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Provision of Care Pathways for stroke survivors across the East Midlands

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Contents

Foreword

This report was written by the East Midlands Academic Health Science Network, Stroke Rehabilitation programme, in collaboration with the East Midlands Strategic Clinical Network and with support from staff at Sherwood Forest Hospitals NHS Trust, Nottingham University Hospitals Trust, Nottinghamshire Healthcare NHS Trust, Nottingham CityCare Partnership, University Hospitals Leicester NHS Trust, Leicestershire Partners NHS Trust, United Lincolnshire Hospitals NHS Trust, Lincolnshire Community Health Services NHS Trust, Northampton General Hospital NHS Trust, Kettering General Hospital NHS Trust, Derby Hospitals NHS Foundation Trust, Derbyshire Community Health Services, and Derbyshire Social Services.

1. Background

The provision of care for stroke survivors living in the East Midlands differs amongst Clinical Commissioning Groups (CCGs) areas. The focus of this report is to identify what services exist in each area of the East Midlands, with a particular focus on the provision of community based rehabilitation services. The aim was to identify typical care pathways experienced by stroke survivors living in each area. This report also provides information regarding the East Midlands Academic Health Science Network (EMAHSN) activities in engaging with providers and commissioners to address gaps in service provision and build cases of support to implement evidence based stroke services.

Stroke is the third largest cause of death in the United Kingdom, and is a leading cause of disability worldwide [1], representing the most important causes of morbidity and long term disability in Europe [2]. There are approximately 152,000 strokes in the UK every year and about 1.1 million stroke survivors live in the UK [3]. Stroke consumes approximately 5% of all health service resources within the UK National Health Service (NHS), with a large amount of this being due to inpatient care of disabled stroke patients [4]. Recovery can continue for many years after a stroke and consequently a seamless transfer of care and access to services over the long term is important for positive patient outcomes.

The stroke care pathway begins with initial treatment in a hyper-acute or acute stroke specialist unit in an NHS hospital. For optimal recovery this needs to be followed on discharge from hospital by the provision of specialist rehabilitation in the community setting, for patients who need it [5]. During the last decade there has been an increasing focus on Early Supported Discharge (ESD) teams. ESD services comprise of multidisciplinary teams of nurses, therapists, doctors, and social care staff, with specialist stroke knowledge. ESD teams facilitate the transfer of patients from hospital to home and provide rehabilitation and support in the early stages of adjusting to the home environment.

Research evidence has shown that ESD significantly increases the likelihood of gaining independence in activities of daily living for patients with mild to moderate stroke [6]. This increases the quality of life for both the patients and their carers or families and reduces length of hospital stay. Stroke patients who are newly transferred home are able to benefit from continuing contact with specialist therapy services [7, 8]. Research has also shown that ESD services are more likely to be effective when provided by a specialist multidisciplinary team, comprising of a physiotherapist, an occupational therapist and a speech and language therapist, with medical, nursing and social worker support and when work is coordinated through regular meetings [9, 10].

Research suggests ESD is not suitable for all patients (those with more severe stroke), and many patients will require further rehabilitation after accessing ESD services. Community stroke rehabilitation services should be available following discharge from acute services, ESD, community stroke beds or outpatient services. Community stroke rehabilitation services can be defined as services that are delivered predominantly within the stroke survivor's normal place of residence, and are distinct from, although complementary to, interventions delivered by ESD services [11].

The delivery of services has been shaped by various clinical guidelines that have highlighted the need for ESD services and have set out recommendations regarding the type and amount of therapy that should be provided by a community stroke rehabilitation service, and the need for six month reviews [12, 13]. Six month reviews are important to identify any unmet needs of stroke survivors at approximately six months after leaving hospital. Due to the long term nature of recovery from stroke, patients can experience changes in their needs over time and may require signposting to further services to receive appropriate, targeted support. Six month reviews can provide a link from hospital to home and can help to prevent unnecessary readmissions to hospitals or care homes.

Yet despite a wealth of research evidence and policy and guideline recommendations, service provision for stroke survivors on leaving hospital still varies widely across the country. In a report by the Care Quality Commission [14], ESD was found to be available in only 37% of areas and occupational therapy was not always provided by a stroke specialist in 44% of areas. Six month reviews were in place in less than one quarter of places, and only 34% of Primary Care Trusts had a framework for joint reviews of health and social care needs, despite clinical guidelines that this should be the case [14].
To facilitate implementation of evidence based services two consensus studies were conducted to clarify the core components of evidence-based community stroke services. The optimal components of ESD and community stroke services, informed by research evidence and national guidelines, were identified, outlining the need for stroke specialist care with collaborative working across service providers, health disciplines and social care. [10,11].

Working with commissioner and provider stakeholders and in collaboration with the East Midlands Strategic Clinical network (EMSCN) evidence-based service specifications were developed for ESD,[1] community rehabilitation and Six Month Reviews[2] by the EMAHSN during specific workshops. The NHS Midlands and East Stroke Services Specification also

[1] ESD Service Specification
[2] Six Month Review Service Specification

sets out guidance for the services that allow for a fully integrated, end-to-end stroke service [15], that implements recommendations of the National Stroke Strategy [12] and meets the standards advised by the Royal College of Physicians [13] and NICE guidelines [16].

Figure 1 shows an illustration of how the stroke care pathway should operate according to clinical guidelines, and was produced to inform patients and their families about services that should be available to them following discharge from hospital. This report describes the stroke care pathways currently operating in the East Midlands and highlights gaps in service provision.

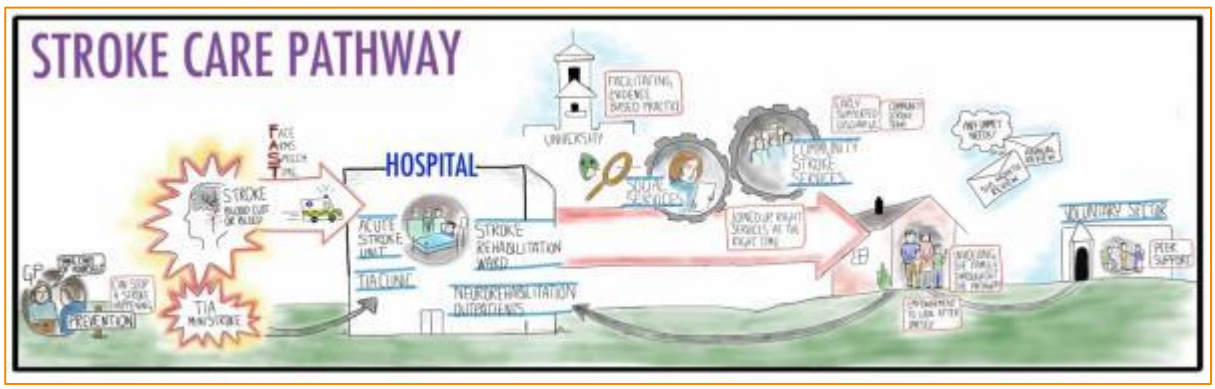

Figure 1: Illustrated diagram of the stroke care pathway

2. Approaches to mapping the stroke Care Pathway

This mapping exercise was conducted to determine what healthcare pathway existed for stroke survivors in each area of the East Midlands. This activity initially comprised an ESD service review in 2012 led by the East Midlands Strategic Clinical Network (EMSCN), which was later refreshed in 2014 in collaboration with the East Midlands Academic Health Science Network (EMAHSN). Provision of care for stroke survivors in the community was compared to the evidence-based pathway outlined in the service specifications developed by the EMASHN and EMSCN. This process allowed for gaps in service provision to be identified and service improvement activities to be initiated.

The ESD service assessment review in 2012 began with a self-assessment by ESD providers using a proforma template (Appendix A). ESD service providers were asked to grade their services from 1 to 5 for focussed areas and use red, amber and green as a traffic light system to represent where services were operational or requiring improvement.

Following the self-assessment process, face-to-face meetings were organised with the ESD providers and involved presentations by the providers. A discussion took place including the reviewing team, providers and commissioners regarding future action. This led to the creation of a written report for providers and commissioners, and feedback provided with the East Midlands Stroke Clinical Advisory Group and relevant Chief Executives.

The community stroke service review was extended beyond ESD in 2014 to include provision of community stroke rehabilitation services. Service providers were asked to complete a further self-assessment (Appendix B) which required yes or no answers regarding the availability of, or access to, particular services.

The results of both service reviews informed the development of the CCG Heat Map (Figure 2) which displays the availability of community stroke services in each CCG area. Each CCG area within the East Midlands is numbered on the map and is colour coded to show which parts of the stroke care pathway are provided. Only three areas (Nottingham City, Corby and Northampton) provide ESD, community stroke rehabilitation services and six month reviews. Three areas (Nottingham West, Nottingham North & East and Rushcliffe) provide ESD and community stroke rehabilitation services. However, the remainder of the East Midlands currently only provide an ESD service and there is no provision for community stroke rehabilitation services or six month reviews, despite the strong evidence base, clinical guidelines and service specifications that clearly show the requirement for them.

Following on from the CCG Heat Map, the stroke care pathway for each geographical area within the East Midlands was mapped out in more detail. This was achieved through continued engagement with service providers from both community and acute settings who provided information to the EMAHSN about how their services were structured. Both acute and community service providers confirmed where patients could be referred to and from and ensured that the pathway diagram produced by the EMAHSN was accurate.

Additional information about the size of CCG areas, patients registered from each area (See Appendix C) and incidence of stroke (See Appendix D) was gathered from the Health and Social Care Information Centre, the National Cardiovascular Intelligence Network and the Office for National Statistics. Admission rates to hospitals were gained through liaising with acute service providers and the Informatics team at the EMAHSN.

