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 Lincolnshire Sustainability and Transformation Partnership

Report to	**Health Scrutiny Committee for Lincolnshire**
Date:	**12 June 2019**
Subject:	**Stroke Services – Case for Change and Emerging Options**

Summary:

The report describes the national and local context regarding the vision and strategy that will deliver an effective and accessible service for patients with a suspected and/or diagnosed Stroke.

The paper sets out the Case for Change for Stroke services and the proposed options for future services as set out within the Acute Services Review and the feedback to date from the Healthy Conversation 2019.

Actions Required:

Committee members are asked to note and comment on the report.

1. Background

1.1 What is Healthy Conversation 2019?

On 5 March 2019, the NHS across Lincolnshire launched its Healthy Conversation 2019. It is an open engagement exercise which will shape how the NHS in Lincolnshire takes health and the health service forward in Lincolnshire in the years ahead. It is a chance for everyone to learn more about the NHS's current thinking on the future of NHS services and is a way to get meaningful feedback from the public, their representatives, NHS partners and staff about what future services may look like. It is planned that 'Healthy Conversation

2019' will run into the autumn, with a wide range of engagement events and discussions across the county.

It is important to remember that this stage is not a public consultation – this engagement exercise will help shape the options for a full public consultation, without which no permanent changes can be made to services.

1.2. Background for Stroke

There are over 100,000 people per annum who suffer a stroke in the UK each year, around one stroke every five minutes. Stroke survivors are at greatest risk of having another stroke in the first 30 days of having a stroke. Around one in four stroke survivors will experience another stroke within five years. Stroke is the third commonest cause of death and the 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.

2. What is a stroke?

A stroke is a blood clot or a bleed in the brain and can lead to permanent neurological damage, complications and sometimes death.

The long-term problems caused by stroke can include:

- Paralysis
- Loss of feeling and sensation
- Speech impairment
- Tiredness
- Depression
- Anxiousness
- Visual problems
- Difficulty with swallowing
- Memory problems
- Mood swings
- Lack of concentration

There are different types of strokes, depending on whether the disruption in blood flow resulted from a blockage or a burst in a blood vessel:

- ***Ischaemic stroke***: the blood vessels in the brain are blocked by a clot or have become too narrow for blood to get through. The reduction in blood flow causes brain cells in the area to die from lack of oxygen. This is what happens in 80% of all strokes.

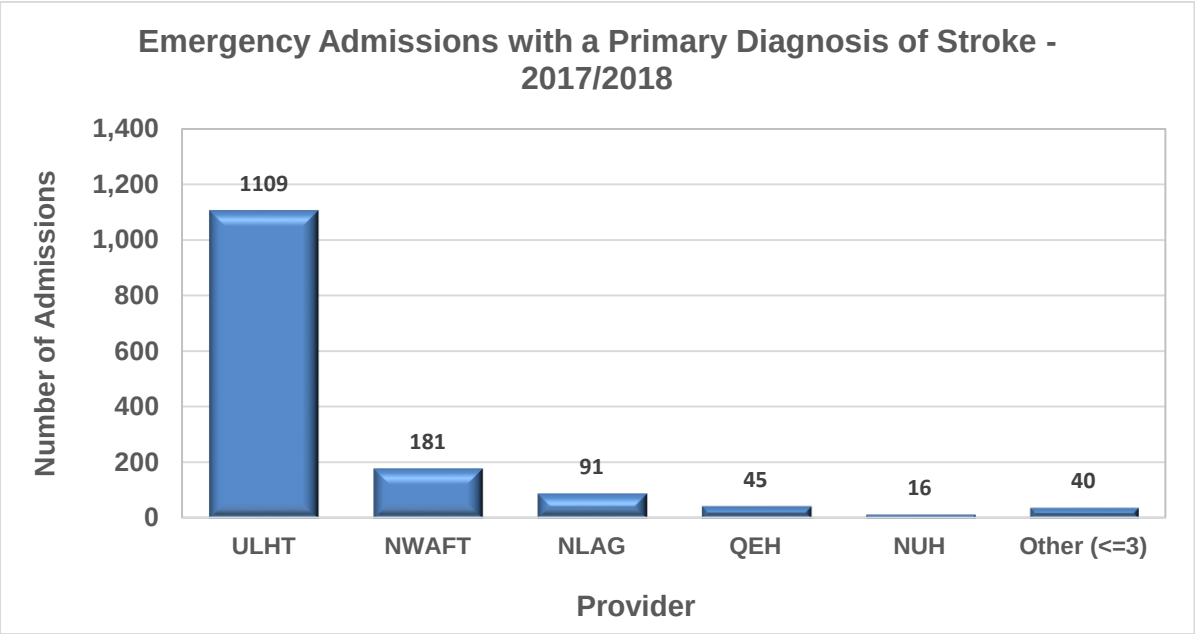
- ***Haemorrhagic stroke***: the blood vessel bursts, rather than being blocked. This results in blood leaking into the brain and causing damage.

