

## **An Independent Clinical Review of the Greater Manchester Integrated Stroke Service by Greater Manchester Lancashire & South Cumbria Clinical Senate**

**Date of Report: 23<sup>rd</sup> October 2014**

### **Chair's foreword**

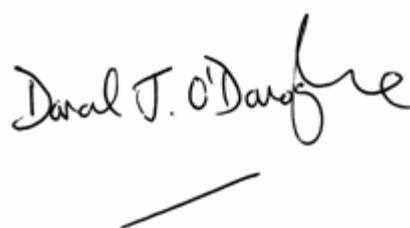
The Greater Manchester, Lancashire & South Cumbria Clinical Senate were asked to review the plans for Greater Manchester Integrated Stroke Service (GMISS). This was with a view to providing clinical advice that would strengthen the working of the proposed future network model.

It was clear from the outset of this review that Greater Manchester Association of Clinical Commissioning Groups are committed to improving outcomes for patients who have a stroke. They have given their full support to GMISS to achieve this on their behalf. The progress to date with plans for further centralisation of hyperacute and acute stroke services are commendable and this is in no small part due to the clinicians and managers who have a desire to provide the best evidence based care for their patients, carers and families.

The Clinical Senate were very happy to accept this review and with the help of the programme lead, the lead consultants, the various clinicians, managers and patients who made themselves available to the Independent Clinical Review Team, I am pleased to present this paper outlining the findings of the review.

Throughout the review process, I have been impressed by the collaboration and team working of the members of the Independent Clinical Review Team. I want to thank our review team members, the external reviewers, the Stroke Association, NWAS and the Acute and Community Trusts for their hard work and support, without whom we would not have such a comprehensive document.

Finally, I would like also to thank the Clinical Senate management team for their role in the production of this report and their ongoing support in the development of the Clinical Senate.



**Professor Donal O'Donoghue**  
**Senate Chair**  
**Greater Manchester, Lancashire & South Cumbria Clinical Senate**

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## 1. Executive Summary

1.1 Stroke is a leading cause of mortality and disability worldwide. Each year in England an estimated 125,000 people have a stroke and of those 40,000 die<sup>1</sup>. Organised stroke care with inpatient provision by multidisciplinary teams managed in a dedicated ward is associated with better quality and reduced death and co-morbidities<sup>2</sup>. This highlights that care in a stroke unit is the biggest single factor that can improve outcomes for stroke.

1.2 Whilst hyperacute stroke care is important to optimise clinical outcomes for *all* stroke patients (including those not eligible for thrombolysis - up to 85% of total stroke patients<sup>3</sup>), stroke services require to be delivered in an integrated way by a multi-disciplinary team. This should enable the provision of robust clinical assessment, in-patient acute stroke care and rehabilitation that moves seamlessly from discharge to community stroke rehabilitation as well as longer term support for reintegration into the local community. A robust Early Supported Discharge (ESD) service that supports patients from hospital and to their home is important and can reduce long term dependency and re-admission to hospital care as well as reducing length of stay<sup>4</sup>

1.3 To optimise functional outcomes for patients, stroke care must be consistently designed and delivered by a health and care system that has the capacity and capabilities to achieve all of the above.

1.4 In July 2014, the Greater Manchester, Lancashire & South Cumbria Clinical Senate received a commission to review Greater Manchester's plans for future stroke services. As a result, an Independent Clinical Review Team of clinical experts was convened and performed a review using a mixed method approach of qualitative research methods. Aims of the review included: providing clinical advice with regard to optimising the working of the network model, maintaining a focus on the period after the 72 hour acute care bundle and providing clinical advice on how the model can be sustained in light of other potential reconfigurations.

1.5 The Independent Clinical Review team were impressed by the work that has gone on thus far by the Greater Manchester Integrated Stroke Service (GMISS) programme board in improving services for stroke patients for the hyperacute and acute phase of the stroke patient's journey. The plans will improve clinical outcomes for stroke patients as a result.