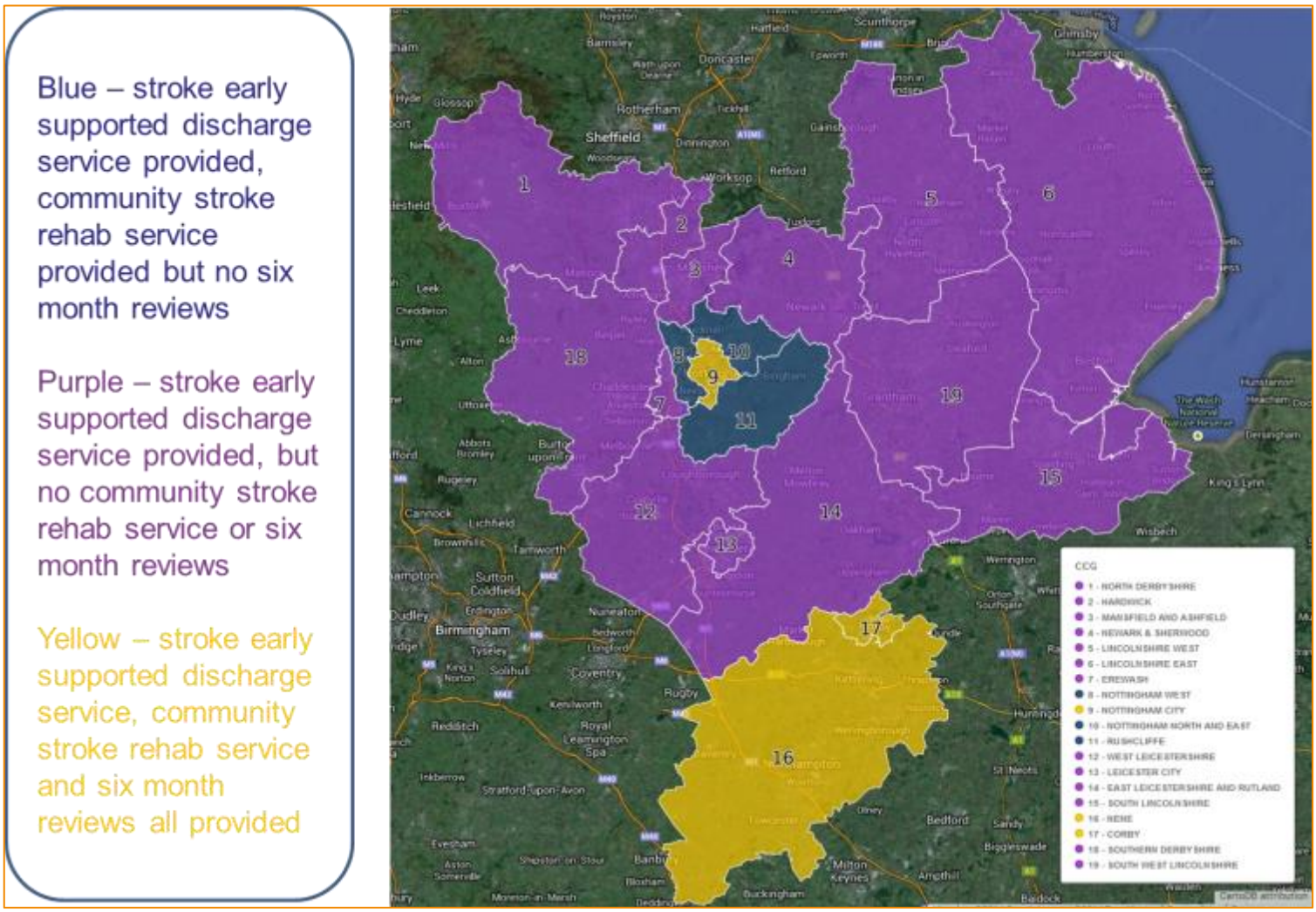

Figure 2: CCG heat map showing which aspects of the stroke care pathway are available in each CCG area. See Appendix C for information about the prevalence of stroke in each area.

3. Stroke Care Pathways by geographical area

Mid-Nottinghamshire

The area of Mid-Nottinghamshire includes the Mansfield & Ashfield and Newark & Sherwood CCGs (see Appendix C for more information). The prevalence of stroke in the Mansfield & Ashfield CCG area is 1.8% and is 1.9% in the Newark & Sherwood CCG area, which is slightly above the England average of 1.7% (Appendix D). Figure 3 shows a map of the stroke care pathway for all stroke patients in Mid-Nottinghamshire.

Stroke patients are admitted to King's Mill Hospital (Sherwood Forest Hospitals Foundation Trust; SFHT) to the Stroke Unit. The Stroke Unit comprises Ward B53, which is an acute ward of 23 beds providing a seven day service; and Ward B54, which is a rehabilitation ward of 15 beds providing a six day service. Hospital Episode Statistics (HES) data suggest that during 2013, SHFT reported an annual admission of 553 confirmed stroke cases. On discharge from the acute stroke ward at King's Mill Hospital, patients may be transferred to the stroke rehabilitation ward at King's Mill Hospital or referred to the Early Supported Discharge (ESD) service if they meet particular criteria. The ESD service helps to coordinate transfer of care from hospital to home and provides intensive rehabilitation in the patient's home. Patients who do not require inpatient rehabilitation but are not suitable for ESD are able to access further rehabilitation provided by the Neuro-Rehabilitation Outpatients service at Mansfield Community Hospital, King's Mill Hospital and Newark Hospital. Patients may also access speech and language therapy provided by County Health Partnerships at Mansfield Community Hospital.

Occasionally on discharge from acute services, patients may also be diverted away from the stroke pathway to receive care as an inpatient at the Fernwood Rehabilitation Unit, Newark Hospital, or Mansfield Community Hospital.

Patients in Mansfield & Ashfield and Newark & Sherwood do not have access to stroke specialist community rehabilitation delivered in their own homes (beyond ESD), or six month reviews.

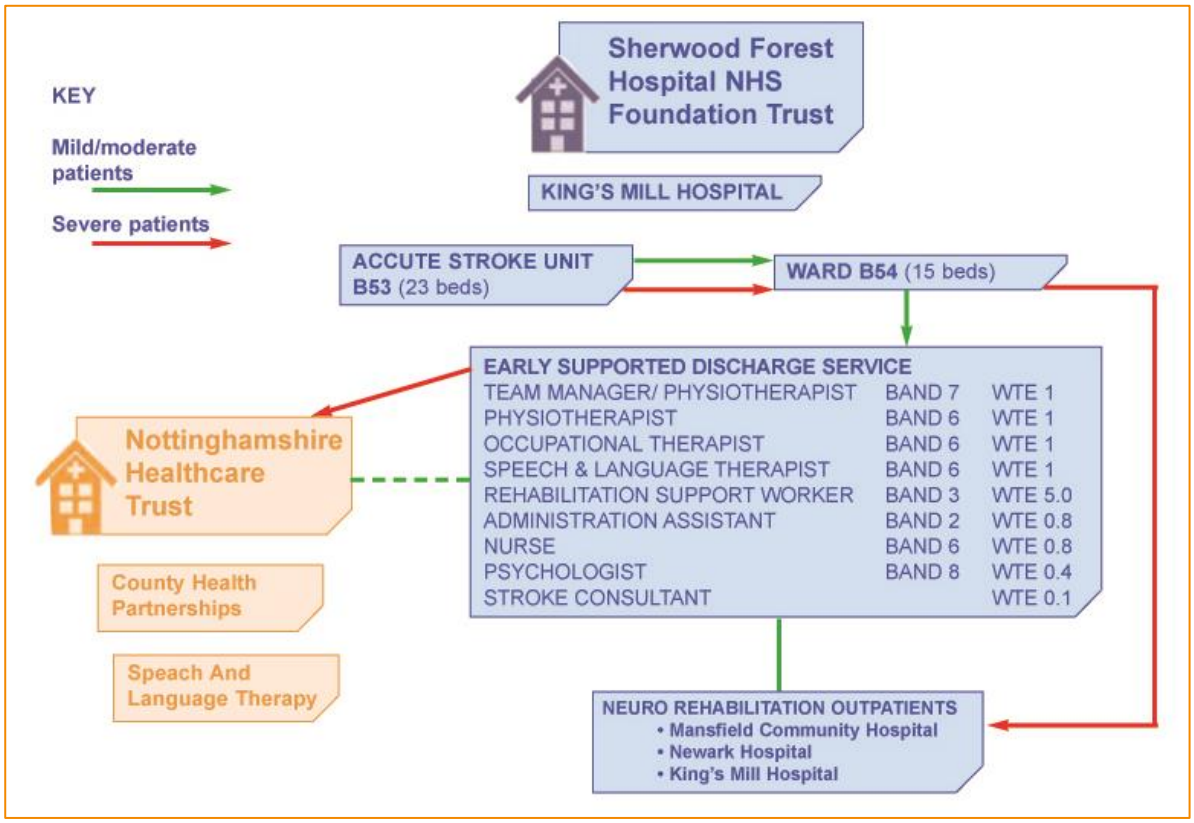

Figure 3: Stroke care pathway for patients in Mid-Nottinghamshire

Nottingham City

Nottingham City area is covered by a single CCG area (see Appendix C for more information). The prevalence of stroke in this area is 1.3% compared to the England average of 1.7% (Appendix D). Figure 4 shows a map of the stroke care pathway for patients who have had a mild to moderate stroke in Nottingham City.

Stroke patients in Nottingham City are admitted to the Stroke Unit at Nottingham City Hospital (Nottingham University Hospitals Trust). HES data suggest that in 2013 1306 strokes were admitted to the Stroke Unit at Nottingham City Hospital in total. The Stroke Unit includes a hyper acute section which provides care for the first 72 hours after stroke, an acute section for stays of up to a week. There are two rehabilitation wards in the Stroke Unit; Rehab 1 caters for non-complex stroke patients, and Rehab 2 caters for stroke patients with more complex needs. According to HES data, 366 patients from Nottingham City CCG area were admitted to Nottingham City Hospital in 2013.