- ***Subarachnoid haemorrhage***: there is bleeding into the area around the brain known as the subarachnoid space. This is usually due to a burst aneurysm, which is a weakness in the blood vessel wall.

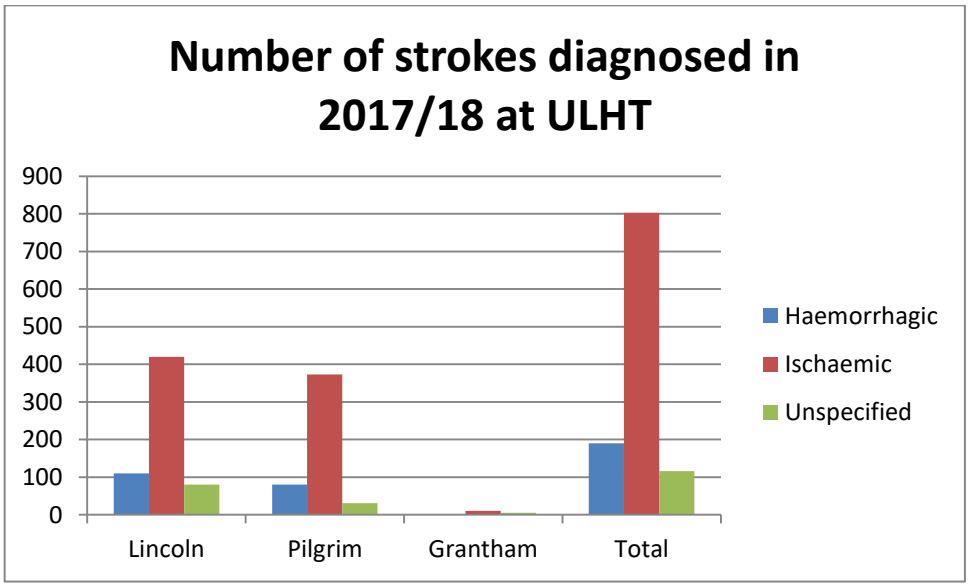
Sometimes, a person will have a transient ischaemic attack (TIA) or a 'mini-stroke'. This is caused by a temporary disruption in the blood supply to part of the brain. The individual usually makes a quick recovery, but a TIA must be taken seriously as it can increase the likelihood of a stroke in the future.

3. Stroke statistics for Lincolnshire

The chart below shows the total number of stroke admissions during 2017/18 for all providers for the Lincolnshire population.



The chart below shows the number of strokes, by type of stroke that were diagnosed at United Lincolnshire Hospitals NHS Trust (ULHT) hospitals for the 2017/18 year (April 2017 to end of March 2018).



Rates of death from Stroke for people under 75 years old per 100,000 population between 2013 -15 were lower for Lincolnshire (12.6%) compared with East Midlands (13.0%) or England (13.6%).

The prevalence of stroke (all ages) in 2014/15 was higher in Lincolnshire (2.2%) compared with both East Midlands (1.8%) and England (1.7%). Stroke rates have risen slightly since 2012 -13 in each Lincolnshire CCG, excepting South West Lincolnshire, which has remained constant.

Deaths from stroke for over 75's per 100,000 population are the highest in Lincolnshire West CCG (632.9) and lowest in South West Lincolnshire CCG (542.2).

The rate of stroke is expected to increase, rising to 3.1% of the Lincolnshire population living with the consequences of stroke by 2020.

4. National Context

The NHS Long Term Plan was published in January 2019 and explains that there is strong evidence that hyper acute interventions such as brain scanning and thrombolysis are best delivered as part of a networked 24/7 service. Areas that have centralised **hyper-acute stroke care** into a smaller number of well-equipped and staffed hospitals have seen the greatest improvements.

This means a reduction in the number of stroke-receiving units, and an increase in the number of patients receiving high-quality specialist care. Integrated Stroke Delivery Networks (ISDNs) involving relevant agencies including ambulance services through to early supported discharge will ensure that all stroke units will, over the next five years, meet the NHS seven-day standards for stroke care and the National Clinical Guidelines for Stroke.