1.6 However, the Independent Clinical Review Team found that the plans for care post 72 hour care bundle were less robust and would benefit from the same focus of effort that has been afforded the hyperacute and acute stroke pathway. The current service provision for ESD and community rehabilitation varies across the patch resulting in inequity of access which in turn will affect equity of outcomes and places a risk to the flow of patients out of the hyperacute and acute stroke units.

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<sup>1</sup> Townsend N, Wickramasinghe K, Bhatnagar P, Smolina K, Nichols M, Leal J, et al (2012), Coronary Heart Disease Statistics. [British Heart Foundation](#)

<sup>2</sup> Bray BD, Ayis S, Campbell J, Hoffman A, Roughton M, Tyrrell PJ, et al (2013) Associations Between the Organisation of Stroke Services, Process of Care, and Mortality in England: Prospective Cohort Study. [BMJ](#);346:f2827.

<sup>3</sup> Rudd, A et al (2010) Stroke Thrombolysis in England, Wales and Northern Ireland: How Much do we do and How Much do we Need? [Journal Of Neurology, Neurosurgery and Psychiatry](#)

<sup>4</sup> Langhorne et al (2005) Early Supported Discharge services for Stroke Patients: a Meta-Analysis of Individual Patients' Data, [The Lancet](#) Vol. 365, pages 502-506.

## Recommendations

The recommendations of the Independent Clinical Review Team, in light of the original questions set within the Terms of Reference for the review, are set out on in the next pages and in Table 1. A full report of the methods and findings of the Independent Clinical Review Team are presented in the main body of this report.

### Original objectives of the Independent Clinical Review Team:

#### **1. Provide clinical advice with regards to optimising the working of the agreed clinical model, from the point at which a patient is to be discharged from the hyperacute stroke service.**

The Independent Clinical Review Team recommended (set out more fully in recommendations 2, 3, 5 & 6) that:

- 1) The Greater Manchester Integrated Stroke Service (GMISS) would benefit from implementing a comprehensive clinical communication strategy;
- 2) That a managed system should be set up to support ongoing monitoring and improvement of the network model further;
- 3) Protocols are agreed with stakeholders to address equity of access for patients who fall out with the scope of the current plans; and
- 4) A comprehensive suite of clinical outcome measures are developed for the network model.

It is the view of the Independent Clinical Review Team that developing and implementing these recommendations will go some way to optimising the clinical model.

#### **2. Maintain a particular focus on ongoing aspects of the pathway post discharge, (Early Supportive Discharge and Community Stroke Rehabilitation) that aim to optimise improvement of functional outcomes.**

The Independent Clinical Review Team set out more fully in recommendations 4 & 8 the advice that:

- 1) GMISS urgently move to focus on the development of a service specification for Early Supported Discharge (ESD) and Community Stroke Rehabilitation that complements the gold standard acute service; and
- 2) An examination of how the specification can be implemented to provide an integrated ESD and Community Stroke Rehabilitation service to all eligible patients regardless of where they live is undertaken. This work will require to be complimented with a workforce analysis (see below)
- 3) A workforce analysis is carried out to inform the planning and delivery of these services across Greater Manchester (GM) that can be used to inform business case development for an equitable and sustainable ESD and community stroke service to ensure a seamless service that will optimise functional outcomes for patients.
- 4) Information is developed that details how to access psychological therapies for patients who have been discharged and may be suffering from depression or anxiety.

**3. Provide clinical advice on sustainability of the service and to support future proofing, for example in light of other potential reconfigurations.**

The Independent Clinical Review Team recommend that GMISS and other services planning service change or reconfigurations would benefit from more regular communication relating to progress and planning. This is because it is important to ensure there are no unintended consequences of the stroke model on other planned service changes. This is a whole system challenge, not just that of one individual programme.

Finally, the Independent Clinical Review Team has made a recommendation (7) in relation to specialist imaging services across GM. It was found that the whole radiology service provision for GM would benefit from specific focus for improvement due to the issues that arose and the potential impact of those on other services. It was out with the scope of this review to explore further. Nonetheless, the review team felt the risks identified potentially impact upon stroke services.