On discharge from acute services, patients in Nottingham City CCG who meet eligibility criteria are referred to the ESD service, which is provided by Nottingham CityCare

Partnership. Patients unsuitable for ESD, or who require further rehabilitation after discharge from ESD have access to the community stroke rehabilitation team, also provided by Nottingham CityCare Partnership. Both services provide stroke specialist rehabilitation in the patient's home.

Patients in Nottingham City are also offered six month reviews provided by Nottingham CityCare Partnership.

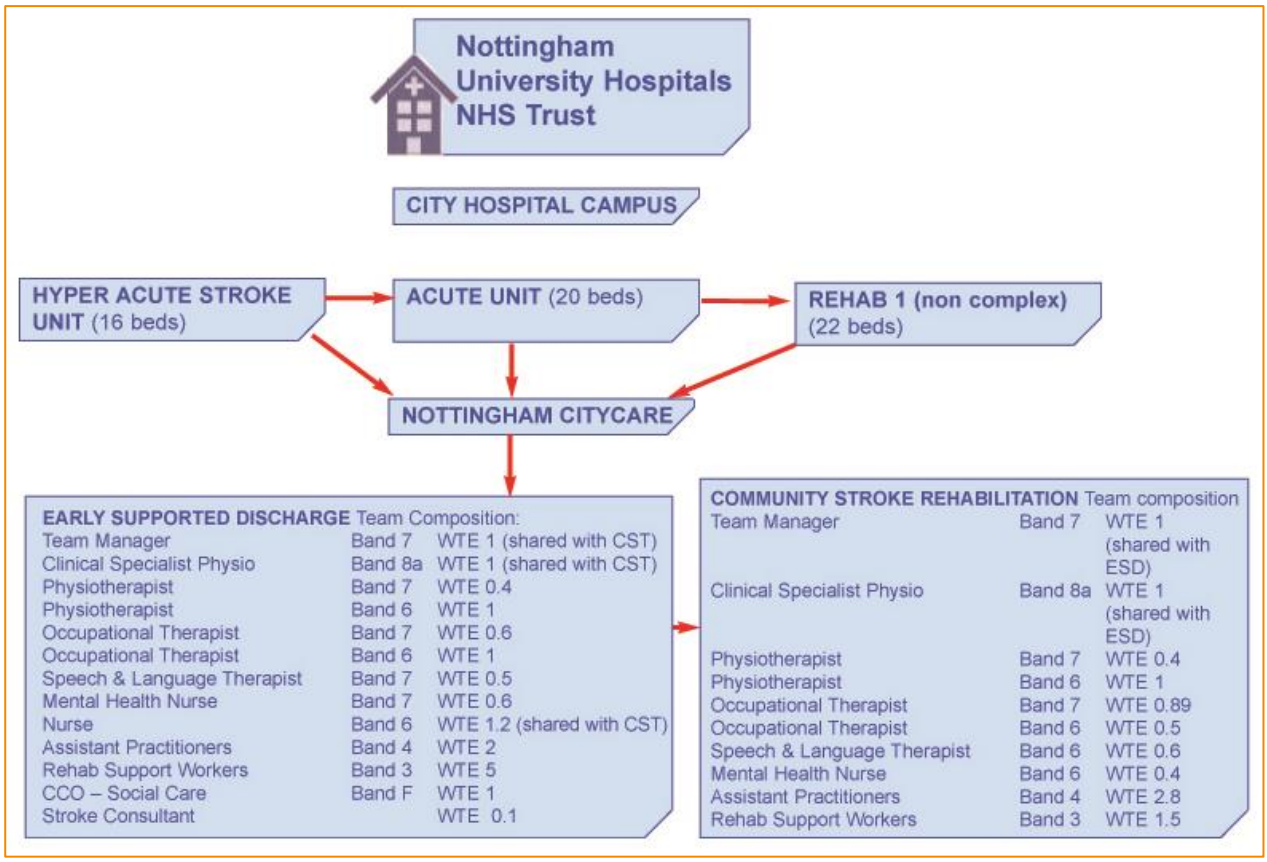

Figure 4: The stroke care pathway for patients in Nottingham City.

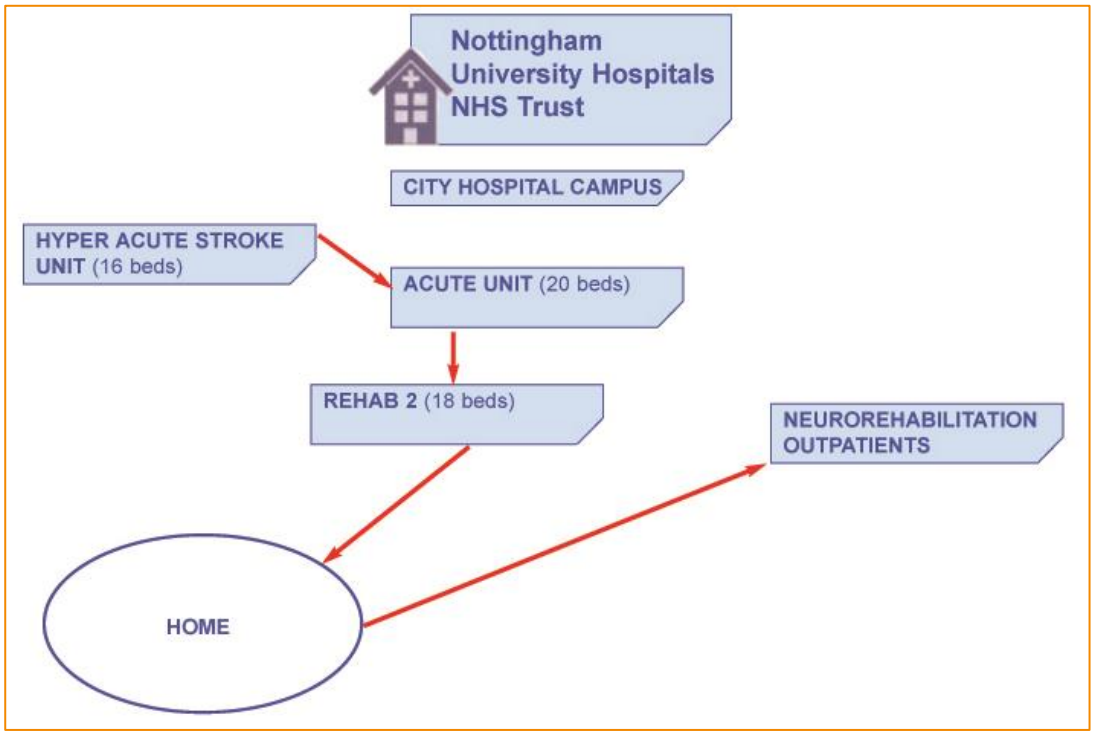

Figure 5: Stroke care pathway for patients who have had a severe stroke in Nottingham City.

Patients with severe strokes in Nottingham City follow a different stroke care pathway (Figure 5) to patients with mild to moderate strokes. Patients are admitted to the Hyper Acute Stroke Unit at Nottingham City Hospital and are transferred to the Acute Stroke Unit and then to Rehab 2 Ward for inpatient rehabilitation. On discharge from Rehab 2 Ward and following a return home, stroke patients have access to NeuroRehabilitation Outpatients services, which are now trialing a home-based service for some patients.

Nottinghamshire County South

Nottinghamshire South encompasses the CCGs of Nottingham West, Nottingham North & East, and Rushcliffe (see Appendix C for more information). The prevalence of stroke is 2.0% in all three CCG areas, compared to the England average of 1.7% (Appendix D). Figure 6 shows the stroke care pathway for patients in Nottingham County South who have had a mild to moderate stroke.

Patients with mild to moderate strokes in Nottinghamshire County South are admitted to the Hyper Acute Stroke Unit at Nottingham City Hospital. HES data show that in 2013, Nottingham City Hospital admitted 182 stroke patients from Nottingham West CCG area, 225 stroke patients from Nottingham North and East CCG area and 157 stroke patients

from Rushcliffe CCG area. Patients may then be transferred to the Acute Stroke Unit at Nottingham City Hospital and stroke patients with less complex needs are transferred to Rehab 1 Ward for inpatient rehabilitation. On discharge from hospital, stroke patients may be referred from the Hyper Acute Stroke Unit, or the Acute Stroke Unit, or Rehab 1 Ward to the Stroke Outreach Service provided to patients in their own homes by Nottingham University Hospitals NHS Trust.

After discharge from the Stroke Outreach Service team, patients requiring further rehabilitation are referred to the Community Stroke Service provided by Nottinghamshire NHS Trust County Health Partnerships. This service provides stroke specialist rehabilitation in the patient's home. Patients may also be referred for speech and language therapy provided by County Health Partnerships.

Patients in Nottinghamshire South are not provided with six month reviews.