Mechanical thrombectomy and clot-busting treatment (thrombolysis) can significantly reduce the severity of disability caused by a stroke. These treatments carefully remove a blood clot from the blood vessel causing an interruption to the brain's blood supply, or use drugs to dissolve the clot. ISDNs will support STPs and ICSs (Integrated Care Systems) to reconfigure stroke services into specialist centres, improve the use of thrombolysis and further roll out mechanical thrombectomy. This will ensure 90 percent of **stroke patients receive care on a specialist stroke unit** and that all patients who could benefit from thrombolysis (about 20 percent) receive it, up from just over half of eligible patients now.

Expanding mechanical thrombectomy – from 1% to 10% of stroke patients – will allow 1,600 more people to be independent after their stroke each year in England. This combination of specialist stroke care, thrombolysis and thrombectomy would result in the NHS having the best performance in Europe for people with stroke. Mechanical Thrombectomy is not provided in Lincolnshire. It is an NHSE decision to provide Mechanical Thrombectomy in specialised tertiary centres only at the current time. The nearest tertiary centre that provides this service is in Nottingham (Nottingham University Hospitals NHS Trust).

Lincolnshire patients are referred to Nottingham if Mechanical Thrombectomy is prescribed.

National support for the scaling of technology will assist the expansion of life-changing treatments to more patients. This includes the use of CT perfusion scans to assess the reversibility of brain damage, improved access to MRI scanning and the potential use of artificial intelligence interpretation of CT and MRI scans to support clinical decisions regarding suitability for thrombolysis and thrombectomy. Interoperable information systems supported by telehealth will aid more timely transfer of information between providers, enabling more effective hyper-acute pathways and improving access to and intensity of rehabilitation

The NHS will work with Health Education England to modernise the stroke workforce with a focus on cross-specialty and in some cases cross-profession accreditation of particular 'competencies'. This will include work with the medical Royal Colleges and specialty societies to develop a new credentialing programme for hospital consultants from a variety of relevant disciplines who will be trained to offer mechanical thrombectomy.

Implementation and further development of higher intensity care models for stroke rehabilitation are expected to show significant savings that can be reinvested in improved patient care. This includes reductions in hospital admissions and ongoing healthcare provision. Out of hospital, more integrated and higher intensity rehabilitation for people recovering from stroke, delivered in partnership with voluntary organisations including the Stroke Association, will support improved outcomes to six months and beyond. The existing national stroke audit (SSNAP) provides high quality information on the acute and inpatient rehabilitation care of stroke patients to improve stroke services. An update to SSNAP will provide a comprehensive dataset that meets the needs of clinicians, commissioners and patients by describing the quality of care provided for stroke patients from symptom onset through to rehabilitation and ongoing care.

Milestones for Stroke care set out in the NHS Long Term Plan include:

- In 2019 we will, working with the Royal Colleges, pilot a new credentialing programme for hospital consultants to be trained to offer mechanical thrombectomy.

- By 2020 we will begin improved post-hospital stroke rehabilitation models, with full roll-out over the period of this Long Term Plan.

- By 2022 we will deliver a ten-fold increase in the proportion of patients who receive a thrombectomy after a stroke so that each year 1,600 more people will be independent after their stroke.

- By 2025 we will have amongst the best performance in Europe for delivering thrombolysis to all patients who could benefit.

5. The Lincolnshire Strategy for Stroke Services

5.1 Inpatient Care at ULHT

Current Model of Stroke Care within Lincolnshire

- In-patient, hyper-acute (day 0 – 3 of the pathway) and acute stroke services (Day 3- to discharge) offered at both the Lincoln and Pilgrim Hospitals

- Grantham Hospital does not provide hyper-acute or stroke services. There is provision at Grantham for patients, living in the Grantham area or other, to have rehabilitation care following their stay on the stroke unit at either Lincoln or at Pilgrim.

- The annual volume of activity for each stroke unit places each site on the borderline of a minimal critical mass recommended to deliver a sustainable service able to deliver standards, best outcomes and maintain workforce. Growth in incidence at 1.8 per cent per annum over the next five years is unlikely to change this position

- In line with the NHS England's Stroke services: configuration decision support guide (2015) and the wider evidence base key drivers of reconfiguration include: the need to right size in order to deliver safe service; improving thrombolysis: time to treatment; ensuring services in rural areas achieve a positive balance between volumes, travel times and financial viability

Workforce: Current position

The table below shows the recommended number of medical posts at each of the hospital sites to deliver stroke services, taken from the National Clinical Guidelines for the provision of stroke services, together with the current number of staff currently in post. This highlights the heavy reliance on agency and locum medical staff at both the Lincoln and Pilgrim hospital sites.

