with independent support, through our public consultation in light of the feedback we receive.

Potential positive impacts

1. Evidence that consolidating hyper-acute and acute stroke services on a smaller number of sites where specialised staff and equipment can be concentratedmeans patients are:
    - More likely to survive and recover more quickly.
    - More likely to have a reduced length of stay inhospital
    - More likely to continue to lead more fulfilling livesin the future, such as being able to return to work
2. Consolidating hospital stroke services helps address the significant workforce shortages and challenges experienced in these services by:
    - Concentrating specialist skills and expertise together to ensure clinical staff maintain and develop these to provide the safest and best possible care
    - Making hospital stroke services more attractive todoctors, nurses and therapists to work in
    - Reducing reliance on temporary, expensive staffingsolutions
3. Consolidation of hospital stroke services on the Lincoln County Hospital site allows more patientsto benefit from these services being located on the same hospital site as the highly successful Lincolnshire Heart Centre, which include:
    - Increased access to important time critical interventions
    - Increased access to acute imaging services, furtherreducing time to treatment
4. Consolidation of stroke services on the Lincoln County Hospital site ensures patients are closer to Nottingham's Queen's Medical Centre in the instancethey require mechanical thrombectomy.

Potential adverse impacts

1. For those patients who would previously have been admitted to Pilgrim Hospital, Boston with a stroke (1to 2 a day on average), treatment would be receivedat an alternative site with the facilities and skills to look after the most seriously ill patients.

    - Lincoln County Hospital is expected to be the alternative site for the majority of patients, witha minority going to Peterborough City Hospital,and Queen Elizabeth Hospital at Kings Lynn on occasion

    These patients would get the specialist input they require at the right time and receive the best possible care. However, it is acknowledged that needing to travel further for this care may be seenas an adverse impact by some people.

    - Of those patients seen at an alternative site, it is estimated that there would be no increase in the number of patients travelling more than 60 minutes by ambulance, the threshold set by the local health system for this type of activity.

    - The friends and family of those patients receiving treatment at an alternative hospital, which better meets the patients care needs, may have to travel further to see them.

12 Acute Services Review: Preferred option – Stroke Services

Note the case for change and proposed model of care described in this chapter are set against the current model of care (i.e. that provided before the COVID-19pandemic and subsequent temporary service changes).

12.1 Case for change

12.1.1 Stroke is the third most common cause of death and most common cause of complex disability in the UK. A stroke can occur at any age; a quarter of stroke deaths occur in under 65 year olds, around 80% of strokes are attributable to high blood pressure, smoking, obesity, poor diet and lack of exercise.

12.1.2 Rates of death from stroke for under 75 year olds per 100k population in 2015-17 was lower forLincolnshire (12.6%) compared with East Midlands (13.0%) or England (13.1%). However, the prevalence of stroke (all ages) in 2018/19 was higher in Lincolnshire (2.3%) compared with both East Midlands (1.9%) and England (1.8%).

12.1.3 It has been estimated that c.3% of the Lincolnshire population will be living with the consequences of stroke by 2020. This will place a considerable burden not only on health services but on families and carers, and the workforce as a whole.

12.1.4 The United Lincolnshire Hospitals NHS Trust (ULHT) currently provides inpatient, hyper-acute(day 0 – 3 of the pathway) and acute stroke services (day 3- to discharge) at both Lincoln Hospital (2019/20: 670 strokes per annum) and Pilgrim Hospital (2019/20: 497 strokes per annum).

12.1.5 Grantham Hospital does not provide hyper-acute or acute stroke services, if strokes present at Grantham Hospital they are rapidly transferred to the most appropriate site (19/20: of 77 stroke patients attending at Grantham Hospital A&E, 18 were strokes and sent on to other sites. Of the remaining 59 mimics 7 were TIAs which also transferred to other sites, 19 were admitted to Grantham, 18 transferred elsewhere and 15 were discharged from A&E).

12.1.6 The NHS *Stroke Services: Configuration Decision Support Guide* recommends that whenassessing the case for change for stroke services the Sentinel Stroke National Audit Programme (SSNAP) analysis should provide the starting point.

12.1.7 The SNAP is comprised of 44 key indicators (KI) that are grouped into 10 domains, which highlight the pre-existing and upcoming national measures. Each domain has a performance level (A to E, with A being best performance) and a total key indicator score is calculated based on the average of the 10 domains. The combined total key indicator score is adjusted for case attainment and audit compliance to provide an overall SSNAP level.

12.1.8 ULHT continually strives to improve the SSNAP performance at Lincoln County Hospital and Boston Pilgrim Hospital, however this is challenging for the reasons set out in this case for change. ULHT's performance by site for the last 12 months is set out in the table below.

Figure 158 – ULHT SSNAP October 2019 to September 2020

SSNAP Level/Score	Jul-Sep20	Apr-Jun20		Jan-Mar20	Oct-Dec19
Lincoln County Hospital					
Team-Centred Total KI Level	B		A	B	C
Team-Centred Total KI Score	80.0		86.0	78.0	68.0
SSNAP Level	B		A	B	C
SSNAP Score	80.0		86.0	80.0	68.0
Boston Pilgrim Hospital		***Domains 5-10***	***All Domains***		
Team-Centred Total KI Level	A	A	D	C	C
Team-Centred Total KI Score	86.7	81.4	52.1	66.0	60.0
SSNAP Level	B		D	C	D
SSNAP Score	78.0		55.9	66.0	57.9

12.1.9 However, when comparing ULHT's SSNAP performance data consideration needs to be given to the changing context stroke services have been provided in and associated changed to pathways:

- December 2019 – March 2020: This period was in essence 'pre-Covid', when both LincolnCounty Hospital and Boston Pilgrim Hospital both classified as a 'Routinely Admitting Hospital' for hyper-acute stroke care. During this period SSNAP scores were:
  - Lincoln County Hospital - 'B' and 'C'; and
  - Boston Pilgrim Hospital - 'C' and 'D'.
- April 2020 – September 2020: In response to the COVID-19 pandemic and the additional pressures this put on the sustainability of the ULHT stroke services, Boston Pilgrim Hospital became a 'Non Routinely Admitting Hospital' (rather than a Routinely Admitting Hospital, which Lincoln County Hospital continued to be). Consequently, during this periodfor Pilgrim the emphasis should be placed on Domains 5 to 10 in the SSNAP data, rather than those which attribute to the first 72 hours). For Boston Pilgrim Hospital the SSNAP report for April – June 2020 reported on all Domains and was also amended to reflect Domains 5-10). The July – September 2020 SSNAP report only focused on Domains 5-10for Boston Pilgrim Hospital. During this period, SSNAP scores were (with the emphasis forBoston Pilgrim on Domains 5-10):
  - Lincoln County Hospital - 'A' and 'B'; and
  - Boston Pilgrim Hospital - 'B'

12.1.10 It should be noted that Lincoln County Hospital was 'A' for the first time in the April-June quarter of 2020. This coincided with the temporary service change to consolidate ULHT hyper-acute stroke services on the Lincoln County Hospital site in light of the challenges the service faced due to COVID-19.

12.1.11 This experience of service consolidation and improved performance aligns to the evidence presented later in this chapter for the concentration of stroke clinical expertise and capacity on to fewer sites.

12.1.12 In addition to SSNAP, 'pre-Covid' ULHT was not achieving the required performance in 1 of the 4 priority standards for 7-day services, for hyper-acute stroke.

Figure 159 – 7-day services and urgent network clinical services

Clinical Standard	ULHT
Clinical Standard 2 – All emergency admissions seen and have a thorough clinical assessment by a suitable consultant as soon as possible but at the latest within 14 hours from the time of admission to hospital	
Clinical Standard 5 – Hospital inpatients have scheduled 7-day access to diagnostic services, typically ultrasound, CT, MRI, echo, endoscopy and microbiology. Consultant-directed diagnostic tests and reporting available 7-days a week	
Clinical Standard 6 – Hospital inpatients have timely 24 hour access, 7-days a week to key consultant-directed interventions that meet relevant specialty guidelines, either on site or through formally agreed networked arrangements with clear protocols	
Clinical Standard 8 – All patients with dependency needs should be seen and reviewed by a consultant twice daily. Once a clear pathway of care has been established, patients should be reviewed at least once every 24hrs, 7 days a week	

12.1.13 The NHS *Stroke Services: Configuration Decision Support Guide* also recommends that hyper-acute stroke units should see no less than 600 strokes per year, as activity below this is not sufficient to ensure staff have enough clinical and institutional learning experience to maintain their skills. The minimum of 600 strokes per year was also a threshold endorsed by the Midlands and East stroke review. Even when factoring in growth in demand the Boston Pilgrim Hospital Service is unlikely to see 600 strokes per year over the next 5 years.

12.1.14 In 2019/20 significant workforce gaps existed across the ULHT stroke services against recommended clinical standards:

- Both Lincoln and Pilgrim Hospitals should have six substantive consultant posts each, however there were only two substantive consultants in post in total with gaps covered byagency and locum doctors (however not always up to a total of 6 on each site) - to date ithas not been possible to recruit substantively to vacancies.
- Vacancy rate at Pilgrim Hospital for nursing was 50%, which led to a reduced number ofbeds being open on the Stroke unit from 28 to 24.