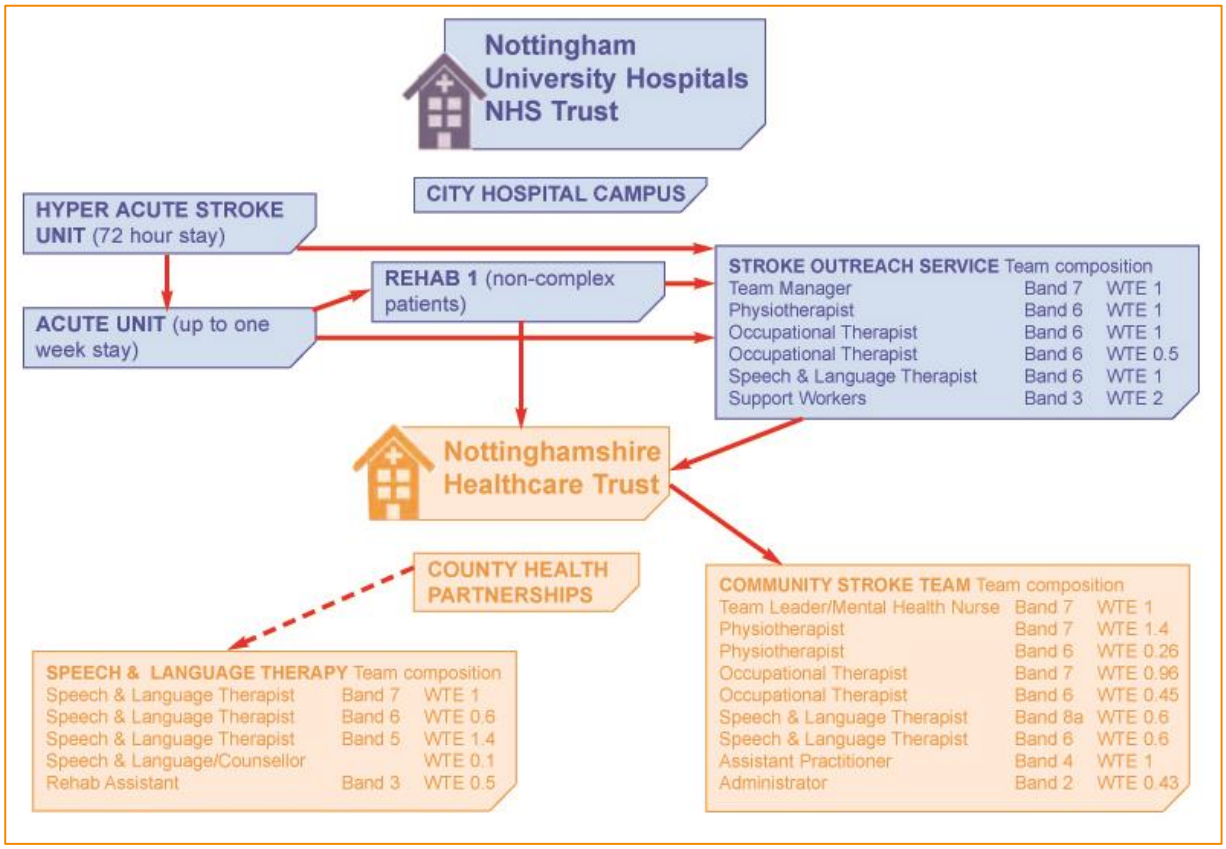

Figure 6: The stroke care pathway for patients who have had a mild to moderate stroke in Nottinghamshire County South.

Patients with severe strokes in Nottinghamshire County South follow a different stroke care pathway (Figure 7) to patients with mild to moderate strokes. Patients are admitted to

the Hyper Acute Stroke Unit at Nottingham City Hospital and can then be transferred to the Acute Stroke Unit at Nottingham City Hospital. Patients with complex needs receive rehabilitation on the Rehab 2 Ward at Nottingham City Hospital and are then discharged home, with access to NeuroRehabilitation Outpatients services, which are now trialing a home-based service for some patients. Patients are also able to access speech and language therapy provided by Nottinghamshire Healthcare Trust County Health Partnerships.

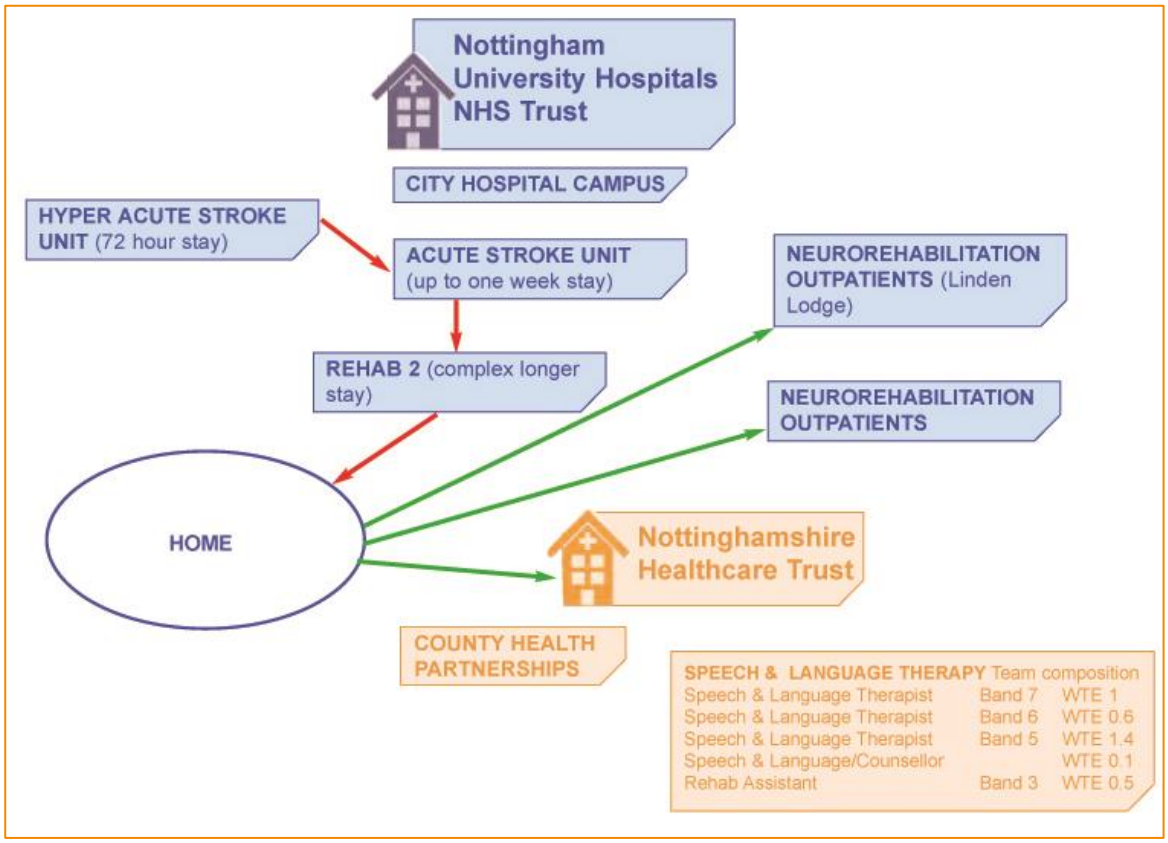

Figure 7: The stroke care pathway for patients who have had a severe stroke in Nottinghamshire County South.

Leicestershire

Leicestershire has three CCGs associated with it; Leicester City, West Leicestershire, and East Leicestershire & Rutland (see Appendix C for more information). The prevalence of stroke is 1.2%, 1.6% and 1.8% in each CCG area respectively, compared to the England average of 1.7% (Appendix D). The stroke care pathway for Leicestershire patients is shown in Figure 8.

Patients are admitted to the Acute Stroke Unit at Leicester Royal Infirmary. The Acute Stroke unit comprises Ward 25 and Ward 26 and have a total of 36 beds, eight of which are Hyper Acute beds. HES data show that in 2013, 352 stroke patients were admitted form Leicester City CCG area, 364 stroke patients were admitted from West Leicestershire CCG area, and 343 stroke patients were admitted from East Leicestershire & Rutland CCG area to Leicester University NHS Trust.

On discharge from the Acute Stroke Unit, patients may be transferred to Ward 3, the Stroke Rehabilitation Unit in Leicester Royal Infirmary for inpatient rehabilitation. Patients may also be referred from the Acute Stroke Unit to Ward 1 in Coalville Community Hospital or to Ward 1 in St Luke's Hospital, for inpatient rehabilitation provided by Leicester Partners NHS Trust. Patients may be referred onwards for speech and language therapy and intermediate care provided by Leicester Partners NHS Trust.

Patients meeting particular criteria may also be referred from the Acute Stroke Unit at Leicester Royal Infirmary to the Early Supported Discharge Service provided by Leicester University Hospitals NHS Trust. The ESD service provides stroke rehabilitation to patients in their own home.

Patients in Leicestershire do not have access to home-based stroke specialist community rehabilitation services (beyond ESD) and are not offered six month reviews.