Site	Medical Staff	Recom-mended Number of Medical Staff	Substantive Doctors In-post	Agency and Locum	Other
Lincoln	Consultants	6.0	2.0	1.0	1.0 (middle grade acting up)
	Middle Grade Doctors	0	0	0	0

Site	Medical Staff	Recom-mended Number of Medical Staff	Substantive Doctors In-post	Agency and Locum	Other
Pilgrim	Consultants	6.0	0	3.0	1.0 (fixed term retiring Dec 2019) and 2 Agency Locum
	Middle Grade Doctors	0	0	0	
Grantham	Consultants	0.5	0.5	0	0
	Middle Grade Doctors	0	0	0	0

Case for change

Clinical standards and performance standards are not consistently being met, and there are significant workforce gaps against clinical guidelines for staffing levels, and this has been the case for a number of years. This is explained further below:

Lack of Compliance with Clinical Standards and Guidelines	Lack of Sustainable and Resilient Working Patterns
• Performance against stroke national audit programme (SSNAP) requires further improvement on both Hyper-acute Stroke Units (HASU) in Lincoln and Pilgrim. • Performance against standards linked to best practice tariff not being achieved at Lincoln • Stroke service at Lincoln not achieving two of the four 7-day service priority standards	• There are only 2 substantive consultants in post across Lincoln and Pilgrim vs. national guidelines which recommend 6 WTEs per hyper-acute stroke unit: a 10 WTE gap at ULHT to meet guidelines. • Substantive recruitment has not been achievable in last 2-3 years • 37.9% gap in Pilgrim nursing workforce

6. Emerging Options for the Future

There are two emerging options:

1. **Centre of Excellence – Stroke services at Lincoln Hospital. This is the preferred option**

2. **Stroke services continue at both hospitals with a combined stroke rota**

The preferred option for Stroke services has been developed based on the national clinical guidelines for stroke care published by the Royal College of Physicians fifth edition, 2016. It also reflects the key message and recommendations for stroke care as set out in the NHS Long Term plan published in January 2019. The preferred option would see:

- Consolidation of hyper-acute stroke (day 0-3) and acute stroke services (day 3-7) at the Lincoln Hospital to align with the vision for the Lincoln Hospital site accommodating the “hubs” for specialised services

- Delivery of a much enhanced community-based stroke rehabilitation service with the aim to reduce the length of time patients stay in the acute hospital. The aim is to discharge patients by day 7 (average), with a step change to average of day 10 in the first instance

- Activity movement: all non-elective activity transferred from Pilgrim to Lincoln Hospital.

The second option of continuing stroke services at both hospitals with a combined stroke rota is less likely to be as successful at delivering stroke services that meet the national standards and guidelines for stroke services, and delivery of 7-day stroke services.

Workforce: Future position for the preferred option of establishing a centre of excellence on the Lincoln site.

It is highly likely that recruitment to a centre of excellence for stroke services will be more successful with improved retention of staff, thus providing a sustainable clinical service for the future.

The medical workforce model for the acute hospital service in the preferred option is reflected in the table below.

	WTE Funded Establishment
Lincoln	
Consultants	***6.5***
Middle Grade Doctors	***3.0***

In summary, the preferred option of consolidating stroke services at the Lincoln hospital aims to:

- **Consolidate the total number of medical staff that are currently in post to the Lincoln site, with all positions to be substantively filled**

Aim to address: heavy reliance on agency and locum staff; current vacancy rate of 13% medical staff and 36% nursing staff at Pilgrim; and support the changed nursing skill mix, especially around filling band 5 nursing vacancies.

Discharge patient by day 7, but step change move to day 10 from current average of 14.

6.1 Impact to patients in the preferred option

The impact to all potential stroke patients across Lincolnshire has been considered in evaluating the preferred option. One of the concerns that is being raised during the *Healthy Conversation 2019* is the potential impact on travelling times to the Lincoln Hospital site for all patients across the county.

This has been considered, and if the Stroke unit at Pilgrim did close, the majority of patients would be displaced to the Lincoln Hospital site meeting the recommended guidelines for diagnosis and treatment.

