Trust Board – March 2011

Stroke Services

PURPOSE: To provide the Board with a detailed briefing on the issues that are making delivery of stroke services challenging and progress in relation to the development of stroke services

PREVIOUSLY CONSIDERED BY: Risk & Quality Committee (RAQC)

IMPLICATIONS:

Objective(s) to which issue relates: To ensure that the Trust delivers the national and local standards set out by the national operating framework, benchmarked mortality and outcome standards and Beds and Herts Heart and Stroke Network

Risk Issues: Implementation of 24 hr thrombolysis service

Financial: Increase in on call intensity payment associated with network thrombolysis rota, potential increase in therapy provision required. Potential growth in income linked to expansion of catchment area

HR: Capacity for training for A&E consultants and stroke nursing staff

Healthcare/ National Policy: National stroke strategy, vital signs standards and sentinel audit outcomes

Legal Issues: Possible claims from complaints and litigation and compliance with statutory responsibilities.

Equality Issues: Equity on service delivery

RECOMMENDATIONS:

The Trust Board is asked to note the report.

DIRECTOR: Director of Operations
PRESENTED BY: Director of Operations
AUTHOR: Divisional Director – Medicine
DATE: 23 March 2011
Stroke Services Executive Summary for Trust Board March 2011

A report was requested on the stroke service following review of recent exception reports and the noted failure to meet the vital signs indicators and the services appearing as an outlier in terms of HSMR reporting. The Board requested a more detailed review by the Risk & Quality Committee (RAQC) to which the attached paper was submitted in February 2011. Following detailed discussion, the RAQC referred the report to the Trust Board for information and asked that an executive summary be provided. The key points in the paper are:

Prior to recent improvements the service was not delivering the required standards, demonstrated by:

- a single handed consultant led service
- poor patient pathway with inpatient beds at QEII and no acute beds at Lister
- poor performance on the vital signs indicators with a poor Sentinel audit in part also due to poor data capture and recording
- insufficient therapy input
- poor outcomes noted via HSMR, in part linked to coding

The paper details recent achievements:

- appointment of a second stroke physician
- creation of 10 Hyper Acuter Stroke beds at Lister
- service reconfiguration with the diversion of all acute strokes to the Lister ‘acute site’
- consolidation of stroke work by stroke specialist rather than being shared with the elderly care consultants
- consultant delivered service

Further recent improvements include the:

- appointment of a dedicated data inputting clerk to capture real time performance
- strengthening of performance management of stroke indicators and ensured multidisciplinary learning
- increased CT capacity and fast track protocols for diagnostics
- Monday- Friday high risk Trans Ischaemic Attack (TIA) service with ring fenced diagnostics and a referral protocol agreed with GPs
- Commencement of a Monday-Friday 09.00-17.00hrs stroke thrombolysis service

which have all have led to significant improvements in data collection and performance improvements in recent months.
This is a key time for stroke services with the emphasis on stroke service delivery continuing to be a national priority throughout 2011/12.

- Commissioners, Networks and SHAs are supporting the development of a 24/7 model for the delivery of thrombolysis for stroke patients
- PCT are seeking to commission work from North London for East and North Hertfordshire as a result of which the Trust requested a Royal College of Physicians review of the service in October 2010.

The RCP visit noted some positive service improvements in process, investment, partnership working and a noted commitment to the service and made recommendations which are in the process of being delivered at which point we can commence a 24hr thrombolysis service.

There is a requirement to continue to focus and deliver the vital signs indicators, commence the 24/7 thrombolysis service and improve patient outcomes.

Identified key challenges and actions are:

- training of emergency department and ward staff
- improve therapy access
- consolidation of inpatient beds to the Lister
- Increase high risk TIA access to 7 days a week

In the medium term there is a requirement to:

- review consultant medical staff provision
- substantively increase therapy service to meet the RCP guidelines of 45 minutes of each therapy a day (to include physiotherapy, occupational therapy, dietetics and speech and language therapy) for those patient that requiring that level of input.