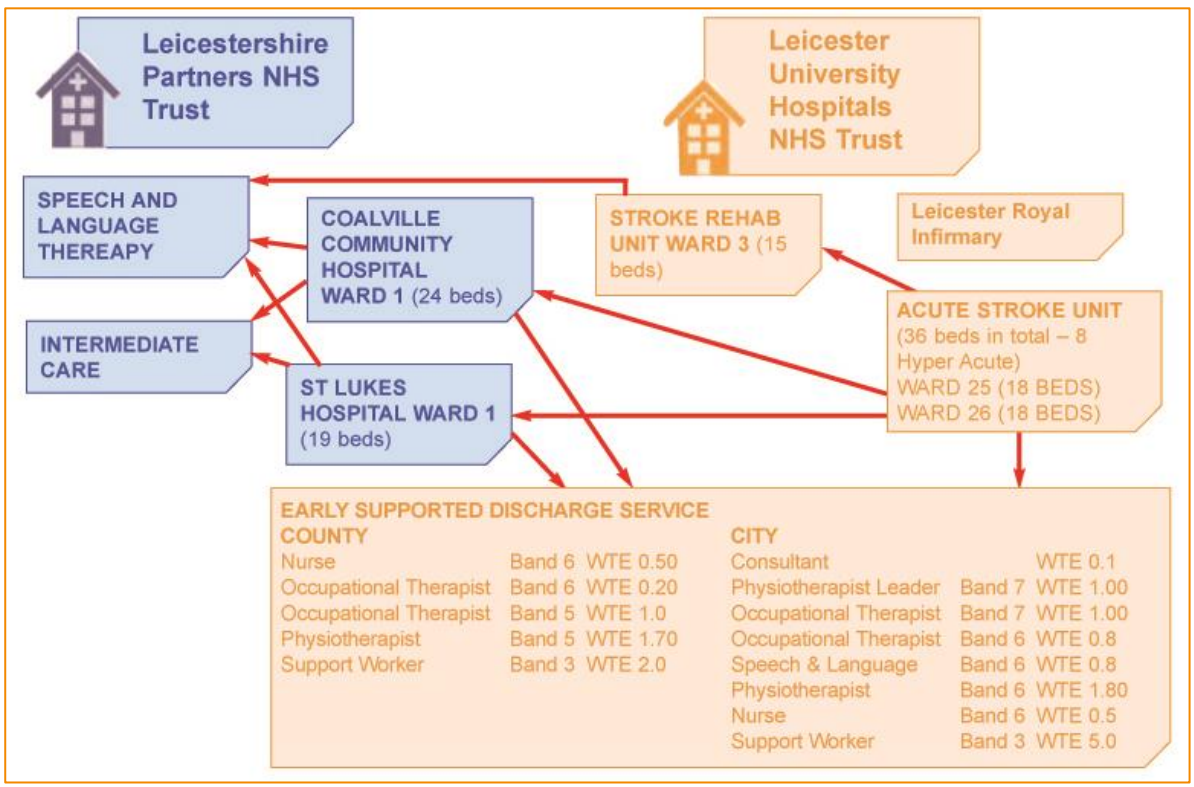

Figure 8: The stroke care pathway for patients in Leicestershire

Lincolnshire

Lincolnshire is covered by four CCGs: Lincolnshire West CCG, Lincolnshire East CCG, South Lincolnshire CCG, and South West Lincolnshire CCG (see Appendix C for more information). The prevalence of stroke is 1.9%, 2.5%, 2.0% and 2.0% respectively for each CCG area, compared to the England average of 1.7% (Appendix D). The stroke care pathway for patients in Lincolnshire is shown in Figure 9.

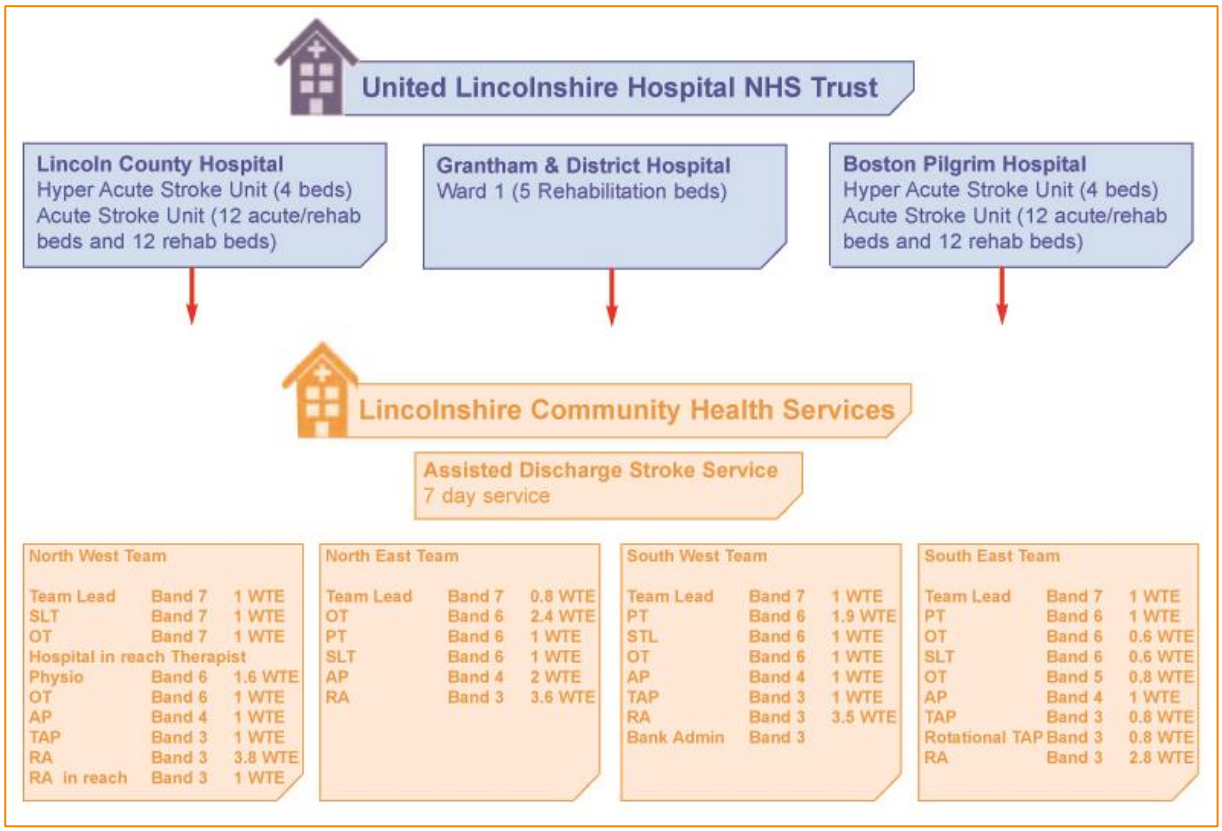

Figure 9: The stroke care pathway for patients in Lincolnshire

Stroke patients are admitted to Lincoln County Hospital or Boston Pilgrim Hospital, depending on where the patient lives. HES data show that in 2013, United Lincolnshire NHS Trust admitted 374 stroke patients from Lincolnshire West CCG area, 449 stroke patients from Lincolnshire East CCG area, 79 patients from South Lincolnshire CCG area, and 177 patients from South West Lincolnshire CCG area. Lincoln

County Hospital and Boston Pilgrim Hospital both have Hyper Acute and Acute facilities in their stroke units. Grantham and District Hospital has five stroke specialist rehabilitation beds.

Patients who meet eligibility criteria are referred to the Assisted Discharge Stroke Service, provided by Lincolnshire Community Health Service. The Assisted Discharge Stroke Service is split into four sub-teams based on geographical location.

Generic community rehabilitation that is not stroke specialist is available for patients who do not meet eligibility criteria for the Assisted Discharge Stroke Service or for patients who require further community rehabilitation after discharge from the Assisted Discharge Stroke Service.

Patients in Lincolnshire do not have access to home-based stroke specialist community rehabilitation (beyond ESD) and are not offered six month reviews.

Northamptonshire

Northamptonshire is served by Nene and Corby CCGs (see Appendix C for more information). The prevalence of stroke for Nene CCG area is 1.6% and for Corby CCG area is 1.8%, compared to the England average of 1.7% (Appendix D). The stroke care pathway for patients in Northamptonshire is shown in Figure 10.

Stroke patients are admitted to either Northampton General Hospital (NGH), where Hyper Acute and Acute stroke unit facilities are available, or to Kettering General Hospital (KGH), where acute stroke unit facilities are available. HES data show that in 2013 NGH accepted 86 stroke admissions from Corby CCG area and 885 stroke admissions from Nene CCG area. According to HES data, KGH accepted 52 stroke admissions from the Corby CCG area and 179 stroke admissions from Nene CCG area in 2013. Patients who are admitted to NGH but reside closer to KGH are repatriated to KGH when possible.

On discharge from both NGH and KGH, patients may be referred to the Community Stroke Team. This team provides an ESD service for patients meeting certain criteria and stroke specialist community rehabilitation for patients who do not meet ESD criteria or for patients requiring ongoing therapy after ESD has finished. All rehabilitation is delivered in the patient's home.

Patients from NGH and KGH may be referred from the Acute Stroke Unit for further rehabilitation as an inpatient to Danetre Hospital or Isebrook Hospital. Following discharge, patients may then be referred onwards to the Community Stroke Team.

Six month reviews are offered to all stroke patients by the Community Stroke Team.

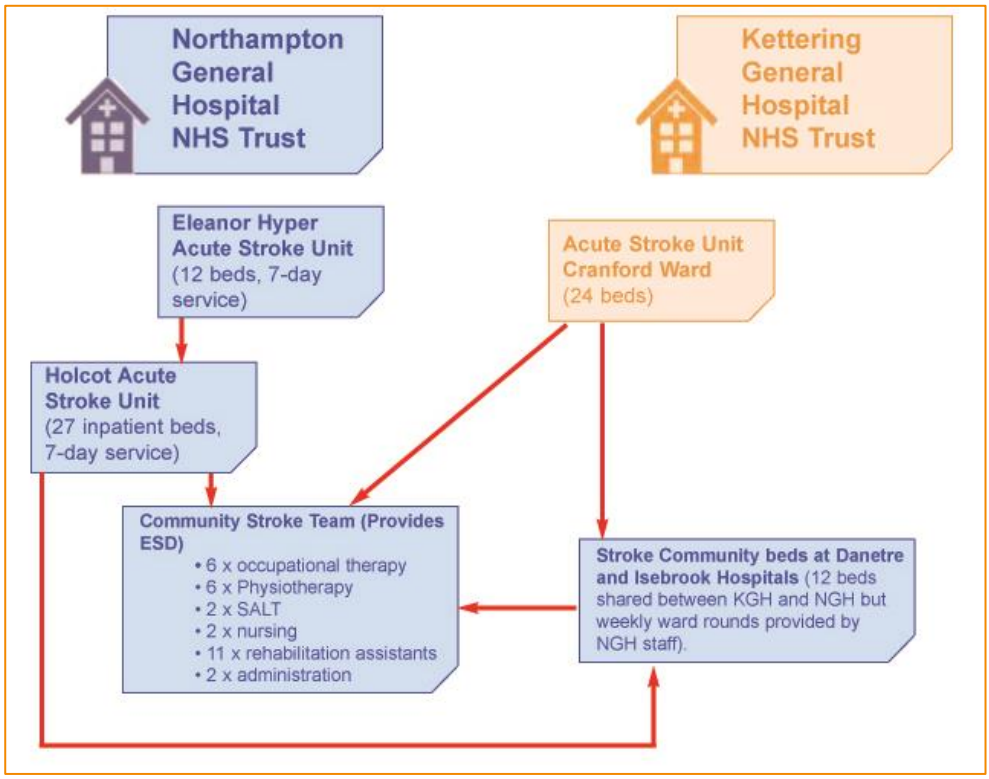

Figure 10: The stroke care pathway for patients in Northamptonshire

Southern Derbyshire

The CCGs of Southern Derbyshire and Erewash serve the South Derbyshire area (see Appendix C for more information). The prevalence of stroke is 1.8% and 2.0% for each CCG area respectively, compared to the England average of 1.7% (Appendix D). The stroke care pathway for patients in Southern Derbyshire is shown in Figure 11.