12.1.15 Between the start and end of 2019/20 the 12 month rolling average length of stay across ULHT for stroke patients reduced from 16.1 days to 13.6 days. At Lincoln Hospital the reduction was 16.5 days to 14.4 days, looking at individual months the lowest average length of stay was 10.6 days. At Pilgrim Hospital the rolling average length of stay reduced from 13.8 days to 12.1 days, the lowest average length of stay for an individual month was 11.5 days.

12.1.16 The current community stroke service provided in Lincolnshire was procured in 2010, prior to this there were no community based rehabilitation services for stroke survivors. It is a countywide service that has established excellent working relationships with all acute stroke units delivering care to Lincolnshire residents. It is delivered by Lincolnshire Community Health Services NHS Trust (LCHS) in partnership with Lincolnshire Adult Care Services and the Stroke Association. At present the service supports c.60% of stroke survivors to leave hospital.

12.1.17 To address these challenges, the preferred option for the future provision of stroke services across Lincolnshire identified through the options appraisal process once fully implemented comprises of two elements that fully align with recommendations in the NHS Long Term Plan:

- Consolidation of hyper-acute and acute stroke services (day 0-7 post stroke) at the Lincoln Hospital; and
- Provision of a much greater enhanced community-based stroke rehabilitation service with the aim to reduce the length of time patients stay in the acute hospital (best practice target 7 days).

12.1.18 It is proposed there are two main stages to the implementation of this preferred model:

- Phase 1: Enhancement of the community stroke services, this will act as an enabler to the consolidation of hospital stroke services. Following significant work to re-define and agree how an enhanced stroke rehabilitation service should function and what resources would be required, an initial investment was made and ongoing review and patient feedback will inform further development of the service.
- Phase 2: Public consultation on the consolidation of hyper-acute and acute stroke services at the Lincoln Hospital site followed by implementation (as appropriate).

12.1.19 It should be noted the case for change for stroke services developed for the first ASR ClinicalSummit in early 2018 has not changed, and the service's fragility was highlighted further through COVID-19. The case for change and preferred option are described in more detail inthe remainder of the chapter.

12.2 Consolidation of hyper-acute and acute services at Lincoln Hospital

Overview

12.2.1 The option to consolidate hyper-acute and acute stroke services at Lincoln Hospital was designed through a number of clinically led workshops headed by the Stroke Consultants at ULHT with support and contributions from Professor Rudd (the National Clinical Director for Stroke Services), and local acute, primary and community based health professional. A numberof influential factors for why the Lincoln Hospital site was identified to centralise acute stroke services as opposed to Pilgrim Hospital were identified.

12.2.2 Co-location of specialised services is very important. There is an established and highly successful heart centre on the Lincolnshire Hospital site. The cardiology team support the stroke team to deliver an optimal front door service as co-location with cardiology enables access to more important time critical interventions like bubble echocardiograms and implantable loop recorders. At Lincoln Hospital there is an established Advanced Care Practioner (ACP) service and pathway that was noted as a regional example of excellence by a Getting It Right First Time (GIRFT) review.

12.2.3 Co-location with the heart unit also has the benefit of using the Cath lab facilities to directly access acute imaging thus bypassing A&E and further reducing door to needle time. Moving these cardiac services from the Lincoln site to another hospital would require significant financial investment and is risky in terms of being able to transfer all staff for this service.

12.2.4 Mechanical thrombectomy is a relatively new treatment for strokes that is currently only carried out in tertiary stroke centres, the closest of which for Lincolnshire residents is Nottingham University Hospitals NHS Trust (NUH). Lincoln Hospital offers a shorter travel time to NUH than Pilgrim Hospital by c.30 minutes. Consolidation of stroke services at Lincoln hospital also provides an increased opportunity for the Lincoln site to provide mechanical thrombectomy in the future as there has been discussion at a national level that Cardiologists may be considered as being appropriate to deliver mechanical thrombectomy based on their experience with PPCI.

12.2.5 Vascular Surgery is currently provided from Pilgrim Hospital, and will be going forward. Co-location with Vascular Surgery is helpful, however the timeline for surgery is within 2 weeks andreserved for those with no disability or minor disability patients who are fit for surgery.

12.2.6 ULHT's stroke service faced a number of ongoing recruitment challenges. Experience has shown it is easier to recruit to the Lincoln Hospital compared to Pilgrim Hospital, and thereforethe current and future feasibility of the service would be better protected if services were consolidated on the Lincoln site.

12.2.7 More Lincolnshire residents would also receive their care out of the county if stroke services were consolidated on the Pilgrim Hospital site rather than at Lincoln Hospital. Based on strokepatients attending their nearest hospital it is estimated c.150 more patients per year would be treated outside of Lincolnshire if stroke services were consolidated at Pilgrim Hospital rather than Lincoln Hospital (this reduces to c.65 patients if a 15-minute travel time preference for Pilgrim hospital is applied). Lincoln Hospital is therefore a better solution for more of Lincolnshire's population on that basis.

12.2.8 When the model for consolidating hyper-acute and acute stroke services at Lincoln Hospital was presented to the East Midlands Clinical Senate it was praised by the panel and deemed to be well led clinically and from the evidence provided well researched. It was acknowledged that the proposed reconfiguration would reduce unwarranted variation in outcomes and would ensure a more consistent achievement of clinical standards and national guidelines.

12.2.9 The only question raised was how patients with Transient Ischaemic Attack (TIA) symptoms attending Pilgrim Hospital would be managed. All high risk patients will be offered an appointment in Lincoln the next day, as per national guidelines. There would be two follow-upstroke and TIA clinics a week at Boston Hospital for local patients (e.g. post-discharge) and some low risk patients attending with TIA symptoms could be seen in these.

12.2.10 These clinics will rotate for all clinicians, unless some express preferences for them. There is scope for more clinics if the demand is there. It is the intention that a once a month clinic in Louth, Skegness and Gainsborough will be established once the demand has been ascertained. Skegness is the highest priority.

12.2.11 Since this initial work on the future care model for acute stroke services the NHS Long Term Plan has been published that also recommended the consolidation of specialist acute stroke services to improve quality and outcomes.

Quality

12.2.12 The evidence is clear that centralising hyper-acute stroke treatment at a much smaller number of hospitals has considerable benefits as these units are more likely to provide more effective stroke treatment thereby saving lives, reducing the chances of disability and shortening the time spent in hospital.

12.2.13 Evaluation of the centralisation of hyper-acute stroke services in London and Greater Manchester have shown these models can reduce mortality, improve provision of evidencebased clinical interventions and reduce length of stay. The evaluations have shown these effects can be sustained over time.

12.2.14 Reconfiguration of hyper-acute stroke services in London and Greater Manchester has been shown to deliver unadjusted mortality decreases at 30 days of 2.8% and 1.6% respectively (estimated to be the equivalent of c.100 and c.70 extra lives saved per year respectively). These areas have also reported an absolute decline in risk adjusted length of hospital stay of 1.4 days and 2.0 days respectively.

12.2.15 A significant improvement in patient outcomes has also been seen through similar changes to hyper-acute services in Northumberland.

12.2.16 Evidence shows that stroke patients treated in dedicated and focused hyper-acute stroke units are more likely to survive and recover more quickly because these units are fully staffed and equipped, and set up to deliver specialist care 24/7. This also helps to address the significant workforce shortages and challenges in stroke by concentrating specialist stroke skills and expertise under one roof.

12.2.17 Performance against the SSNAP has required further improvement in stroke services at Lincoln Hospital and Pilgrim Hospital for some time. Through the consolidation of acute services on the Lincoln Hospital site it should be possible to drive improvements in these clinical standards and therefore the care that patients receive.

12.2.18 A key factor in achieving this will be not providing two acute stroke units; one that is borderline on the critical mass (600 strokes) for the minimum number of strokes per year and one that is below the recommended critical mass. For the latter, even when factoring in demand growth it is unlikely to achieve the critical mass over the next 5-10 years.

12.2.19 A single acute stroke service at Lincoln hospital would treat over 900 strokes a year, which would ensure staff have enough clinical and institutional learning experience to maintain their own skills and expertise. This in turn would make the service more attractive to doctors and nurses to work in and would support addressing some of the key workforce challenges faced.

12.2.20 Such an improvement in outcomes for patients by consolidating services is also seen in other services such as for heart attack patients. Lincolnshire residents have already experienced this through the establishment of the Lincolnshire Heart Centre at Lincoln Hospital.

12.2.21 In 2013 the Lincolnshire Heart Centre opened, underpinned by a £4.3m investment in a new facility. Since it opened 1000 lives have been saved by patients being treated at the specialistcentre. The latest statistics from the National Institute for Cardiovascular Outcomes Research(NICOR) show the centre outperforming all of the national targets.

12.2.22 Anyone suffering a heart attack caused by blockage of an artery is treated by using a balloon catheter called an angioplasty. The national target is 150 minutes for all patients to receive this treatment from first 999 call to when the balloon is inflated. Nationally, 75% of patients are treated within this window. In Lincolnshire, despite the large geographical area and road network, 85% of patients are treated within the timeframe.

12.2.23 On average it takes the specialist team just 32 minutes from the moment a patient arrives in the ambulance at hospital to open the artery – national average is 40 minutes. Patients spend on average 2 days at Lincoln County Hospital, whereas nationally it is 3 days.

12.2.24 30-day mortality for patients who have suffered a heart attack (STEMI/nSTEMI combined) has fallen from 13.8% to 5.4%.