The Board is asked to note the attached report.
1. Introduction

1.1 The Trust is committed to providing an effective stroke service to the population of Hertfordshire. The Trust has been providing a stroke service on the Lister site since September 2009 and has been reporting performance against national and local performance indicators to the Trust Board since 2009 as part of the performance and compliance framework. The Board has also received updates on stroke services as part of exception reporting in relation to mortality reports. However, following review of recent exception reports due to the failure to meet these standards and noting of stroke services as an outlier in terms of HSMR reporting, the Board has requested a more detailed review by the Risk & Quality Committee.

1.2 This paper seeks to provide the Risk & Quality Committee with detail of the development of the stroke service in recent years, an understanding of the standards that are expected of a high quality service, an outline of the issues that have and are currently facing the service and an explanation of the plans to mitigate those challenges and to develop the service.

1.3 The paper identifies the steps undertaken to achieve the vital signs standards for stroke and the national stroke strategy (2008) supported by the introduction of Department of Health and local SHA standards will ensure that the Trust provides the basis for an efficient and effective service to patients accessing stroke services within East and North Hertfordshire.

2. Background

2.1 The catchment area for the Trust is approximately 500,000 population and the Trust receives between 10 and 15 acute stroke admissions a week. The Trust had been offering a limited thrombolysis service for stroke since May 2008.

2.2 In terms of stroke physicians, Dr O’Kane was running the stroke units single handed until Dr Chandra commenced in post in August 2010. In terms of junior medical staffing, an allocated junior doctor for the acute stroke unit has been recently appointed to; currently this is a foundation year one grade. All other medical care is consultant delivered. A further review of consultant numbers will be undertaken following receipt of benchmarking information.

2.3 The Hyper Acute Stroke Unit (HASU) is a 10 bedded stroke unit which is providing hyperacute stroke care within the Trust. The unit has been open since December 2009 (previously this unit was a 14 bedded generic stroke unit). There are four mobile monitors for providing continuous non-invasive physiological monitoring. HASU is supported by an existing 24 bedded stroke ward at QEII. The HASU was required in order
to achieve the original vital signs standard that 70% of patients spending 90% of their acute stay in an acute unit and to enable the trust to commence a Monday – Friday 09.00 – 17.00hrs stroke thrombolysis service. Prior to this all stroke inpatients were managed at the QEII. The Trust, along with the Heart & Stroke Network, reviewed the literature which demonstrated that East and North Hertfordshire required additional inpatient beds if it was to develop its inpatient stroke service with a view to becoming a thrombolysis centre. The clinical teams visited other centres to determine best practice and have replicated that in their own HASU.

2.5 The Senior Ward Sister currently manages both stroke wards at QEII and Lister sites. Stroke specific nurse training (for thrombolysis management and swallow assessment) has been facilitated by the Network. Approximately 10% of the stroke nurses are NIHSS (National Institute of Health Stroke Scale) trained which is in line with other units but a trajectory for improvement has been agreed.

2.6 There is currently a shortfall of therapy staff on the HASU. Current provision is for 0.5 WTE physiotherapist (with no specific stroke or neurology training), Occupational Therapy (OT) only for ‘urgent’ cases and no dedicated Speech and Language Therapy (SALT). Patients do not receive timely specialist therapy assessment of their neurological impairment and do not receive daily 45 minutes face to face therapy treatment as recommended by the NICE.

2.7 The stroke service has been underperforming in terms of vital signs and the national sentinel audit, although investigation has confirmed that poor data collection and submission has contributed to this. The Trust records key service indicators for all services including re-admission rates and hospital mortality. This and the Department of Health (DH) ‘vital signs’ for stroke are presented to the Executive Committee for monitoring.

2.8 In the last six months previous issues raised around data collection have been resolved by the recruitment of a data entry clerk and the revision of clinical proformas. Strategically, the Trust re-aligned services in 2009 with Lister Hospital becoming the ‘acute’ services site and QEII Hospital the ‘non-acute’ site. The next step is that all hospital based or acute stroke services would be centralised on to the Lister site. Provisional plans would see a reduced but more efficient bed base and the move would be funded by efficiency savings within this (34 beds reducing to 25 on a single site).