Stroke patients in Southern Derbyshire and Erewash are admitted to the Stroke Unit at the Royal Derby Hospital, which has Hyper Acute and Acute facilities. According to HES data, in 2013, 726 stroke patients from Southern Derbyshire CCG area and 68 stroke patients from Erewash CCG area were admitted to Derby Royal Hospital.

Patients may then be transferred to the Stroke Rehabilitation Unit, or if they meet eligibility criteria may be referred to the ESD service. The ESD service has a central hub, which directs patients to Derby City, Amber Valley/Erewash or South Derby Dales teams depending on where the patients reside. Patients may be referred from the Stroke Rehabilitation Unit to the ESD central hub. Additionally, patients may be referred from the ESD central hub to the Neuro-Rehabilitation Outpatients service. Intermediate care is available to stroke patients in all areas.

Patients in South Derbyshire do not have access to home-based stroke specialist community rehabilitation (beyond ESD) and are not offered six month reviews.

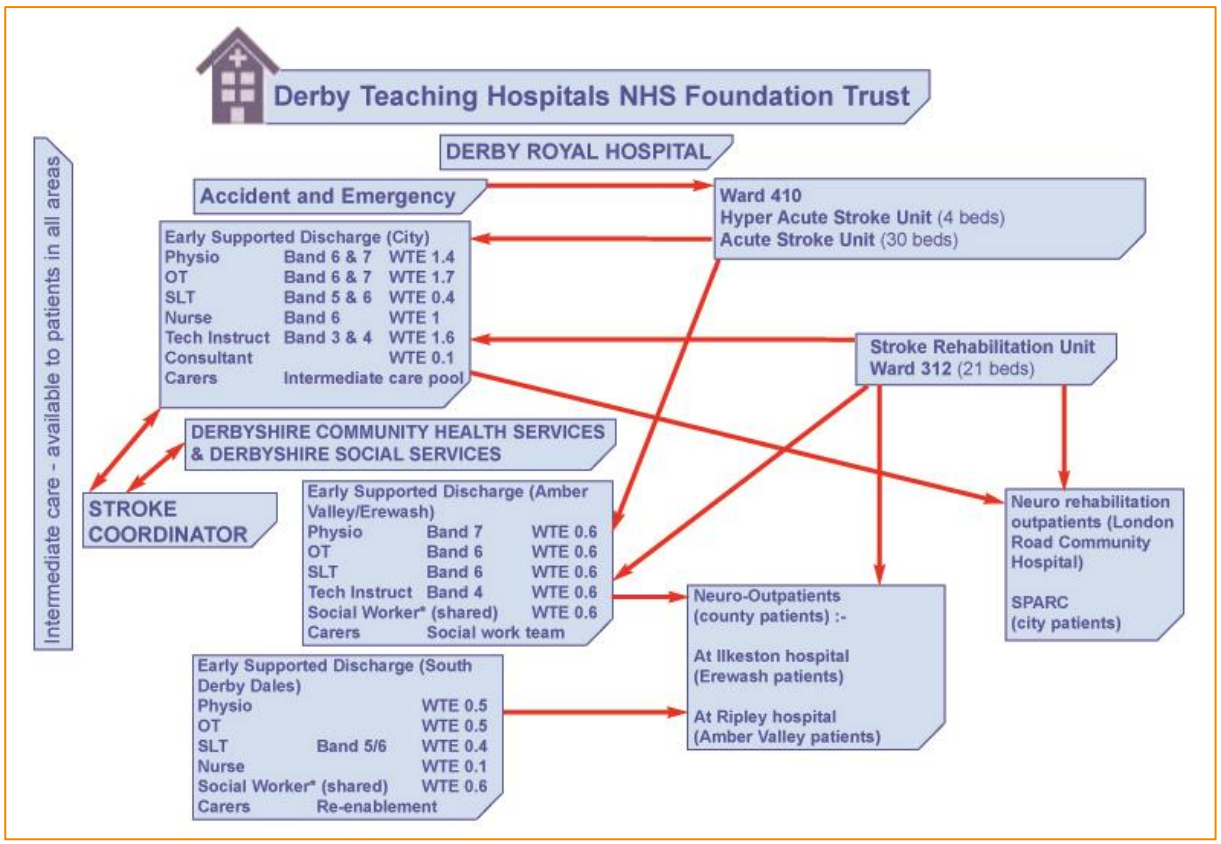

Figure 11: The stroke care pathway for patients in Southern Derbyshire

4. Service improvement activities

Where services do not exist

To address gaps in service provision, further activities were conducted in Mid-Nottinghamshire (Mansfield & Ashfield and Newark & Sherwood), and Leicestershire (West Leicestershire and East Leicestershire & Rutland) CCG areas following continued commissioner engagement with the EMAHSN.

Following the dissemination of the Heat Map (Figure 2) showing gaps in community stroke services across the East Midlands, the EMAHSN was approached by the commissioner for stroke in Mid-Nottinghamshire, to discuss the provision of community rehabilitation beyond ESD services for Mansfield & Ashfield and Newark & Sherwood. The EMAHSN worked with acute and community services to obtain audit data in order to provide the commissioner with information about the patient flow from the acute setting (King's Mill Hospital) through to community services. The EMAHSN met with the commissioner in December 2014 to present the data and discuss possible options for improvements in community stroke service delivery. At present, patients who are not eligible for ESD or who require further rehabilitation beyond the scope of ESD access the NeuroRehabilitation Outpatients Service at Mansfield Community Hospital, Newark Hospital and King's Mill Hospital. However, these patients could be better served by a stroke specific community rehabilitation team delivering stroke rehabilitation in the patient's home. Report and options appraisal documents were developed for the commissioner in Mid-Nottinghamshire detailing these findings. At present, Mid-Nottinghamshire is undergoing community service reconfigurations in line with a local Better Together agenda and in relation to the Better Care Fund[3]. The EMAHSN remain committed to supporting the commissioner in progressing the provision of community stroke services for patients in Mid-Nottinghamshire.

In Leicestershire, commissioners expressed a need for information to support their commissioning intentions. The stroke care pathway was presented and commissioners are currently progressing plans for commissioning a joint stroke and neurological rehabilitation community service.

[3] The Better Care Fund in Nottinghamshire

Six Month Reviews

The EMAHSN facilitated a commissioner engagement event in February 2014 to inform commissioners about the need for six month reviews of stroke survivors. Six month reviews were specified in the CCG Outcome Indicator Set 2013-2014[4] Domain 3 (improving recovery from stroke), and again in the CCG Outcomes Indicator Set 2014/2015[5], which stated that people who have had a stroke must receive a follow-up assessment between 4-8 months after initial admission. The NHS Outcomes Framework for 2015/2016[6] specify the "proportion of stroke patients reporting an improvement in activity/lifestyle on the Modified Rankin Scale at 6 months", which although worded slightly differently, still relies on a review being conducted.

The six month review can be carried out by acute or community provider services, and ensures stroke survivor unmet needs are identified and appropriate referrals to healthcare services are made. The EMASHN and EMSCN developed a toolkit to assist commissioners and providers with adoption of six month reviews in their area. The toolkit was provided on a USB stick which contained a video explaining the need for six month reviews, with testimonies from three stroke survivors. Alongside the video, several documents were provided, including national guidelines, evidence based procedures and documentation required to deliver six month reviews, a six month review service specification and an outline of commissioning issues to be considered. The development of the toolkit[7] was informed by a National Audit of six month reviews conducted by the EMAHSN [17], which collected data from CCGs across England to investigate the provision of six month reviews, the models used to provide them and what tools were most commonly used by providers.

[4] CCG Outcomes Indicator Set 2013/2014
[5] CCG Outcomes Indicator Set 2014/2015
[6] The NHS Outcomes Framework 2015/2016
[7] EMAHSN Six Month Reviews Specification Toolkit for Commissioners

5. Conclusion

This report summarises activities conducted by the EMAHSN and EMSCN aimed at identifying the stroke care pathway experienced by stroke survivors in each geographical area of the East Midlands. Findings show that commissioning of services varies considerably across the East Midlands resulting in different models of care provided for stroke survivors living in the community.

The EMAHSN and EMSCN wanted to discover how closely the commissioned pathways of care across the region matched the evidence based specifications and national guideline recommendations. Data were collected from providers of hospital, ESD and community rehabilitation services using self-assessment proformas. This information was used to create a visual map and allowed for a graphical representation of the stroke care pathway in each area of the East Midlands. Pathways were confirmed or amended through continued engagement with service providers.