12.2.25 Specifically in the context of the temporary changes made by ULHT to consolidate hyper-acute stroke on the Lincoln Hospital site in response to the additional pressures put on the ULHT stroke service by the COVID-19 pandemic, a number of useful insights have emerged (based on information April to September 2020):

- Patient feedback has been good with only 3 negative comments via Care Opinion in 6 months. Comments related to poor communication with patient regarding reason for transfer from Boston ED to Lincoln Hospital site for Stroke care.
- All eligible patients for Thrombolysis were treated within the clinical window.
- All eligible patient for mechanical thrombectomy met the travel times and onward transfer to a tertiary centre. Since April 2020 9 patient were sent for mechanical thrombectomy (3 of whom were from the Boston catchment area, in contrast to a single patient in the preceding period from the start of the service at Queens Medical Centre Nottingham).

Access

12.2.26 Pilgrim Hospital currently treats 497 strokes a year (19/20), those patients transported to Pilgrim Hospital by ambulance generally originate from Boston, Mablethorpe on the east coast and Spalding to the south.

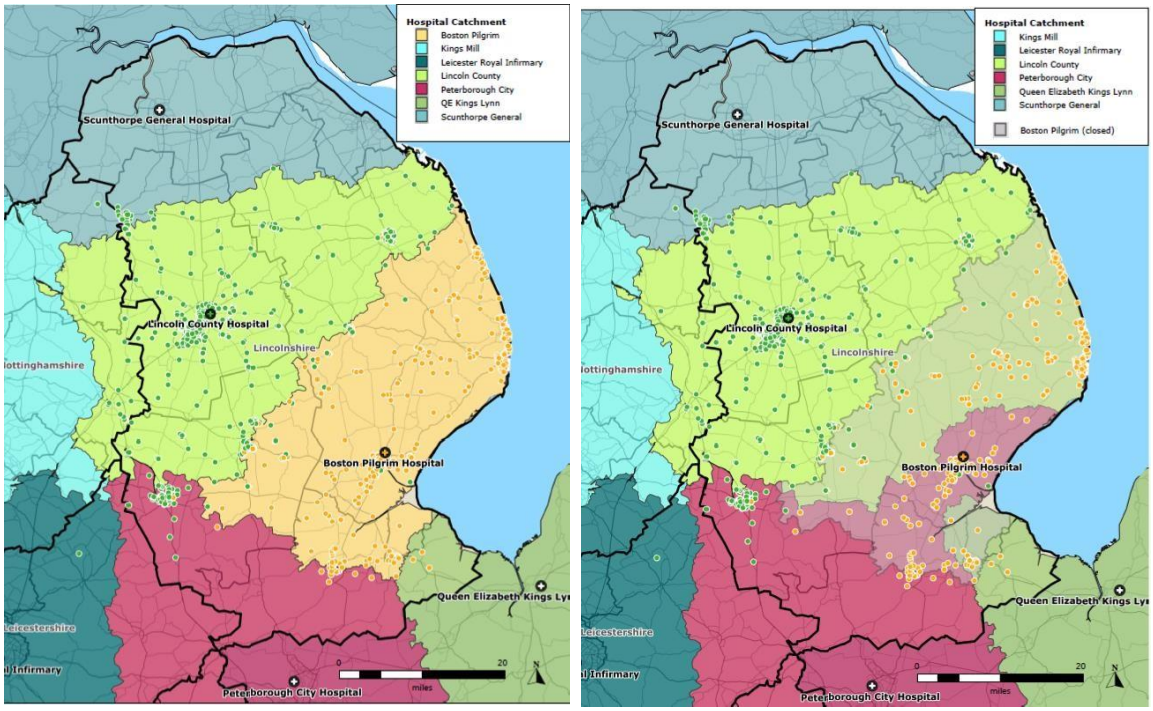
12.2.27 Once fully implemented the preferred option to consolidate stroke services at Lincoln Hospital will displace all 497 stroke patients currently seen at Pilgrim Hospital. In the proposed model of consolidated hyper-acute and acute stroke services at Lincoln Hospital, the patient pathway will see patients with FAST positive symptoms who would have previously gone to Pilgrim Hospital taken directly to the nearest A&E Department by the ambulance service.

12.2.28 For patients who self-present at the Pilgrim Hospital A&E department, they will be assessed and transferred to Lincoln Hospital by ambulance for treatment if their symptoms indicate a diagnosis of stroke.

12.2.29 The maps below show the current hospital catchment areas for stroke patients and what the hospital catchment areas would expected to be for stroke patients if hyper-acute and acute stroke services were consolidated at the Lincoln Hospital site, once fully implemented.

Figure 160 – Hospital catchment areas: current and proposed preferred option

Current **Preferred Option**



12.2.30 These are derived from analysis and modelling completed by Operational Research in Health Ltd (ORH) on potential changes to stroke services at Pilgrim Boston Hospital in 2018. Approximately 50% of the Pilgrim Hospital patients would be taken to Lincoln Hospital and the others would be transported out of county, mostly to Peterborough.

12.2.31 ORH used a combination of East Midlands Ambulance Trust data and data on FAST-positive stroke patients from Lincolnshire. Travel time analysis was undertaken to quantify the base position for Pilgrim Hospital patients and how travel times would be expected to change if changes to services occur. Travel times were based on blue-light speeds.

12.2.32 Under the proposal of consolidating acute stroke services at Lincoln Hospital, it is estimated the average travel time by ambulance to an acute stroke unit for stroke patients who would have gone to Pilgrim Hospital will increase from 23m58s to 44m28s (increase of 20m30s on average). This is based on the assumption patients attend their nearest unit.

12.2.33 In 2015 the predecessor programme to ASR, LHAC, prescribed and agreed the level of activity which should be accessible within three different time thresholds. The three thresholds were 45 minutes (A&E, maternity and non-elective paediatrics), 60 minutes (all other non-electives and outpatients) and 75 minutes (elective paediatrics, day case surgery and elective surgery).

12.2.34 Stroke services fall into the 60-minute threshold, as other non-elective services, and the travel time analysis conducted estimated that under the proposal where stroke services are consolidated at Lincoln Hospital no patients would travel over 60-minutes. Assuming patients travel to their nearest acute stroke unit.

12.2.35 A sensitivity analysis was conducted on the number of patients travelling over 60-minutes if stroke services were consolidated at Lincoln Hospital. This estimated that even with patients travelling to their nearest acute stroke unit plus a 15-miunte threshold preference for Lincoln County Hospital, no patients would travel over 60-minutes (increase in average travel time of 22m53s). It is estimates around 75% of Pilgrim Hospital patients would attend Lincoln Hospital under this scenario.

12.2.36 The sensitivity analysis estimated patients would still not travel more than 60-minutes when the threshold was increased to 20-minutes. Under this scenario the average increase in travel time to hospital is 23m07s, compared to 20m30s if there is no preference.

12.2.37 The table below provides a summary of the estimated impact on the number of patients displaced and associated travel times by ambulance when the preferred option is fully implemented (based on 19/20 activity and forecast 23/24 activity). This includes a sensitivity analysis relating to patients not attending the nearest hospital.

Figure 161 – Displaced stroke activity and impact on travel times

	Lincoln Hospital		Pilgrim Hospital		Peterborough Hospital		QE Kings Lyn Hospital	
	19/20	23/24	19/20	23/24	19/20	23/24	19/20	23/24
Patients attend nearest hospital								
Stroke Activity	+236	+246	-497	-517	+226	+235	+35	+36
Travelling +60 mins.	0	0	0	0	0	0	0	0
Sensitivity Analysis – nearest hospital +5mins								
Stroke Activity	+277	+289	-497	-517	+185	+192	+35	+36
Travelling +60 mins.	0	0	0	0	0	0	0	0
Sensitivity Analysis – nearest hospital +10mins								
Stroke Activity	+338	+352	-497	-517	+124	+129	+35	+36
Travelling +60 mins.	0	0	0	0	0	0	0	0
Sensitivity Analysis – nearest hospital +15mins								
Stroke Activity	+376	+392	-497	-517	+86	+89	+35	+36
Travelling +60 mins.	0	0	0	0	0	0	0	0

NOTE: Forecast is based on average annual growth rate of 0.97% p.a.

12.2.38 A number of stroke patients currently transferred to Boston Hospital are from the most deprived wards, as defined by the Index of Multiple Deprivation (IMD), around Skegness and some areas of Boston. There are also pockets of demand in less deprived wards around Coningsby and Woodhall Spa.

12.2.39 The ORH analysis identified the majority of wards which account for the highest 10% of IMD scores in Lincolnshire currently have travel times of over 30-minutes, with an average of c.35m32s. ORH also modelled the scenario of Pilgrim Hospital stroke services being consolidated at Lincoln Hospital, which estimated all of these wards experience an increase in average travel time to hospital, with an average increase of c.21m39s (based on attending nearest hospital).

12.2.40 The ORH modelling identified that under the scenario where Boston Hospital stroke services are consolidated at Lincoln County Hospital, the change in travel time is generally similar regardless of the IMD group. But the most deprived wards still have the longest travel time.

12.2.41 The analysis and modelling completed by ORH on potential changes to stroke services at Pilgrim Boston Hospital in 2018 was re-run in 2021 with more recent data. The findings were very similar to the original analysis, including the modelling identifying no patients would travel over 60 minutes by ambulance (including when a threshold preference of 20 minutes is set for Lincoln County Hospital). The original report and more recent report, which includes a comparison of findings between the two reports, are included in Appendix F.

12.2.42 During the various public engagement exercises that have taken place a number of people, particularly in the Boston area, raised some concern about travel time for people with symptoms of a suspected stroke if the service was no longer provided at Pilgrim Hospital.