2.9 Previously the outpatient’s service for stroke patients was shared amongst 4 of the elderly care consultants which caused significant issues with data capture and monitoring of pathways, now resolved through the appointment of the second stroke physician.

2.10 A second substantive dedicated stroke physician was appointed in May 2010 and took up post in August 2010. This appointment ensures that the hyper acute stroke unit to has daily consultant input and facilitated the substantiation of a high risk Trans Ischaemic Attack (TIAs) service Monday-Friday 9-5. This appointment will support the process of providing a twenty four hour seven day a week thrombolysis service.

3. Inpatient service standards

3.1 There is an agreed pathway with the East of England Ambulance Trust for all new acute stroke presentations to be conveyed to the Lister Hospital for assessment for thrombolysis Monday - Friday 09.00-17.00hrs. Patients who self present at QEII are managed in the same way as other sub specialties that are centralised onto a single site. The stroke
physicians are available 9-5 for direct referral. Once the patients are accepted they are directly transferred to the Lister ED department where they will be met by the stroke team for assessment. Since February 2011 outside of these hours patients are conveyed directly to Watford Hospital.

3.2 The management of the inpatient acute stroke pathway is supported operationally at the twice operational management meetings where all newly diagnosed acute stroke patients are discussed to ensure that, where clinically appropriate, they have been admitted to a stroke ward. There is a dedicated assessment bed on the hyper acute stroke ward at Lister to expedite access for admissions with a new acute stroke diagnosis. Where demand exceeds capacity the Divisional Director for Medicine agrees actions directly with the Director of Operations to ensure that acute stroke patients have access to a bed on an acute stroke ward. This process has highlighted when the systems have failed, particularly when stroke patients are not admitted directly to the HASU. All non achievement of the targets is validated, investigated and solutions implemented.

3.3 The stroke physicians and radiologists have a written protocol in place which ensures that all clinically urgent patients have access to CT scans within 60 minutes of arrival and that all non urgent patients are scanned within 24 hours of admission. There is a joint escalation process in place with Radiology to support achievement within required timeframes. Radiological diagnostics are available 7 days a week.

Between 20-25% of patients are being scanned within an hour of referral which is in line with national standards but there is on some occasions a delay in referral to radiology. This issue is being highlighted and investigated at patient level detail on a weekly basis.

3.4 Thrombolysis for stroke patients is in place Monday- Friday 09.00- 20.00hrs. The Trust is following a typical model where this is undertaken by the emergency department consultants in conjunction with the stroke physicians.

Ongoing e-learning training is in place for all emergency department middle grades which is required to be able to expand the service beyond Monday- Friday 09.00 – 17.00hrs.

3.5 All acute stroke patients are discussed by the multidisciplinary team and outcomes are documented as part of the patient’s pathway. On discharge the patients GP is notified of the patients care plan, which is incorporated into a comprehensive discharge summary.

4 Outpatient high risk TIAs service standards

4.1 There is a dedicated one stop Trans Ischaemic Attack service in place as per national guidance. The clinics are run from the hyper acute stroke unit at the Lister by the consultant acute stroke physicians Monday – Friday 09.00 – 17.00hrs. Once a referral is received on the HASU the patients are contacted immediately to attend the clinic for assessment by a stroke physician. The main issues for this service are late or out of hour’s referrals and non compliance to attend the clinic by the patients. These issues are also being highlighted by other Trusts.

4.2 Radiological diagnostics are discussed directly with the Radiologists by the stroke physicians on an individual basis to ensure that diagnostics are undertaken within 24 hours of the onset of symptoms where clinically appropriate. Radiological diagnostics are available 7 days a week which allows for patients seen on a Friday afternoon to have access to CT scanning and doppler imaging over the weekend if clinically appropriate. There is a joint escalation process in place with Radiology to support achievement within required timeframes. The Radiology department and the stroke physicians are working well in partnership and if issues arise they have been resolved in a timely fashion but this
is on a rare occasion. The most reason example of this is the agreement for all ED attendances with likely stroke are being sent to the CT scanner rather than seek Radiologist agreement for the CT scan to take place.