Variation exists across the East Midlands in the models of service delivery for stroke patients. Currently, only Nottingham City provides a complete stroke care pathway exactly as specified by the evidence-base. Northamptonshire provide a complete stroke care pathway, but use a slightly different model of service delivery in that the Community Stroke Team provides an ESD service. There are also several areas where services are unavailable. Mid-Nottinghamshire, Southern Derbyshire, Leicestershire and Lincolnshire do not provide stroke specific community rehabilitation at home for patients after ESD, or for patients who are ineligible for ESD and require a slower stream of therapy. Mid-Nottinghamshire, Nottinghamshire County South, Southern Derbyshire, Leicestershire and Lincolnshire do not provide six month reviews for stroke patients, despite the requirement to do so as specified in the CCG Outcomes Indicator Set 2013/2014[8] and the CCG Outcomes Indicator Set 2014/2015[9].

The lack of stroke specific service provision in some areas of the East Midlands results in inequalities for stroke patients across the region and represents a post code lottery, as patients access different stroke care pathways depending on where they live. Not all areas in the East Midlands have commissioned an evidence-based service and therefore it is difficult to determine whether these alternative models of service delivery meet the requirements suggested by the research and deliver the best care for stroke patients.

The use of different models of service delivery also raises the question of whether different stroke care pathways are effective, in terms of cost, functional outcome, patient and carer satisfaction, wait times in between services, and integration with social care. In order to

[8] CCG Outcomes Indicator Set 2013/2014
[9] CCG Outcomes Indicator Set 2014/2015

evaluate the effectiveness of a pathway, we must address how to measure effectiveness, and at present this is a difficult issue. For example, different services use different outcome measures to show changes in functional ability for stroke care patients. There is also a lack of data sharing across the stroke care pathway, largely caused by information governance issues associated with patient identifiable data. At present, there is no clear mechanism to allow service providers to join patient-level data from each service in the pathway, and without this it is difficult to get accurate data about patient use of the pathway as a whole. Data from GPs, social care and voluntary sector is significantly lacking and currently it is not possible to evaluate the impact of a particular stroke care pathway on these services, although current local initiatives to join health and social care data may improve this situation. The Stroke Sentinel National Audit Programme (SSNAP) collects data from service providers and joins records together using the process of transferring records from one service to another as patients move between services. Whilst this does join the data across the pathway, SSNAP only provides aggregated data reports rather than patient level-analysis which makes an evaluation of the effectiveness of a particular stroke care pathway difficult. Results from SSNAP do show the patient flow in and out of each particular service, but do not display patient flow along the whole pathway, leaving SSNAP unable to describe and highlight alternative pathways that stroke patients may travel along, or to make comparisons between different models of service delivery.

Restructuring of the NHS, new policy initiatives and changes in commissioning procedures are threatening the delivery of an evidence-based stroke care pathway in areas of the East Midlands. Specialist stroke care has been a national priority for the past seven years, but integrated care initiatives and a lack of funding are leading commissioners to question the need to adopt an evidence-based pathway.

If alternative models of service delivery are adopted without a supporting evidence base, it is unclear whether these models will still be beneficial to patients. We would argue that until such a time as new evidence is available, commissioners should be guided by research evidence and national guidelines. Also, given the variety of care pathways currently provided in the East Midlands, the importance of routine data collection to inform service evaluations is great.

The EMAHSN encourage the dissemination and use of the stroke care pathway maps presented in this report to inspire and inform service improvements. The maps can be used to highlight to commissioners gaps in service provision in certain areas across the region, and the EMAHSN are keen to facilitate discussions with commissioners to explore the possibility of increasing service provision for stroke survivors in areas where services are currently lacking. The pathway maps can also act as a basis for establishing patient flow through services and may assist in understanding the costs and demands associated with particular services, which may provide a basis for exploring the effectiveness of different service delivery models. The EMAHSN are in the process of developing the

pathway maps into service directories for use by patients and their families to increase information provision and confidence in navigating between services.

The development of the stroke care pathways have paved the way for engagement with providers regarding the need to standardise local data collection in order to measure the impact and effectiveness of stroke services that are currently commissioned across the East Midlands. The EMAHSN is progressing this issue with provider, commissioner and data controller stakeholders with a view to empowering local providers to carry out analysis of their services.

This report has highlighted the variation and gaps in provision that exist for stroke survivors living in the community across the East Midlands. Each patient and their family deserve to receive the best evidence based care to maximise their recovery from stroke. The EMAHSN and EMSCN strive to facilitate the commissioning and provision an integrated and evidence based stroke care pathway for every stroke survivor in the East Midlands.

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Appendix A: ESD service review template

EARLY SUPPORTED DISCHARGE SERVICE REPORT

SERVICE ASSESSMENT TO REVIEW PROVIDER PROGRESS TOWARDS A SUSTAINABLE MODEL OF EARLY SUPPORTED DISCHARGE

Completed by

Date

ESD DRAFT 3- February 2012

1. PURPOSE OF ASSESSMENT / REVIEW

The Royal College of Physicians' National Sentinel Stroke Audits for 2006 and 2009 identified that Early Supported Discharge (ESD) services are both clinically and cost effective. Evidence shows they can reduce length of stay by 8 days and reduce costs by 9-20% without affecting readmission rates. ESD can also reduce mortality and morbidity and increase patient satisfaction.

In January 2010 the East Midlands Cardiovascular Network agreed establishing equitable ESD services across the region was a high priority. A year later the Network intends to review the current position with regard ESD across the region.

The purpose of the review will be:

- To identify progress made across each geographical area with the implementation of the ESD service model.
- To identify areas of good evidence based practice and lessons that can be learned and shared.
- To identify recommendations for action, concerning both provider development and future commissioning intensions, with the intention of improving clinical and social care outcomes and increasing cost efficiency across the whole pathway.
- To inform future network priorities and work plans.
- To update the East Midlands ESD service specification, to reflect any issues arising from the reviews.

2. SERVICE ASSESSMENT PROCESS

The service assessment process will be based upon the model previously used when assessing the acute stroke services. The process will incorporate the following steps:

- Self assessment of all the providers of ESD across a geographical area utilising the attached form.
- Face to face service review of all ESD services across a geographical area acknowledging in some cases there will be more than one provider present.

The face to face service review will include: a presentation by the providers of back ground information about the service and progress made towards full implementation and a virtual walk along the patient pathway accompanied by the presentation of patient case histories. The reviewing team will then discuss with both the provider/s and commissioners the draft contents of the network report and recommendations for future action.

- A written report will be provided to both the providers and commissioner within a month of the review visit.
- A consolidated report will then be provided to the Stroke Clinical Advisory Group (CAG) and to relevant Chief Executives.

The reviewing team will contain the following representatives:

- Chairperson (Clinical Lead from the Network)
- External Clinical Representative with an ESD/MDT background
- Representatives from the Network including a note taker
- A patient / carer representative.
- Commissioning representatives e.g. Clinical Commissioning Group (CCG)
- A representative from Collaborations for Leadership in Applied Health Research and Care (CLAHRCs)

We suggest the ESD team includes:

- Service lead and Executive sponsor from each service
- MDT representatives from each service.
- Relevant partner agencies e.g. stoke unit, social care representative
- Lead medical consultant
- Local commissioning lead

3. KEY MILESTONES

Activity	Timescale
Relevant stakeholders notified regarding the review.	February 2012
Self Assessment form sent out.	End of April 2012
Self Assessment forms returned	May 2012
Review meetings take place	June 2012
Review reports are completed and circulated	July 2012

Following the face to face service review meeting the following will occur, using information from both the self assessment and the face to face service review

- A report will be drafted which will be shared with both commissioners and providers.
- The report will identify areas for improvement and make recommendations for action.
- Where appropriate areas of good practice and shared areas of challenge will be shared across health communities to support improvement planning.
- Local communities will then be expected to develop time scaled action plans addressing areas identified. The Network are proposing to work in Partnership with CLARHC to deliver individual packages of support to teams across geographical areas to address identified challenges.
- A summary report will be developed for the Stroke CAG and relevant Chief Executives.

4. SELF ASSESSMENT OF ESD PROVISON

The objective of the self assessment is to provide a starting point for discussion. The contents of this plus the presentations and discussions made at the meeting will be used to agree the recommendations and actions. It is therefore important that answers provided are as honest as possible, identify key challenges and where answers cannot be provided an explanation is given as to why this is the case.

Grading has also been included to highlight priority areas for action and of greatest challenge, as interpreted by the ESD team,

To represent the grading, the panel allocated 1 to 5 for each of the focussed areas within the pathway. Traffic light colour coding has been used as a common theme. The following table outlines the allocation of colour to grading:

	Red		Amber	Green	
Service Assessment	1	2	3	4	5

1 No evidence that the standard is in place

2 Plans in development to achieve the standard

3 Time scaled plans in place which are resourced and approved

4 Standard partially achieved and partially operational

5 Standard fully achieved and operational

5. Self Assessment

Completed by .....

Date of Completion .....

A. Background Information

Information required	Provider response
Provider organisation	
Lead commissioning contact/s and contact details.	
Eligibility criteria for entering the service	
Makeup of the team including present establishment and planned establishment. (please include WTE and banding)	
Performance targets against which the service is monitored	
Service model including opening	

hours, referral mechanism, length of stay with the service, onward pathway, patient capacity, annual caseload, case mix.	
How was the service developed e.g. was the East Midlands service specification used?	
Overall budget for service and funding mechanism. Please outline any specific financial challenges faced by the service, e.g. short term funding, is the tariff split?	