12.2.43 Something in particular that was raised was the 'golden hour'. The conversations highlighted there were differing views amongst the public about what the 'golden hour' referred to, with many thinking of it in the context of the core principle of rapid intervention in trauma cases, rather than the specific golden hour for administering thrombolysis treatment.

12.2.44 The golden hour is often used to refer to the period of time following a traumatic injury during which there is the highest likelihood that prompt medical and surgical treatment will prevent death. While initially defined as an hour the exact time period depends on the nature of the injury, and can be more than or less than this duration. It is well established that the person's chances of survival are greatest if they receive care within a short period of time after a severe injury; however, there is no evidence to suggest that survival rates drop off after 60 minutes.

12.2.45 The golden hour for stroke services refers to the door to needle time i.e. from the patient arriving in hospital to administering the thrombolysis treatment. It is a target and has no clinical significance to outcome. The sooner the treatment is given, the better the chance of a better outcome for those who are going to benefit from the treatment. Not everybody can have the treatment as it depends on the type of stroke, around 15% of all patients can receive this treatment and of these one third (5% of total) will benefit.

12.2.46 There is a 4.5-hour limit in the national clinical stroke guidance that refers to the time within which thrombolysis treatment can be administered with the current licence. This is more relevant to clinical practice, but it starts from the time of onset of stroke symptoms or from when the last time the patient was seen well. When discussing the preferred option for stroke services with the public this was explained.

12.2.47 In this context of the '60-minute door to needle time' and '4.5-hour limit for the time in which thrombolysis can be administered' it is important to note the local experience of consolidating heart services on to the Lincoln Hospital site to create the Lincolnshire Heart Centre and what can be achieved:

- On average it takes the specialist team in Lincoln Hospital just 32 minutes from the moment a patient arrives in the ambulance at hospital to open the artery – national average is 40 minutes.
- The national target is 2.5 hours for all patients to receive angioplasty from first 999 call to when the balloon is inflated. Nationally, 75% of patients are treated within this window. In Lincolnshire, despite the large geographical area and road network, 85% of patients are treated within the timeframe.

12.2.48 The NHS Lincolnshire CCG fully recognises its duty to reduce inequalities in respect of access to health services and that the proposals will have an adverse impact on travel times for some people from areas of high deprivation.

12.2.49 Given the evidence of the impact of centralising hyper-acute stroke care (including the impact of temporary changes to ULHT's stroke services in light of Covid on its SSNAP scores), it has been concluded the clinical benefits and outcomes outweigh the impact of increase geographical distance. However, it should be recognised that the travel time analysis identified that all patients displaced would still be within 60-minutes travel time of a hyper-acute stroke unit.

12.2.50 It should also be recognised that central to the preferred model for acute stroke services is an enhanced community service that will enable a shorter length of stay in hospital following a stroke. This would support patients to return back to their own communities much faster than they currently do.

12.2.51 This approach fully aligns with the feedback received from the public during the various engagement exercises. A common theme arsing in these discussions was the public thought it was important that patients should be able to undergo rehabilitation and ongoing care nearer their homes.

12.2.52 Conversations are ongoing with Lincolnshire County Council regarding public transport and how it supports access to health services in the wider sense. The impact of the proposed service changes on access has been considered in the Equality Impact Assessment and this will be tested and explored further through consultation with the public before any plans are finalised.

12.2.53 These plans, for example, could include providing additional non-emergency patient transport such as cohorting appointments by postcode and providing a shuttle service. Any plans developed would need to be done so in the context of existing local and national patient transport policies and criteria.

12.2.54 In addition, through workshops with stakeholders proposals have been developed to improve support to patients with regards to travel in the broadest sense across Lincolnshire (i.e. not just relating to proposed service changes under the acute services review). These include:

- Ensuring a seamless process for advice, eligibility assessment and booking
- Improved coordinated way of ensuring the appropriate transport is arranged for discharges from hospital:
    - The default should be Non-Emergency Patient Transport Services (NEPTS) unless there is a ‘medical need’
    - Better planning and coordination with the family/patient early in a patients stay as an integral part of discharge planning
    - Coordination of NEPTS with potential other options through a single system approach to discharge planning
- Booking of clinics:
    - More proactive choices regarding clinic bookings should include a discussion on ‘how are you intending to travel’
    - Real time information to support administrators in understanding public transport should be easily accessible on their IT systems so that if the patient is travelling by bus and the first bus doesn’t arrive until 10:00 the patient is offered an appointment after this time
- Integration of CallConnect and NEPTS journey planning to reduce duplication
- Integration of systems to allow funded, non-funded and concessionary fares/bus passes to use multiple types of transport

Affordability and Deliverability

12.2.55 Currently there are 28 stroke beds in the Lincoln Hospital stroke unit and 28 in the Pilgrim Hospital unit, however only 24 beds are open at the latter due to nurse shortages.

12.2.56 To inform the number of stroke beds required at Lincoln Hospital under the preferred model to consolidate acute stroke services on that site an analysis has been conducted based on three key factors:

- Activity growth rate;
- Preference for hospital site; and
- Average length of stay

Figure 162 – Future stroke service bed requirement at Lincoln Hospital 2023/24

Lincoln Hospital bed requirement under preferred option				
	Current	Current av. LoS	10 day av. LoS	7 day av. LoS
Based on ONS all age growth (19/20-23/24: 2.17%)				
Nearest	*28*	*43*	28	20
Nearest + 5mins	*28*	*45*	30	21
Nearest + 10mins	*28*	*47*	32	22
Nearest + 15mins	*28*	*48*	33	23
Based on av. annual growth rate (19/20-23/24: 3.88%)				
Nearest	*28*	*44*	29	20
Nearest + 5mins	*28*	*46*	30	21
Nearest + 10mins	*28*	*48*	32	23
Nearest + 15mins	*28*	*49*	33	23
Based on ONS 65+ growth rate (19/20-23/24: 6.70%)				
Nearest	*28*	*45*	29	21
Nearest + 5mins	*28*	*47*	31	22
Nearest + 10mins	*28*	*49*	33	23
Nearest + 15mins	*28*	*51*	34	24

12.2.57 The factor that has the biggest impact on the required bed capacity for a consolidated acute stroke unit at Lincoln Hospital is average length of stay. The ambition is to move to an average length of stay of 7 days supported through an enhanced discharge service.

12.2.58 However, based on the evidence from Northampton and Peterborough that have implemented the enhanced community model a 7-day length of stay in the acute setting may not be achieved straight away. Therefore, the bed capacity for the proposed future model has been based on an average length of stay of 10 days.

12.2.59 Although care should be taken when comparing data between 2019/20 and 2020/21 given the impact Covid-19 had on peoples behaviours and the changes in patient pathways, the average length of stay at Lincoln County hospital reduced from c.15 days to c.13 days between these two years, which coincided with the consolidation of hyper-acute stroke services on the Lincoln Hospital site. With the average length of stay in some months below 10 days.

12.2.60 The factor that has the second largest impact on the required bed capacity for the proposed model of care is hospital site preference. Given within the 15-minute site preference scenario for Lincoln Hospital it is estimated patient travel times will not exceed 60 minutes, to strike the optimum balance of ensuring sufficient capacity at Lincoln Hospital and the impact on out of county hospitals this scenario has been used as the basis for the future bed capacity requirement.

12.2.61 The factor that has the least impact on the required bed capacity is the activity growth rate. The future bed capacity requirement has been based on the average annual growth rate.

12.2.62 Drawing the chosen assumptions for these three factors together gives a future bed requirement of 33 acute stroke beds on the Lincoln Hospital site to deliver the preferred model.

12.2.63 When giving consideration to the future capacity requirements for a consolidated acute stroke service at Lincoln Hospital, as well as the stroke activity consideration needs to be given to mimic activity.

12.2.64 It is estimated that currently at Lincoln Hospital mimics use around 2 beds a year and around 2.7 beds at Pilgrim Hospital. Under the proposed model for acute stroke services it is estimated that Lincoln Hospital would need an additional 1.3 beds for mimics if patients attend their nearest hospital and an additional 2 beds if a 15-minute preference for Lincoln Hospital is applied.

12.2.65 Based on mimics requiring 2 beds, this gives a total bed requirement of 35 beds for the proposed model to consolidate acute stroke services on the Lincoln Hospital site.

12.2.66 Currently significant workforce gaps also exist across ULHT stroke services against recommended clinical standards, In particular in stroke consultants across the whole service and in nursing at Pilgrim Hospital.

12.2.67 The proposed future model of acute stroke services supports a more sustainable and resilient workforce, particularly in the medical consultant and nursing groups, by:

- A reduction in a heavy reliance on locum and agency staff
- Increases the chances of recruiting to substantive roles if the service is based at Lincoln Hospital alongside other specialist services
- Avoids having to spread 6.0 consultants across two sites
- Supports a concentration (through service consolidation and the provision of fewer beds) of nursing staff at the Lincoln site, where there are currently fewer vacancies than at the Pilgrim site

12.2.68 The table below sets out the current hospital based stroke service workforce model (funded establishment) together with the workforce model under the proposed preferred option.