4.3 A TIA referral form has been agreed with lead GPs and circulated to all GPs to ensure consistency in use of referral criteria. The PCT have supported the Trust with developing the referral form, gaining GP involvement and supporting a high level of communication to ensure that GPs understand the clinical importance of completing the referral form which enable swift and accurate assessment of the patients presentation to be undertaken.

5. Current Performance

5.1 For January 2011, the Trust has achieved all the vital signs metrics apart from high risk TIA (see appendix 2) where only 3 out of 6 patients meet the standard of being seen, diagnosed and the commencement of treatment within 24hrs. Analysis of the data is as described in section 4.1. The network is undertaking a detailed piece of work to understand the impact of these issues across Hertfordshire and Bedfordshire. The Trust expects to deliver this standard for the quarter following further action with GPs.

6. External Assessment

6.1 The Joint Stroke Services Peer Review Scheme were invited to conduct a peer review visit to East and North Hertfordshire NHS Trust on 5 May 2010, as part of a peer review of stroke services within the Bedfordshire and Hertfordshire Heart and Stroke Network. The Peer Review is undertaken by the Royal College of Physicians.

6.2 The provision of safe and sustainable hyperacute stroke services for patients admitted as an emergency to the East and North Hertfordshire NHS Trust, including arrangements for stroke thrombolysis to be available twenty four hours a day seven days a week, was the agreed terms of reference for the visit.

6.3 The following findings from the review team visit were commended:

- The review team noted the enthusiasm to provide high quality services amongst many staff on the visit.
- There is commitment of the Trust Board and senior management level to implement strategic plans to further evolve the stroke service.
- The East of England Ambulance Trust strongly supports the development of hyperacute 24/7 stroke services at Lister Hospital.
- There has recently been a clear improvement in process around acute stroke care including access to out of hour’s brain imaging and active bed management to facilitate direct admission to the stroke unit.
- There has been significant investment in nursing staff and non-invasive physiological bedside monitoring equipment, a second whole time stroke consultant, a second CT scanner and a dedicated stroke data clerk

6.4 The review team identified a number of concerns during their visit, itemised below:

- The provision of out of hour’s stroke thrombolysis by clinicians not trained in stroke or thrombolysis. The action taken to address this is to ensure all Emergency Department consultants and middle grades are trained by 1st April 2011 to support the thrombolysis of patients out of hours.
- Lack of clear governance around the current thrombolysis service including an unclear thrombolysis protocol and proforma. From the 1st November 2010 all inpatients
have had a clinical proforma which has been populated by Stroke clinicians (both medical, nursing and therapy) and is attached to inpatient notes. Reviews of stroke service policies and documentation has taken place. A thrombolysis protocol and proforma is in place.

- Little or no access to stroke therapy services on the new Lister acute stroke unit. Negotiations have begun with Hertfordshire Community Trust, who are contracted to provide therapy services to the Trust, as part of the review of the therapy contract in order to achieve this requirement. This gap has been identified and will be partially addressed when the stroke service is centralised at the Lister.

- Poor multidisciplinary working and lack of an integrated team approach to service development and delivery. A full time stroke nurse lead for the Hyper Acute Stroke Unit has now been put in place to support multidisciplinary working supported by multidisciplinary attendance at weekly meetings with the Divisional Chair and Director to address any issues.

On completion of these actions the Trust will be compliant with Royal College recommendations and will seek to implement a 24/7 service.

7. External Support

7.1 The PCT and local GPs have confirmed to the Trust that they are committed to supporting the development of the stroke service at East & North Hertfordshire NHS Trust and would also wish to see an expansion to the service so they can commission work that is currently managed in North London to the Trust.

7.2 The PCT are supporting the improvements to the service by providing representation to the weekly multi-disciplinary meetings led by the Divisional Chair and Director for the Medical Division.