In summary, the impact of the preferred option to patients within the scope of Lincolnshire CCGs is as follows:

1. Displaced patients from Pilgrim Hospital with suspected stroke (includes mimics) = 773
   a. Of this 773, a total of 484 patients will have a diagnosis of stroke

2. 378 of the total of 773 patients will come to Lincoln Hospital
   a. Of this 378, a total of 236 patients will have a diagnosis of stroke
   b. Of this 378, a total of 152 patients will either be admitted with other medical symptoms or will be discharged from A&E.

3. 395 of the 773 will be displaced out of county as follows:
   a. 387 to North West Anglia NHS Foundation Trust (Peterborough City Hospital)
   b. 8 to Queen Elizabeth's Hospital, King's Lynn (5 out of this 8 will have a stroke diagnosis).

4. Out of the total of 387 patients displaced to North West Anglia NHS Foundation Trust a total of 241 patients will have a diagnosis of stroke.
   a. A total of 146 patients will either be admitted with other medical symptoms or will be discharged from A&E.

<u>Patients currently coming to Pilgrim Hospital from CCGs outside of Lincolnshire</u>

Pilgrim currently has around 6 diagnosed stroke patients per year from this category. If these patients were walk in patients, they would be blue lighted

across to Lincoln is the assumption, as these are likely to be people on holiday in Lincolnshire from outside of the county.

7. Development of a Single Assisted Discharge Service for Stroke

To enable the proposed hyper-acute/acute stroke service to be established and deliver the improvement in outcomes required, then an excellent rehabilitation service for Stroke survivors is essential.

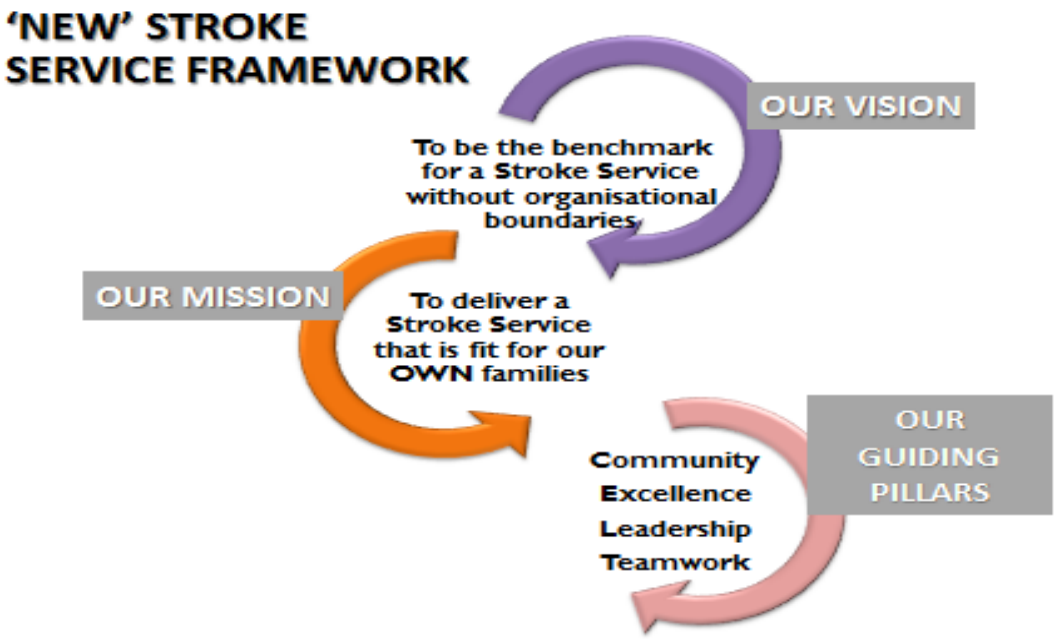
Work has been taking place between the stroke teams in United Lincolnshire Hospitals Trust, Lincolnshire Community Health Services, Stroke Association and Adult Social Care to develop a 'single team' approach that will ensure colleagues work together to deliver effective stroke rehabilitation across the County and that rehabilitation will adopt the 'home first' principle.

It should be noted that the existing Assisted Discharge Stroke Service (ADSS) has performed well since being commissioned in 2011, on average supporting between 50 & 60% of stroke survivors to leave the Stroke Units in a timely way. However, it is clear that there are patients who do not fall within the current criteria for the ADSS service who would and should benefit from the support available in order to leave hospital more quickly with the appropriate level of care.