Figure 163 – Stroke services workforce model (funded establishment)

Staff Group	Current configuration		Preferred Option	
	Lincoln Hospital	Pilgrim Hospital	Lincoln Hospital	Pilgrim Hospital
Medical				.
• Consultants	3.0	3.0	6.0	-
• Associate Spec.	1.0	1.0	2.0	-
• F2 (Trust)	-	1.0	1.0	-
• F2 (Deanery)	1.0	-	1.0	
• F1 (Trust)	-	1.0	1.0	
• F1 (Deanery)	1.0	1.0	2.0	
• GPVTS (Deanery)	1.0	-	1.0	
• Core Trainee (Deanery)	-	1.0	1.0	
• Administration	2.0	2.66	4.66	
ACP				
• Nurse ACPs			5.80	-
Nursing				
• Registered	26.90	23.24	51.08	-
• Nursing Associate	2.00	4.0	-	-
• Non Registered	15.32	11.26	21.04	
• Ward Clerk	1.0	2.0	1.4	
AHP				
• Physio/OT/SALT	39.36		33.67	

12.2.69 As there will no longer be a stroke service at Pilgrim Hospital, staff will be offered the opportunity to transfer to Lincoln Hospital, or to be re-deployed within another department at the Pilgrim Hospital.

12.3 Stroke Early Supported Discharge (ESD) Service

12.3.1 Between the start and end of 2019/20 the 12 month rolling average length of stay across ULHT for stroke patients reduced from 16.1 days to 13.6 days. At Lincoln Hospital the reduction was 16.5 days to 14.4 days, looking at individual months the lowest average length of stay was 10.6 days. At Pilgrim Hospital the rolling average length of stay reduced from 13.8 days to 12.1 days, the lowest average length of stay for an individual month was 11.5 days.

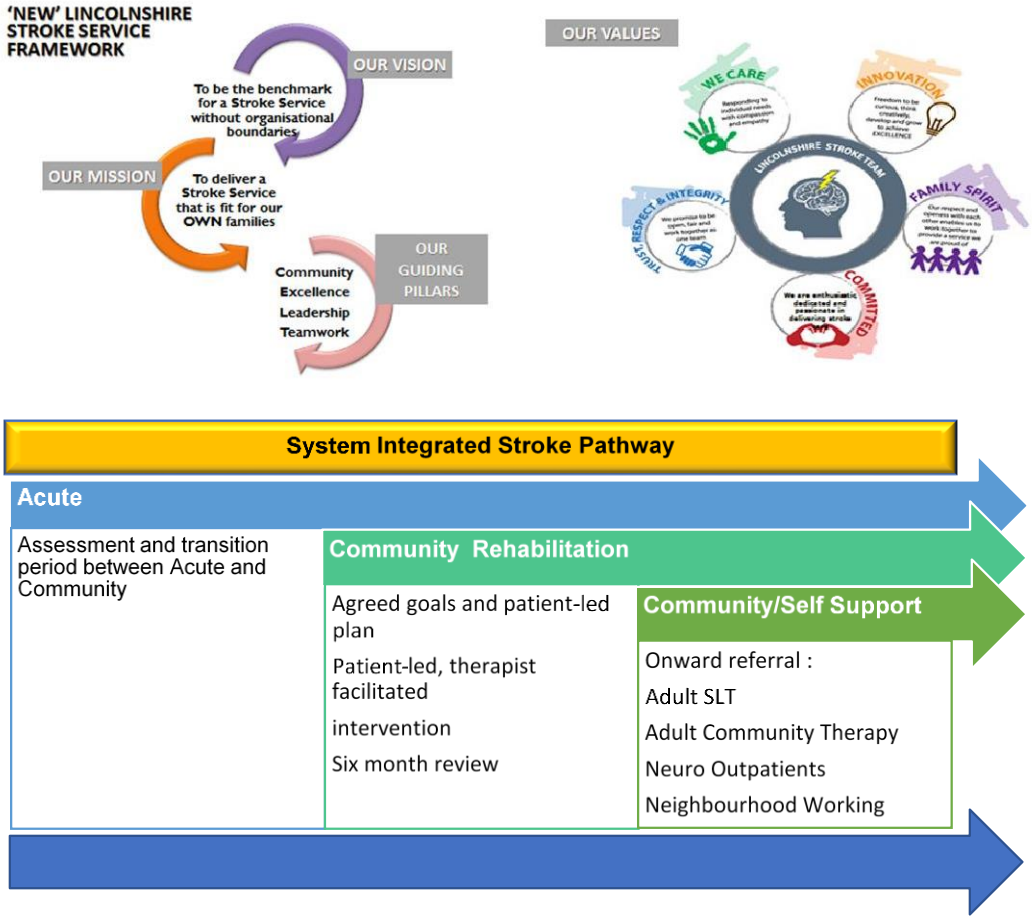
12.3.2 During 2019 significant work took place to re-define and agree how an enhanced stroke rehabilitation service should function and what resources would be required. This aligned to the national recommendations regarding enhanced community stroke services set out in the NHS Long Term Plan.

12.3.3 From the outset it was agreed that there should be an integrated stroke rehabilitation service that worked across both community and acute care with a multi-organisational/multi-professional project group established to drive the work forward.

12.3.4 Simultaneously Organisational Development (OD) work commenced to bring the separate teams together and agree how an integrated service would be established. The aim throughout has *been 'To establish an integrated, seamless pathway and a community based stroke rehabilitation service that is able to support ALL stroke survivors, operating 7 days a week'*.

12.3.5 As part of this process a clear vision, mission and guiding principles were collectively developed and agreed.

Figure 164 – Overview of proposed enhanced community stroke model



12.3.6 Towards the end of the OD work the teams were keen to 'test' out how the new, agreed stroke rehabilitation pathway would operate, thus it was agreed to utilise rapid improvement methodology, 100-day approach, to do this.

12.3.7 Between October 2019 and January 2020 three teams worked together across the pathway with the following change achieved:

- Supported a reduction in length of stay (LoS) on the Stroke Unit in Lincoln County
- Launched the Lincolnshire Stroke YouTube Channel
- Launched a Patient Handbook that travels with the patient from acute to community and beyond
- Initiated a dedicated Stroke Orthoptic clinic
- Started acute/community staff rotational work experience
- Begun the SAM2 trial linked to timely discharge
- Enabled (hospital) WebV access for Social Care colleagues
- Initiated a trial for single assessment and single transfer form
- Piloted 'Living Well After Stroke' Groups

12.3.8 This enhanced community service will:

- Support all stroke survivors across Lincolnshire to receive their rehabilitation within their local community wherever possible;
- Work with the hyper-acute/acute stroke service to deliver an average length of stay of 7 days;
- Ensure a clear route back into specialist care for patients once discharged from the service;
- Offer a 6-month review to all stroke survivors;
- Support new professions to the Lincolnshire Stroke pathway in a community setting e.g. dietetics and psychology;
- Embed the Stroke Association team into the new Lincolnshire Stroke Service; and
- Improve efficiencies in the system through improved outcomes e.g. reduced hospital utilization, reduced social care costs over the medium to long term.

12.3.9 The service will link in closely with the Neighbourhood Teams, who will provide the requisite nursing, social care support and on-going 'self-care' options and support for stroke survivors.

12.3.10 The service will support community hospitals, which will be health & wellbeing hubs providing different levels of care under one roof, making the most effective use of inpatient and ambulatory services offered locally, including rehabilitation, reablement and palliative care services.

12.3.11 At present between four and six stroke survivors per week are discharged into a community bed, which is expected to continue. However, the overriding principle for this work is 'home first' and as the enhanced community stroke service embeds and integrates into Neighbourhood working the ability to support complex survivors at home is expected to increase.

12.3.12 The increase in the community stroke service team to deliver this service is set out in the table below.

Figure 165 – Proposed staffing increase to community stroke team

Staff group	Current service	Proposed increase
Occupational Therapy	8.63	1.78
Physiotherapy	15.72	2.26
Speech and Language Therapy	3.90	2.25
Rehabilitation Assistants	17.70	6.00
Dietician	0	1.0
Clinical Psychologist (specialising in Stroke)	0	1.0
Assistant Psychologist	0	1.0
Total	*45.95*	*15.29*

12.4 East Midlands Clinical Senate recommendations and workforce improvements

12.4.1 The East Midlands Clinical Senate has been involved all the way through the options development and appraisal process for Stroke services. This included an independent clinical review where they were asked to consider whether there is a clear clinical evidence base underpinning the proposal.

12.4.2 The review focussed on the clinical interdependencies and the totality of the changes proposed. Specifically, the clinical review team was asked whether it supported the ASR proposals based on clinical sustainability, workforce deliverability and improvements in clinical outcomes.

12.4.3 Through this review the East Midlands Clinical Senate supported the proposal for Stroke services and made a number of recommendations and workforce improvements. The table below sets out the recommendations and progress against them.

Figure 166 – East Midlands Clinical Senate recommendations and progress

EM Clinical Senate Recommendation	Progress
Ensure the clinical guidelines for the management of patients with a Transient Ischaemic Attack (TIA) are met	All high risk patients will be offered an appointment at Lincoln County Hospital the next day, as per national guidelines. There would be two follow-up stroke and TIA clinics a week at Boston Hospital for local patients (e.g. post-discharge) and some low risk patients attending with TIA symptoms could be seen there These clinics will rotate for all clinicians, unless some express preferences for them. There is scope for more clinics if the demand is there. It is the intention that a once a month clinics in Louth, Skegness and Gainsborough will be established one the demand has been ascertained. Skegness is the highest priority
The EM Clinical Senate reflected Lincolnshire is well placed on the East Coast for a clinical trial around early (in ambulance) stroke management – this could be explored further	The service is not aware of any work of this type locally

12.5 Quality and Equality Impact Assessments

12.5.1 A Quality Impact Assessment (QIA) has been completed for the proposed service change for stroke services to identify clinical risks to the reconfiguration. This has been completed using a standard template and assured by the Head of Nursing Services for Medicine.