7.3 Beds & Herts Heart & Stroke Network leads are supporting the training provided for the stroke nursing team and are attending the Trust in February when the training is being held. The Trusts managerial, medical and nursing team have named points of contact for advice and support within network.

7.4 Negotiations have commenced with Hertfordshire Community Trust to improve the provision of therapy services to stroke patients.

8. Future plans

8.1 The Trust is working towards the expansion of the thrombolysis service to twenty – four hours a day from the 1 April 2011. To be able to deliver a comprehensive twenty – four hour service requires:

- the Bedfordshire and Hertfordshire Stroke and Heart Network to support the Trust in joining the Anglia network rota (supported by a telemedicine service). To be in place by the 1st March 2011.

- all registered nursing staff are to complete a competency programme usually required for nursing staff working in critical care areas such as, coronary care and high dependency units. The competency framework also includes parapatetic competencies to support the provision of therapy to patients across the 7 days of the week. Training has commenced and to be completed by 1st April 2011.
- An increase in the therapy service on the hyper acute stroke unit at the Lister. Negotiations have begun with Hertfordshire Community Trust as part of the review of the therapy contract in order to achieve this requirement. This gap has been identified and will be partially addressed when the stroke service is centralised at the Lister in April 2011.

- Centralisation of the inpatient stroke service to the Lister site. This is a key requirement in order to ensure an equitable level of therapy provision to all inpatients and realise the inherent efficiencies to patient care that would be realised from centralising the service, including having a critical mass of staff, consolidating core skills and senior leadership and improving training, which clearly meet the objectives within Our Changing Hospitals programme.

- Review of low risk TIA clinics to ensure that low risk patients are seen and undergo clinically required diagnostics within 7 days of the onset of symptoms. This review is to be actioned by 1st April 2011.

- The Stroke team are exploring with the network the requirement for a seven day a week high risk TIA service which could be supported by a telemedicine system as with thrombolysis. It is hoped that this will be in place by April 2011.

9. **Challenges to delivery**

9.1 Specific challenges to the stroke service have been identified and are managed via risk registers with scrutiny of mitigating actions where possible:

- Access to rehabilitation beds including neuro rehabilitation within primary care are limited and often result in extended lengths of stay within secondary care. There is no early supported discharge team for stroke patients within Hertfordshire. In incidence of bed pressures or high stroke admissions this can prevent the flow from the HASU to the Acute Stroke Unit causing delays for stroke patients and non compliance with patients being admitted directly to the HASU.

- Engagement with the PCT at a Hertfordshire wide group with the aim of tackle issues. The first meeting of this group is on the 10th February 2010. This forum will look at issues since as Supported Discharge provision.

- The PCT is engaged in changing processes to enable Continuing Healthcare assessments being completed in secondary care. This will reduce length of stay and provide flow within the stroke units enabling strokes to be admitted directly to the HASU.

- HSMR- the Trust has received 3 HSMR alerts related to stroke in the last 12 months. All alerts have confirmed coding as a key reason for the alerts but with a focus on continuing pathway improvements. Coding is carried out weekly with the coding team and a stroke consultant.

- Data inputting- the network data base is very complex & requires large data sets to be inputted for both inpatient stroke and TIA patients. The Trust has invested in a data inputting clerk. This investment has been reflected in the increase of the denominator in quarter 3. This has provided the evidence that we are capturing the number of strokes and that the data quality was the issue. All patients irrespective of whether they are managed as inpatient or outpatients have a stroke proforma completed by the clinical team. The proforma is kept in the patients health records.
• Royal College of Physicians (RCP) recommendations to the Trust (October 2010) stressed that the Trust should not commence a twenty-four hour thrombolysis service without the registered nursing staff achieving the required competency framework and an increase in the therapy provision to the hyper acute stroke unit at Lister hospital. All registered nursing staff on the hyperacute stroke unit will complete competency frameworks. This specific framework spans the whole stroke patient pathway and is both detailed and explicit.