Since the beginning of the year a range of activities have taken place to support this development, namely:

- Senior Leaders Workshop - Vision, Mission and Guiding Principles
- Over 56 members of staff attended two Collaborative Workforce Workshops – 'One Team' Values and co-creation of new ways of working
- Stakeholder mapping and engagement which is ongoing
- Patient involvement plan. Patient experience is being captured via:
    - Patients sharing their stories (positive and negative) with Lincolnshire Community Health Services (LCHS) staff
    - Patients sharing their experience of the current pathway with Healthwatch Lincolnshire colleagues
- Workforce and financial modelling to support a case for change that will shift activity from acute to community care.
- Joint staff meetings where positive changes were discussed and agreed including:
    - ADSS Therapist will spend time on the Stroke Unit (Lincoln) linking with the team to identify the patients who require the ADSS service.
    - ULHT colleagues to complete referral paperwork earlier to ensure patients are assessed by the ADSS team as soon as possible to enable pro-active planning for discharge.
- 25 April 2019 a third collaborative workforce workshop was held with a focus on 'one team' mapping out the patient journey, sharing case studies, identifying barriers to improving care and areas of duplication.
- Final planning is now taking place to enable 'testing' of the changes agreed, initially at Lincoln County Hospital.

The following schematic shows the proposed service Framework to be adopted and the values and principles agreed at the two staff workshops in March.



It is expected that by the end of March 2020, the average length of stay in hospital will have reduced from approximately 14 days to 10 days, with an aspiration that an average length of stay of 7 days will be achieved in line with best practice.

8. Themes and issues raised during the Healthy Conversations 2019

The main concerns raised about stroke in the public engagement events have been about the travel times across the county, specifically from the Boston and Skegness areas and about the response times of ambulances. The question below represents the multiple questions about being treated rapidly after suffering a stroke, and the response has been included.

Q - The Golden Hour is not achievable from some parts of the county?

A - We have spoken to our clinical experts in great detail around their proposed recommendations for stroke services. The 'golden hour' refers to a 60 minute period from door to needle for the 15% of all stroke patients who require thrombolysis (this treatment option is only for acute ischemic stroke). Out of this 20% of stroke patients that receive thrombolysis, one third will benefit from the treatment (5%). Our clinicians believe their recommendations for stroke services will improve care and outcomes for the overwhelming majority of patients (95%). Every patient who uses the county's stroke service will benefit from a fully staffed centre of excellence delivering exceptional care for improved outcomes and subsequently better aftercare.

'You said, we did' – published on the Healthy Conversation website

You said...

- 'Golden Hour' not achievable from some parts of the county
- Consideration of population needed by locality before determining locations of service
- No mention of step down / rehabilitation
- Ambulance response times are poor – assurance needed

Suggestions from the public included:

- Scope how to link mental health support and stroke community rehab

We did (our response)...

The 'Golden Hour' 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 this treatment as it depends on the type of stroke.

The 4.5 hour time limit in the clinical guidance refers to the time within which we can administer the thrombolysis treatment within the current licence. It 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.

We are working closely with East Midlands Ambulance Service (EMAS) throughout the process to ensure ambulance response times are meeting targets and patients are transported safely and in appropriate timeframes. For example, being able to reduce the amount of handover time at A&E will reduce pressure on EMAS so they can spend more time on the road caring for patients.

Linking mental health and stroke community rehab is a good suggestion. Alongside the Acute Services Review we are also working on Integrated Community Care (ICC) which is aligned to the NHS Long Term Plan. This programme of work focuses upon care in the community, mental health and many other areas. We are taking committed steps towards integrating services and will report back on this progress as ICC develops.

9. Consultation

This is not a formal consultation item. However, the Committee may wish to submit initial comments on the case for change and the emerging options to the Lincolnshire Sustainability and Transformation Partnership.

10. Conclusion

The *Healthy Conversation 2019* campaign has delivered a recognisable and effective platform to enable our key stakeholder groups to share feedback with Lincolnshire's NHS.

Stroke priorities continue to be to achieve the stroke standards consistently and to recruit to the Stroke Consultant posts.

11. Background Papers

The following documents were used to inform this report:

- NHS Long Term Plan published January 2019
- Royal College of Medicine guidelines for stroke care, fifth edition, published 2016

This report was written by Julie Pipes, Assistant Director of Clinical Strategy & Transformation at ULHT Julie.pipes@ulh.nhs.uk
and
Carol Cottingham, STP Director Service Redesign
carol.cottingham@lincolnshirewestccg.nhs.uk

This page is intentionally left blank