12.5.2 The QIA for the service proposal:

- Identifies the key relevant quality measures for the areas of safety, clinical effectiveness,and patient experience;
- Identifies any risks to achieving an acceptable quality in these areas; and
- Presents mitigating actions.

12.5.3 A summary of the QIA for the proposed changes to stroke services is set out below and the full version is included in Appendix I.

Figure 167 – Summary of QIA for proposed stroke service changes

Area	Summary Impact(+ve & -ve)	Summary Actions
1. Quality		
Duty of Quality	▪ Perceived reduction in access ▪ Quality of care is anticipated to improve ▪ Specialist centre should attract candidates from further afield ▪ Boston staff unable to relocate may seek alternative employment, but could also fill vacancies at Boston Hospital	▪ Comprehensive communication strategy and robust consultation ▪ Staff consultation ▪ Asses impact on future staffing numbers
Patient Safety	▪ Risk medics and nurses from Boston Hospital do not relocate to Lincoln.	▪ Staff consultation ▪ Assess potential impact on future staffing numbers ▪ Recruitment and retention strategy ▪ Supervised training time built into future rotas to rapidly upskill staff
2. Experience		
Patient Experience	▪ Quality of care not anticipated to be impacted at all ▪ Increase travel distance for relatives based on east coast may be negatively reflected in patient satisfaction surveys ▪ Lack of local in-patient service may cause dissatisfaction with residents local to Pilgrim Hospital. ▪ Limit choice of in-patient care to single ULHT site with potential for patients to wish to receive treatment in surrounding trusts	▪ Comprehensive communication strategy and robust consultation process regarding service changes ▪ Communicate benefits of a single site centre of excellence
Staff Experience	▪ Potentially positive impact being able to recruit to a specialist centre may make posts more attractive ▪ Staff who do not wish to transfer from Pilgrim Hospital could increase turnover rate ▪ Could establish a more robust workforce at Lincoln Hospital improving retention and sickness rates	▪ Strong recruitment campaign to market Trust and benefits or working in a specialist centre ▪ Communicate benefits of a single site centre of excellence
3. Effectiveness		
Clinical Effectiveness & Outcomes	▪ Build on evidence based proactive already in place to drive improvement in SSNAP ▪ May impact on very small numbers of patients who may not meet time critical element to support thrombolysis ▪ Proposed model assumes enhanced community rehab service will be in place ▪ A consolidated inpatient unit will be more cost effective ▪ Recruitment is anticipated to be easier, thus reducing reliance on agency locum cover at Boston	▪ Clear clinical messages for patients as part of a well-planned consultation process ▪ Ensure robust bed modelling of required acute and community capacity ▪ Development of robust recruitment plans ▪ Development of clear service/staff integration plans

12.5.4 Quality for the domains of patient experience, patient safety and clinical effectiveness will be monitored and assured for United Lincolnshire Hospitals Trust (ULHT) through a combination of surveillance mechanisms throughout the Acute Services change and improvement program.

12.5.5 A system wide Lincolnshire Quality Surveillance Group is now meeting bi-monthly chaired by the CCG Director of Nursing with Clinical & Quality lead attendance from all Lincolnshire mainproviders (including ULHT and LCHS), NHSE/I including Specialised Commissioning, HealthWatch; HEE and Social Care. Any significant Quality concerns will be alerted and mitigated through the work of that forum.

12.5.6 Quality metric hard and soft intelligence for ULHT and LCHS is also considered through the CCG Quality and Patient Experience Committee (QPEC) that also meets bi-monthly as a sub-committee to the CCG Board. This committee will continue to consider Quality improvement requirements for ULHT, plus identifying any areas of Quality concern, where improvement action is required.

12.5.7 There are four dedicated CCG Quality Officers that work closely with ULHT, each with a focus on a respective hospital site. These CCG Officers are responsible for daily surveillance to identify any areas of Quality concern for ULHT, working with the Trust to secure improvements where required. This is through meetings with leads from relevant areas of the Trust, through attendance at the Trust's own Quality Governance Committee, via a regular CCG led Patient Safety Group and when indicated through Quality visits to the Trust as required.

12.5.8 There is also regular liaison between CCG Leads and their counterparts in the Trust to flag any areas of concerns plus now a regular system Clinical Forum that meets with ULHT attendance. There are similar quality monitoring processes for all Lincolnshire main providers, each having at least one dedicated Quality officer.

12.5.9 The lead CCG Quality Officer reports any concerns into QPEC and from a CCG perspective re: ULHT into the system Quality Surveillance Group. There is therefore an alerting system for any deteriorating quality areas for ULHT, which can be quickly identified for improvement, immediately if indicated.

12.5.10 Services undergoing any significant change will be monitored via the Trust's own Quality monitoring processes and also through the system and commissioner processes outlined above, to ensure as the change occurs and new service models become embedded that there are no deleterious effects on patient care at ULHT, LCHS or any other providers.

12.5.11 In addition the impact of any proposed changes on staff will be kept under ongoing review through the evaluation of measures such as the NHS Staff Survey, local surveys, absence rates, staff health and wellbeing, and retention rates.

12.5.12 As well as a QIA, a Stage 1 and Stage 2 Equality Impact Assessments (EIA) has also been completed for the proposed acute medicine service changes.

12.5.13 Within the Stage 1 analysis the populations/groups defined by protected characteristics that were identified that may face adversity as a result of the proposed activity/project were Age and Economically Disadvantaged

12.5.14 To help address adverse impact on these groups The People's Partnership, on behalf of the then Lincolnshire Sustainability and Transformation Partnership (now Integrated Care System), carried out an engagement exercise to reach hidden communities between 5 and 25 March 2019.

12.5.15 Over 15 days 130 questionnaires were completed. These submissions received views relating to sensory impairment, physical disability, learning disability, mental health, carers, young people and families, older people, race, pregnancy and maternity and social economic deprivation.

12.5.16 In addition, through March to October 2019 all Lincolnshire health organisations conducted the *'Healthy Conversation 2019'* engagement exercise. Within this period there were a number of engagement opportunities including an ASR-focused survey, drop in events with lead clinicians and executives to discuss proposed service changes, dedicated locality workshops offering more detailed discussion opportunities and a direct response/query mechanism.

12.5.17 During this engagement period, accessibility issues were again taken into account and the survey and promotional materials were made available in different formats on request and translated into different languages. Our partner and stakeholder organisations also worked with us to promote the various ways the public could get involved and supported their groups and audiences to engage. This process yielded broader feedback, however, it is noted that the themes and concerns were similar.

12.5.18 Using the results of the engagement exercises and additional research the following themes were identified in the Stage 2 EIA:

- Age:
  - Possible negative impacts of the stroke service change proposals on the older population include; concerns of greater reliance on family and friends for increased travel needs, longer travel requirements which is impractical, reliance on public transport, which is perceived to be limited in accessibility.
  - Possible negative impacts of this proposed change on the younger population include; negative impact on health, reliance on public transport, which is perceivedto be limited in accessibility
- Economic Disadvantaged:
  - The specific engagement from The People's Partnership did not receive feedback from groups with this protected characteristic
  - But the wider Healthy Conversation 2019 engagement identified that the possible negative impacts of this proposed change on deprived population include longer travel requirements and additional cost of this and specific concern about the costsof return travel from hospital, especially at times of limited/no public transport.

12.5.19 A summary of the EIA for the proposed changes to stroke services is set out below and the full version is included in Appendix J.

12.5.20 The Equality Impact Assessment will continue to be developed and refined throughout the consultation period, drawing in feedback received through the process.

12.5.21 Plans to mitigate impact on travel and access will be finalised once the public has been fully consulted on any proposed service changes. These plans will be finalised in the context of existing local and national patients transport policies and criteria.

Figure 168 – Summary of EIA for proposed stroke service changes

Impact / issue identified	Key actions or justification to address impact/issues	Anticipated outcome – will this remove negative impact
1. Longer travel requirements	▪ As an inpatient service longer travel times are likely to be only experienced upon admission and discharge. This specifically impacts on those patients who currently access stroke services at Pilgrim Hospital. ▪ Estimated c.500 patients a year displaced - travel analysis has modelled that under the preferred option no patients are estimated to travel over 60-minutes (the agreed threshold for this type of activity), assuming they travel to their nearest acute stroke unit by ambulance. ▪ The majority of patients who access acute stroke services are likely to arrive at hospital by ambulance. Upon discharge if the patient has a healthcare need or meets the ULHT transport support criteria transport support will be provided. ▪ Community care (including follow-up and routine appointments) will not be affected by this model, in fact they will be enhanced enabling patients to return home sooner.	• No. For some patients there may be longer travel times, but this is balanced against improved service quality. • For those with health needs on discharge or meet the ULHT transport support criteria transport support would be provided. • Patients would return home sooner.
2. Negative impact on health	▪ Evidence has shown that the centralisation of hyper-acute stroke services has a positive impact on health outcomes, including reduced mortality, improved provision of evidence-based interventions and reduced lengths of stay. ▪ The more sustainably staffed, multi-disciplinary care provided at the Lincoln site upon arrival will improve the care received immediately and throughout admission, with improved community care ▪ Temporary measures instigated due to Covid which include consolidation of hyper-acute stroke unit on the Lincoln Hospital site have demonstrated an improvement in care quality (SSNAP audit)	• Yes. Proposed service should have a positive impact on health and provide improved health outcomes across the county • Admission duration should also be reduced that has benefits to a patient's wider health and wellbeing.