• A major review by the Care Quality Commission (CQC), published in January 2011, on stroke care has found the extent to which patients are supported in coping with life after stroke varies significantly across England. The report found that rehabilitation services after transfer home from hospital were inconsistent across the country and people in some areas had little or no access to stroke specialist community-based rehabilitation. The Commission found only two-thirds of PCTs commissioned specialist stroke physiotherapy and less than 40% of areas provided good access to psychological therapy or stroke counsellors. The Trust will work with the commissioners to support their actions to improve this position.

10. Conclusion

10.1 The stroke service has demonstrated significant improvement in recent months. That is demonstrated in the performance data, the expansion in service provision and the findings of the Royal College of Physicians visit. There have been many challenges of which some have been over come. Plans are in place to continue improving the service and standards and the provision of a 24/7 thrombolysis service from April 2011 is key to this. There is a dedicated and highly motivated team of clinicians, nurses, therapy staff and managers who are striving to take the service forward. These actions will be monitored as outlined below:

• Performance against each of the actions identified in the plan is monitored through the APMG process and is presented to the SMT and the Executive Committee meeting on a weekly basis

• At a Divisional level performance is managed weekly by the Divisional Director and Chair directly with the stroke physicians and the wider team

• Progress is reported to the Divisional Board, Medicine and monitored via the Trusts performance review process

• Regular meetings with both James Quinn and Neil Dardis are in place.

• Weekly clinical analysis of the data is in place.

It is anticipated that these actions and monitoring mechanisms will deliver the required improvements in the stroke service over the coming months.
APPENDIX 1 – STROKE PERFORMANCE INDICATORS

➢ National Vital Signs Standards

- All patients presenting with a recent Trans Ischaemic Attack or minor stroke have access to immediate referral to specialist assessment and investigation; 365 days per year.
- Patients identified as being at high risk of a preventable full stroke should be assessed within 24 hours by an appropriate clinician.
- All other patients to be assessed within a maximum of seven days.
- Where clinically required CT within 24 hours and Carotid Doppler Scan and Echo within 48 hours if required.
- All patients having suffered a TIA/ minor stroke followed up one month in either primary/ secondary care.
- All patients with a suspected acute stroke to be transported to a hospital providing hyper acute stroke services.
- This entails a protocol for stroke triage with appropriate clinical assessment with access to imaging and thrombolysis.
- To include admission to an acute stroke unit for their inpatients stay staffed by appropriate qualified MDT clinicians including a swallow assessment within 24hrs.

➢ For quarter 4 (2010/11) the standards are as follows:

- Achieve vital signs standard of 80% of patients spending 90% of their acute stay in an acute unit
- Proportion of patients admitted directly to an acute stroke unit within 4 hours of hospital arrival [( 90% by April 2011) Department of Health target]
- Achieve SHA target of 15% of patients should have access to thrombolysis within 3 hrs of onset of symptoms (CQINN)
- Achieve SHA target of 60 % of high risk TIA patients being scanned and assessed within 24 hours
- Achieve vital signs standard of 65% of low risk TIA patients being seen in 7 days including access to CT scan
- Proportion of patients presenting with stroke and AF anti-coagulated on discharge (vital signs standard 60% by April 2011)
- Achieve vital signs standards of 20-25% of patients receiving a CT scan within 60 minutes
- Proportion of stroke patients scanned within 24 hours of hospital arrival (vital signs standard of 100% by April 2011)
- Achieve vital signs standard of 60% of all high risk TIAs treated within 24hrs without admission to hospital
- Move to 24/7 hyper acute stroke care including thrombolysis (SHA milestone)
- Vital signs standard of 85% of patients should be discharged with a care plan
# APPENDIX 2 – TRAFFICLIGHT STROKE REPORTS (February 2011)

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<td><strong>Stroke</strong></td>
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<td>% patients accessing scan in 60 mins 20-25%</td>
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<td>% patients with High risk TIA treated in 24 hrs not admitted*</td>
<td>&lt;44% Red 45-59% 60% Green</td>
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<tr>
<td>% patients with High risk TIA seen and scanned within 24 hrs</td>
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