B. Return against investment.

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The service is able to provide evidence that there is reduced bed stay for patients accessing ESD (Please provide evidence over last year or since service started.)	5		
The service is able to provide evidence that the readmission rate has not increased or has reduced for patients accessing ESD. (Please provide evidence over last year or since service started.)	5		
The service is able to provide evidence that the overall costs do no increase or have reduced for patients accessing ESD. (Please provide evidence over last year or since service started.)	3		
The service is able to provide evidence that patients accessing ESD show improvement in terms of ADL as a result of accessing the service.	5		

C. Performance against Service Specification Standards

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The service is able to provide cover 7 days a week.	5		
The service is able to initiate provision within 24 hours of referral. If not please detail reasons for the delay.	5		
The service is able to offer care to 40% of eligible patients.	5		
The service has sufficient capacity and flexibility to manage fluctuations in patient demand.	5		
The service delivers equitable access and levels of service provision compared with other services within the county.	5		
The service proactively monitors and impacts upon readmission rates and length of hospital stay.	5		

D. Patient / Carer Centred Standards

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The Service provides patient/carer/s with information which reflects the diversity of the population and patient need in a timely fashion.	4		
The service promotes dignity, compassion and respect. Please provide evidence.	5		
The service has in place a process for incorporating patient/carer feedback into quality improvement service developments.	5		
The service proactively involves both the patient and their carer/s in discharge planning including onward referral if required.	5		
The service proactively manages the patient's psychological needs.	5		
All patients have in place a multi agency care plan which has been developed in partnership with the patient and their carer.	5		

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The patient receives a service which is of a level of intensity which meets their identified need and agreed goals. Please provide information concerning average length of stay in the service and intensity of provision.	5		
Patient outcome measures are used consistently across the team to measure both patient improvement and overall service effectiveness. Please detail outcome measures used.	5		

E. Work force

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The service is delivered by an MDT with OT, PT, SALT, nursing and medical input and has input from other relevant professionals in line with the Operational Definitions and guidance for ASI collection *.	5		
All staff are suitably experienced and qualified to deliver a specialist stroke service (e.g. in line SSEF – Caroline Watkins)*2.	5		
The team is appropriately staffed and funded to meet the needs of the local stroke population as defined within the Operational Definition guidance for ASI collection.	5		
All team members receive ongoing training appropriate to their role.	5		

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The MDT meets at least weekly to discuss patients	5		
Each patient is allocated a named key worker.	5		
The role of the social worker within the team works well and crosses the interface between hospital discharge and support in the community. Please provide evidence.	4		

F. Partnership working

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
Effective partnerships are in place with social care. Please describe how these work.	5		
Effective partnerships are in place with inpatient stroke services to deliver efficient discharge.	4		
Effective partnerships are in place with community rehabilitation services which facilitate efficient discharge from ESD	5		
Effective partnerships are in place with the voluntary sector.	3		
Effective partnerships are in place with the independent sector including care and nursing homes.	5		

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
Effective partnerships are in place with local commissioner who supports the service to deliver in line with changes in demand.	5		

G. Quality of service provision

Area of care/service	Self Assessment	Progress to date	Future challenges and suggested actions to address
The service has clear eligibility criteria which support patients of mild/moderate severity accessing the service.	5		
The service has in place IM&T systems and documentation which support high quality service provision and service evaluation	5		
The service meets the targets within the ASI and local CQUINs	5		
The service participates in research clinical trials and audit	5		
Robust clinical governance processes and systems are in place	5		
The service has in place robust management and leadership both internally and externally.	5		

1*http://www.improvement.nhs.uk/stroke/StrokeData/tabid/185/Default.aspx

2*http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/@sta/@perf/documents/digitalasset/dh_116343.pdf

G. Additional information

Please add any additional information not covered in the rest of the self assessment e.g. particular achievements or challenges not already addressed in the document.

H. Contact details

If you require any support in completing the self assessment please don't hesitate to contact Jo James Assistant Director Stroke EMCVN via email on jo.james2@nhs.net or via phone on 01158839453.

Please return the self assessment by **18th May 2012** either electronically to the above email address or as hard copy to Jo James, Assistant Director Stroke, East Midlands Cardiovascular Network, Standard Court, Park Row NG16GN.

I'd like to take this opportunity to thank you for the time spent in completing the self assessment, the more detailed the information you provide the more useful the self assessment will be in ensuring your team receive the best outcome from this process.

Appendix B: Community Stroke Team Review template

Community Stroke Rehabilitation services - review of current provision - November 2013	
	Area Name
Please confirm YES /NO unless otherwise specified	
Service description	
Stroke specific / specialist staff with expertise in home-based rehabilitation	
Available for as long as the stroke survivor has stroke related identified and achievable goals (not time limited)	
Patients are assessed within 72 hours of referral	
Therapies start within 7 days of referral	
Training provided to paid and unpaid carers - including those in care homes	
Attendance on local stroke strategy group	
Provide assessment and therapies for stroke survivors admitted to intermediate care beds	
Data entry to SSNAP dataset for ESD and CST teams	

Features of the team	
Defined team leadership	
Multidisciplinary team featuring: (quote numbers)	
Occupational Therapy	
Physiotherapy	
Speech & Language Therapy	
Nursing	
Social work	
Clinical psychologist / Mental health support	
Rehabilitation assistants	
Administration	
Team has access to services for:	
Mobility and movement services	
Emotional & psychological services	
Driving assessment	
Swallowing - specialist nutrition team	
Team has access to:	
Interpretation services	
Clinical Psychology	
Facilities with specialist equipment	
Dieticians	
Orthotics	
Orthoptics	
Vocational Rehabilitation	
Hearing services	
Mental Health services	
Spasticity Management	
Pharmacy	
Stroke Association / Different Strokes etc	
Consultant Stroke Physician	
Community respiratory therapists	
Podiatrists	

Features of the service	
Available to all stroke survivors over 18	
Team members attend hospital and ESD MDTs	
Provided predominantly in the place of residence	
Rehab sessions are planned to ensure stroke survivors see the same and as few staff as possible	
Patients accepted and assessed 7 days	
Therapies are available 7 days	
Patients are assessed for capacity and compliance with therapy	
Intensity of therapy based on clinical need tailored to goals	
Duration of therapy based on clinical need tailored to goals - available for as long as the individual is continuing to benefit from the therapy and is able to tolerate it	
Stroke survivors have a single named point of contact	
Weekly MDT reviews goals of all clients	
Service works in partnership with social care to enable stroke survivors to be cared for in the most appropriate setting for the individual	
Personalised goals are reviewed every 4-6 weeks	
Carers assessments are offered to each carer	
Information strategy in place	
Signposting to wellbeing services	
Telephone (and other) counselling available for 3 months post discharge	

Specialist stroke rehab support and management plans directly address or signpost services for:	
Medication management	
Equipment and environmental controls	
Technology use	
Lifestyle advice / secondary prevention	
Mobility and movement	
Upper limb rehab	
Management of spasticity and tone	
Sensory impairment screening and sensory discrimination training	
Falls prevention	
Cognitive rehabilitation	
Communication	
Everyday activities	
Emotional & psychosocial issues	
Swallowing	
Skin integrity	
Nutrition	
Visual disturbance	
Continence	
Social interaction	
Pain	
Return to work / education	
Driving	
Financial management and accessing benefits	
Discharge is managed by MDT	
Acceptance and exclusion criteria	
Definitive diagnosis of Stroke	
Stroke severity is measured before transfer from hospital / ESD and shared with CST	
Service available to stroke survivors discharged to nursing homes / residential care	
Residential environment is assessed for capacity and safety to facilitate rehabilitation	
Stroke survivors who had a stroke outside the area are accepted to the service	

Direct pathways of referral from:	
Stroke unit (acute)	
Stroke unit (rehab)	
ESD service	
GP	
Outpatient service	
6 month / 12 month review providers	
Self referral	
Open access maintained for reassessment of previously discharged stroke survivors	
Interdependencies with other services	
There should be referral to, and close working with other agencies including:	
All trusts providing stroke services	
Smoking cessation services	
Community services	
Social Care	
Voluntary services	
Independent sector	
Orthotics	
Primary Care	
Home care services	
Day care services	
Community equipment	
The Mobility Centre	
Wheelchair services	
Respite care	
Night sitting service	
Mental Health services	
Psychology services	
Other rehabilitation services	
Care home services	
Transport services (to enable access to groups etc)	
Dept for work and pensions	
Driving assessment centres	
Occupational / Vocational health services	

Appendix C: Additional CCG information

CCG	Size (Square miles)	Number of GP Practices	Total Population	Population aged over 65
Mansfield & Ashfield	66	31	192,500	34,000
Newark & Sherwood	244	15	116,000	23,500
Nottingham City	29	61	308,500	36,000
Nottingham West	31	12	110,500	21,000
Nottingham North & East	60	21	146,000	27,000
Rushcliffe	158	15	111,500	21,500
Leicester City	28	64	331,500	38,000
West Leicestershire	330	50	374,000	67,000
East Leicestershire & Rutland	474	34	319,500	63,000
Lincolnshire West	420	37	227,500	43,000
Lincolnshire East	1060	30	228,000	57,000
South Lincolnshire	351	15	141,000	31,000
South West Lincolnshire	471	19	122,000	25,000
Nene	882	69	622,000	101,000
Corby	31	5	63,000	8,500
Southern Derbyshire	410	57	515,500	88,500
Erewash	23	12	94,500	17,000

Appendix D: Prevalence of stroke by CCG area

Clinical Commissioning Group	Prevalence	Incidence per 1000 people over one year period
North Derbyshire	2.3%	23
Hardwick	2.2%	22
Mansfield and Ashfield	1.8%	18
Newark & Sherwood	1.9%	19
Lincolnshire West	1.9%	19
Lincolnshire East	2.5%	25
Erewash	2.0%	20
Nottingham West	2.0%	20
Nottingham City	1.3%	13
Nottingham North and East	2.0%	20
Rushcliffe	2.0%	20
West Leicestershire	1.6%	16
Leicester City	1.2%	12
East Leicestershire and Rutland	1.8%	18
South Lincolnshire	2.0%	20
Nene	1.6%	16
Corby	1.8%	18
Southern Derbyshire	1.8%	18
South West Lincolnshire	2.0%	20
Stroke prevalence averaged across England is 1.7% The prevalence figures come from the Quality and Outcomes Framework (QOF) returned by each GP practice in the CCG area covering 2012-2013.		

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