3. Greater reliance on family and friends forincreased travel needs
4. Greater reliance on public transport, which is perceived tobe limited in accessibility
5. Concerns about costsof travel to and from hospital, especially attimes of limited/ no public transport
	▪ Acute stroke services will be consolidated on the Lincoln Hospital site. A service will no longer be provided from Pilgrim Hospital
	▪ People currently receiving care at Pilgrim Hospital will on average experience an increase in travel time to an alternative hospital
	▪ The vast majority of patients admitted into an acute stroke unit are through an unplanned attendance and admission, and are therefore likely to present at hospital in an ambulance, as opposed to using their own transport
	▪ Upon discharge, if the patient has a health care need or meets the ULHT transport support criteria then transport will be provided on their return journey home and there will be no need for reliance on friends and family or public transport:
	  ▪ ULHT currently provides a patient transport service based on eligibility criteria; and
	  ▪ Volunteer services currently provide patient transport services where confidence or mobility issues can make it difficult to attend hospital
	• The impact of the proposed service change proposals on access, particularly on groups with protected characteristics, will continue to be explored and understood through consultation with the public and plans only finalised once that process is complete.
		• Yes. For some there may be a greater reliance on family and friends for transport. However, NHS and voluntary sector patient transport services already exist to help in certain situations.
		• The proposed service changes do not make any changes to these patient transport services or associated criteria.
		• Plans to mitigate impact on travel and access will be finalised once the public has been fully consulted on any proposed service changes. These plans will need to be finalised in the context of existing local and national patients transport policies and criteria.

12.6 Vignettes to demonstrate the positive impacts of the clinical model

Patient 1

12.6.1 A 65 years old male who lives with his wife in Sibsey suffers alarming symptoms whilst playing bridge at his local bridge club. An ambulance is called and arrives at the bridge club, the paramedic observes the patient displaying FAST (Facial dropping, Arm weakness, Speech difficulties, T; Time to call emergency services) positive symptoms, a sign that he may be having a stroke.

12.6.2 The ambulance takes the patient directly to the hyper-acute stroke centre at the Lincoln County Hospital where the patient immediately has diagnostic tests on arrival at the hospital, following which a diagnosis of stroke is confirmed and he is admitted to the Stroke Unit. Given the co-location of the hyper-acute stroke unit with the Cardiology team at Lincoln County Hospital, the patient benefits from use of the Cath Lab facilities to directly access acute imaging thus bypassing A&E and reducing the assessment time.

12.6.3 As the patient has a stroke with a blood clot involved, he is given an injection to thrombolyse the clot within one hour of the scan confirming his diagnosis.

12.6.4 The patient stays in the hyper-acute stroke part of the stroke unit for 72 hours, and is then moved to the acute stroke part of the stroke unit to start intensive therapy. The patient's wife visits him at Lincoln County Hospital every day. The patient's wife is unable to drive herself there or access public transport, however transport is provided by volunteer drivers.

12.6.5 After eight days of being in the Lincoln County Hospital stroke unit, the patient is discharged to the Lincolnshire Community Health Service enhanced rehabilitation service closer to his home in Sibsey, where all of his continuing therapy treatment is delivered.

12.6.6 Outcomes, following liaison with the ICT may be:

- The patient's diagnostic tests, treatment and therapy is delivered in line with national best practice and meets all of the national performance standards. The patient received a 7-day service / ward rounds from the Stroke consultants.
- The Stroke team at Lincoln County Hospital work together efficiently and effectively, drawing in support from the Cardiology team as required, to deliver the best care and outcomes for the patient.

Patient 2

12.6.7 A patient has a left partial anterior circulation infarct and is admitted to hospital, and subsequently repatriated to a local hospital for further rehabilitation.

12.6.8 The Multi-Disciplinary Team on the acute ward is unsure as to whether or not a care package is required, so an access visit is completed by the community team after arrival at the local hospital. Support is given to the patient's wife to familiarise her with the equipment required and the support available on discharge from the therapy team.

12.6.9 The patient and their wife agree to discharge with no care package, and the patient is discharged home with downstairs living initially as he is unable to use the stairs. An initialphysiotherapy review in the patient's home is completed within 24hrs and confirms no requirement for community team to support with personal care.

12.6.10 During this visit advice on strategies to reduce risk of falls, particularly in the night, is provided and a care plan for the patient is developed to work on strength, balance and mobility. A total of 44 face to face visits are provided, a combination of speech, occupational therapy and physiotherapy.

12.6.11 Outcomes:

- The patient's stamina in walking improves, they return to sleeping upstairs and explore options to return to driving.
- Onward referrals are made for neuro outpatient physiotherapy, regional driving assessment centre and Stroke Association for ongoing support.
- Care professionals give emotional support to the patient and their wife throughout anda good rapport is built. The patient gives positive feedback to the therapy staff.

Patient 3

12.6.12 A patient has a right total anterior circulatory infarct and spends time in intensive care, followed by a prolonged period of time in hospital and then a local community hospital before being discharged home.

12.6.13 A treatment plan is put in place for the patient that includes engaging more with transfers from lying to sitting, improving the quality of Sara Stedy transfer and being able to manage toileting, working on the management of clonus, supporting the care agency with the moving and handling plan, teaching carer techniques of stretches to left side to maintain soft tissue length and advising and supporting long term carers with moving and handling and equipment training, personal care and dressing techniques.

12.6.14 Outcomes:

- The patient's wife is taught to complete muscle stretches prior to transfers to reduce colonus, and the patient practices transfers using Sara Stedy with care agency staff.
- A referral is complete to spasticity clinic for assessment and a referral is made to the Stroke Association for ongoing support.
- The hospital stroke consultant is liaised with for medication review regarding high tone/pain management.

12.7 Assessment against tests for service change

12.7.1 In line with the guidance set out in *'Planning, assuring and delivering service change for patients'* published by the NHS in 2018, all proposals for significant service change must be assessed against the Government's four tests for service change and NHS England and Improvement's test for reductions in hospital beds.

12.7.2 An assessment against these tests for the proposed change to consolidate acute stroke services at Lincoln Hospital has been conducted and is set out below. This assessment reflectsand aligns to the description and narrative for the preferred option for acute stroke services set out in this chapter.

Test 1: Strong public and patient engagement

12.7.3 There has been strong ongoing engagement with the public throughout the life of the ASR programme and its predecessor programmes. The breadth and depth of this work is set out infull in the stakeholder engagement chapter later in this document with more detail provided inthe detailed engagement reports in Appendices K and L. The focus here is therefore on the engagement relating to stroke services.

12.7.4 During July 2018 a series of nine engagement events to discuss hospital services in Lincolnshire were held, each in a different area in the county. In total 170 members of the public were engaged across these nine events. The meetings were designed to focus on the case for change for particular health services and the possible solutions to the challenges faced. The main themes that arose in relation to stroke services were:

- The provision of specialist care for stroke patients was seen as critical, however there were also concerns about journey times for patients experiencing a stroke, as well as queries around rehabilitation and recovery.
- The need to achieve a 'balance' between quality and travel times. In other words, although attendees felt that the quality of care received on arrival at hospital was extremely important, they also felt its value depended on patients being able to access the care quickly enough. For this reason, reassurances were sought that ambulance staff would be suitably equipped and trained to look after people on the journey to hospital.
- Concerns and queries were around rehabilitation, which was identified as a key area in the treatment of stroke patients. Specifically, many participants felt it was important that patients should be able to undergo rehabilitation and ongoing care nearer their homes.
- In summary there was a widespread view that the centralisation in order to provide specialist, expert standards of care is reasonable, albeit with a need to balance these advantages against the possible negative impacts of increased travel times. There was also a strong view that services should be backed up with improved rehabilitation and robust follow-up and outpatient services in the local community.

12.7.5 As well as the stakeholder events a questionnaire was made available in online and paper formats to enable the public and other stakeholders to share their views. A total of 256 questionnaires were received between 11 July and 5 August 2018. Feedback in relation to stroke services included:

- 31% or respondents were prepared to travel 0-15 minutes to a specialist stroke unit; 39% were prepared to travel 15-45 minutes; 17% were prepared to travel 45-60 mins;and 13% were prepared to travel over an hour.
- 64% or respondents said they would travel to a hospital appointment by car; 13% by public transport; 3% patient transport; 4% taxi; and 15% friend or family.
- When asked about a set of statements and which was most important in relation to stroke services:
    - 26% said 'I will be offered care closer to home when appropriate'
    - 22% said 'I will receive specialist care even if that means I will need to travelfurther'

12.7.6 In October 2018 four public options evaluation workshops were undertaken across Lincolnshire in Sleaford, Mablethorpe, Bourne and Gainsborough to enable members of the public to share their views on the options against the evaluation criteria and supported the ongoing process of developing the final options being proposed for consultation. At this event two proposals for thefuture provision of acute stroke services were considered: consolidating acute stroke services at Lincoln Hospital and providing acute stroke services at Lincoln and Pilgrim Hospital.

- Overall the proposal to consolidate acute stroke services at Lincoln was felt to satisfythe criteria best (64% of respondents).
- It was felt the consolidation of acute stroke services at Lincoln Hospital best met the quality (92%) and deliverability (95%) criteria – this was the case in all four areas where events were held.
- However, views were fairly evenly split in relation to access and a very small majority (53%) felt providing acute stroke services at Lincoln Hospital and Pilgrim Hospital was better in terms of affordability.
- A majority in all four areas where the events were held felt consolidation of acute services at Lincoln Hospital best satisfied the criteria in terms of quality and deliverability.
- Those in the Bourne, Mablethorpe and Sleaford groups were concerned about whether patients would receive treatment within the 'golden hour'.
- Participants debated the issue of affordability to consolidate acute stroke services on the Lincoln Hospital site. It was also suggested consolidating services into one unit would attract more specialist staff, improve the quality of services and patient care andreduce the current reliance on and cost of using agency staff.

12.7.7 In 2019 *Healthy Conservation 2019* was launched, which was an open engagement exercise to shape how the NHS in Lincolnshire takes health care forward in the years ahead. This included pre-consultation engagement on the emerging options in the ASR:

- Feedback relating to the stroke service change proposals identified the following key themes:
    - 'Golden Hour' not achievable from some parts of the county
    - Consideration of population need by locality before determining locations of service – distance, accessibility and transport challenges
    - No mention of step down / rehabilitation and scope to link mental health support
    - Assurance is needed around ambulance response times
    - Overburdening the Lincoln Hospital site
    - Loss of services at Pilgrim
    - Transport issues need addressing before any services are relocated

- Feedback from a workshop held in Boston relating to stroke services highlighted themes relating to:
  - Travel times and ambulance transfers to Lincoln Hospital
  - Treatment times for patients suffering a stroke
  - Ambulance performance and targets
  - Stroke care in the community
- Feedback was also obtained from hidden and hard to reach communities relating to the impact on the protected characteristics, groups and communities focussed around the longer distance need to travel to proposed centres of excellence, such as for stroke services, and the associated increase in cost. This highlighted restricted incomes and savings would be a barrier to travelling further and a need to rely on family members for transport or public transport and taxis with the associated cost and practicality implications. Being physically disabled or with mobility issues makes access more difficult.

12.7.8 Throughout the duration of the ASR programme there has been ongoing engagement with the Lincolnshire County Council Health Scrutiny Committee. Between May and October 2019, the Committee commented on each of the services within the scope of the ASR programme where an emerging preferred option for the future delivery of services was set out. The Committee considered the proposal to consolidate acute stroke services on the Lincoln Hospital site on 12June 2019 and submitted initial comments on 4 July 2019. These were:

- Acceptance that the preferred option had been developed in line with the national clinical guidelines.
- Acknowledgement of significant workforce gaps against clinical guidelines for staffing levels and recruitment to a centre of excellence for acute stroke services aimed to recruit and retain staff.
- Welcome for proposal for enhanced community stroke rehabilitation service as part of the emerging option.
- Acceptance of the benefit of a centre of excellence, but concern recorded on the travelling times to the Lincoln Hospital site for patients across the county.
- Concern on that the patients from Pilgrim Hospital that would be displaced to North West Anglia NHS Foundation Trust.

Test 2: Consistency with current and prospective need for patient choice

12.7.9 The Department of Health guidance on this test sets out that a central principle underpinning service reconfigurations is that patients should have access to the right treatment, at the right place at the right time. Services should be locally accessible wherever possible and centralised where necessary.

12.7.10 The guidance goes onto state that in this context, local commissioners need to consider how proposed service reconfigurations affect choice of provider, setting and intervention; and that commissioners will want to make a strong case for the quality of proposed services and improvements in the patient experience.

12.7.11 The concept of services being locally accessible wherever possible and centralised where necessary is at the heart of the Lincolnshire Acute Services Review, and at the heart of the proposed stroke service model.

12.7.12 Consolidating acute stroke services at Lincoln Hospital will reduce the number of locations fromwhich these services are provided (the number of providers is not reducing under the change proposals). However, there is a compelling case to reconfigure and centralise acute stroke services to improve the quality, safety and sustainability of services and make best use of available resources. Key drivers of change are the current performance in the national stroke audit, currently having two stroke units one slightly above the recommended yearly activity levels and one below and significant challenges in appropriate consultant and nursing workforce.

12.7.13 The consolidation of acute stroke services onto one hospital site would be supported by an enhanced community stroke rehabilitation service to enable more people to be discharged sooner from hospital and return to their home and communities earlier. Thereby improving access to care closer to home. Improved access to community rehabilitation services was a consistent message through the public engagement programme.

Test 3: Clear clinical evidence base

12.7.14 The development of the case for change for acute stroke services has been led by the ULHT stroke consultants supported by Professor Tony Rudd, National Clinical Director for Stroke Services:

- Sentinel Stroke National Audit Programme (SSNAP) performance has required improvement at Lincoln Hospital and Pilgrim Hospital for some time, this was highlighted again in the most recent audit for the period October-December 2019;
- ULHT is not achieving all of the required performance in priority standards for 7-day services, for hyper-acute stroke;
- Pilgrim Hospital does not meet the recommended minimum volume of 600 strokes per year set out in the NHS Stroke Services Configuration Decision Support Guide;
- Significant gaps exist in consultant and nurse workforce across the ULHT stroke services; and
- 'No change' would perpetuate the situation of unsustainable acute services across two hospital sites.

12.7.15 The options for service change to address the significant challenges faced by acute stroke services in Lincolnshire have also been developed by the ULHT stroke consultants supported by Professor Tony Rudd.

12.7.16 The case for change and proposals for the future configuration of stroke services were tested through two Clinical Summits with over 55 leads from across the system, facilitated by the EastMidlands Clinical Senate.

12.7.17 The preferred option for the future configuration of acute stroke services was identified through a clinically led options appraisal event attended by over 60 stakeholders – the conversation on stroke services at this event was led by a ULHT stroke consultant.

12.7.18 The identified preferred option for future reconfiguration of acute stroke services aligns to recommendations of the NHS Stroke Services: Configuration Decision Support Guide and to evaluation findings from London, Greater Manchester and Northumberland on the reconfiguration of hyper-acute stroke services improving outcomes. The identified preferred option also aligns to recommendations for stroke service provision set out in the NHS Long Term Plan.

12.7.19 The presentation of the preferred option for the future configuration of stroke services to the East Midlands Clinical Senate was led by local lead clinicians. East Midlands Clinical Senate panel deemed the proposal to be well led clinically and well researched. It acknowledged the proposed reconfiguration would reduce unwarranted variation in outcomes and would ensure a more consistent achievement of clinical standards and national guidelines.

Test 4: Support for proposals from clinical commissioners

12.7.20 The Lincolnshire CCG(s) have been main sponsors of the ASR programme since its inception. The members of all of the Governing Bodies recognise the case for change and accept that doing nothing is not an option.

12.7.21 Clinical leads from CCGs have played a key role in developing and refining clinical models, working closely with colleagues in the acute setting. This joint approach between clinicians in primary care and acute care will continue into the public consultation meetings.

12.7.22 The four CCG Governing Bodies and 'Shadow' Joint Committee, as they were at the time, considered the outputs of the evaluation process and the independent reviews as the ASR programme developed.

12.7.23 The four CCG Governing Bodies, as they were at the time, agreed the original PCBC that set out the preferred option for the future configuration of acute services in Lincolnshire at their Governing Body meetings in October 2018. The proposed changes to go to consultation set out in this PCBC are the same as they were in the original PCBC.

12.7.24 Most recently the newly formed single Lincolnshire CCG Governing Body reviewed this PCBC on 22 July 2020 and gave its support to the proposed changes to be submitted to NHSEI to start its assurance process. An extract of the minutes of that meeting can be found in Appendix M.

Test 5: Capacity implications

12.7.25 Acute hospital bed capacity requirements under the preferred option for the future configurationof acute stroke services have been modelled considering three main factors:

- Stroke activity growth rate;
- Preference for hospital site; and
- Average length of stay.

12.7.26 Based on the analysis conducted and the sensitivity test completed an additional bed requirement of seven beds has been identified. If implemented this would increase the bed capacity at Lincoln Hospital from 28 to 35.

12.7.27 It is believed a relatively prudent approach has been taken to defining the required acute bed capacity for the proposed future configuration of acute stroke services, given the requirement has been modelled on average length of stay of 10 days where as the target and plan is for anaverage length of stay of 7 days.

12.7.28 In addition, the bed requirement has been modelled based on a 15-minute site preference forLincoln Hospital, to strike a balance between ensuring sufficient capacity at Lincoln Hospital and the impact of activity on out of county hospitals.

12.7.29 The estates solution to provide the additional stroke bed capacity (7 beds) is an extension to the existing unit, which has been scoped at a high level with support from external design andarchitectural consultants. ULHT has an area of land adjacent to the current stroke unit that allows for a 400 square meter build to be achieved.

12.7.30 At this stage, this is the preferred way forward in terms of feasibility and delivering the intended outcomes and benefits. It suggests that the current unit could continue to operate with little or no disturbance making the option also more affordable at this stage as a result of not having toconsider decant costs. This approach and the alternative options considered are set out in more detail in the Estates chapter.

12.7.31 Enhanced community stroke rehabilitation service capacity requirements under the preferred option have been modelled using the learning from the 100-day pilot (2019), on what it takes todeliver an average length of stay of 7 days.

12.7.32 Additional community stroke rehabilitation service capacity modelled as requiring an additional 15.29 wte.

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