<b>Table 1. Recommendations of the Independent Clinical Review</b>	
1.	<b>Recommendation 1:</b> GMISS and other reconfigurations should establish more regular communication relating to progress and planning. This is because it is important to ensure that there are no unintended consequences of the stroke model on other planned service changes. This is a whole system challenge, not just that of one individual programme.
2.	<b>Recommendation 2:</b> GMISS should implement a comprehensive clinical communication strategy that would serve to review the current operational elements of communication to identify opportunities for improvements. In particular, areas that involves both the transition of patients between professions, departments and organisations and communication requirements of other individuals or teams that are indirectly impacted upon by the stroke pathway, e.g. Emergency Departments (ED). The value of electronic communications to support high quality stroke care should be explored.
3.	<b>Recommendation 3:</b> That a managed system is set up that 1) delivers an ongoing operational monitoring system; 2) provides quality assurance to commissioners for the service delivered; 3) promotes development of the requirements of the network model further and allows for an urgent focus on ESD and Community Stroke Rehabilitation. This will mitigate risk of patient flow that can occur without community support; 4) supports the ethos of a 'learning network' incorporating clinical governance, quality improvement and research & development activities.
4.	<b>Recommendation 4:</b> In addressing the inequity of access to ESD and Community Stroke Rehabilitation, the review team advise: 1) the urgent development of a network service specification for ESD and Community Stroke Rehabilitation services that complements the gold standard acute treatment in place 2) implementation of the ESD specification is timed to support the launch of the new hyperacute and acute service in early January 2015, and 3) ensure provision of integrated ESD and Community Stroke Rehabilitation services that are available to all eligible patients regardless of where they live, 4) information that details how to access psychological therapies for patients who have been discharged and may be suffering from depression or anxiety is available to both professionals and patients, carers and public.
5.	<b>Recommendation 5:</b> Protocols are agreed with all the relevant stakeholders including: NWS, Emergency Departments, Radiology services, in-patient teams and Stroke Physicians to address inequity of access for patients who currently fall outwith the plans for the future stroke service.
6.	<b>Recommendation 6:</b> That a comprehensive suite of clinical outcome measures is developed for the network system that describes how they will be measured, which should include: 1) morbidity and functional recovery; 2) patient experience outcomes drawn from a range of qualitative assessment to service and carer impact and experience; 3) clinical outcomes relating to patient safety such as injury, relapse, medicines management or other significant untoward incidents.
7.	<b>Recommendation 7:</b> The review team consider that provision of imaging across GM will require individual focus with a view to developing solutions to issues highlighted that impact on other services and identifying new ways of working so that access to specialist radiology is equitable and sustainable.
8.	<b>Recommendation 8:</b> Perform a gap analysis of workforce for ESD and Community Stroke Rehabilitation that will inform workforce planning to deliver these services across GM, and that can be used to inform business case development for an equitable and sustainable ESD and Community Stroke Service. The gap analysis should also take into consideration Social Services and local authority re-enablement personnel for a truly integrated review.
9.	<b>Recommendation 9:</b> Provision of a facilitated forum for ESD, Community Rehabilitation and Social Services personnel to inform the development of a workforce plan, comprehensive service specification, clinical outcome measures and to increase shared learning.

## 2. Introduction

2.1 This paper sets out the findings of an independent clinical review by the Greater Manchester, Lancashire and South Cumbria Clinical Senate carried out in September 2014 by a multi-disciplinary review team.

2.2 The role of the Clinical Senate in this review is to provide a source of strategic independent clinical advice and leadership on how services should be designed to provide the best overall care and outcomes for patients<sup>5</sup>. The current review centres on plans for reconfiguration of stroke services, in particular the ongoing pathway for patients following discharge from acute stroke services.

## 3. Background

3.1 Plans for further centralisation of hyperacute stroke and acute stroke care have been set out by GMISS and aim to deliver a further centralised model of acute stroke services. These plans were developed and approved collectively by the Association of Greater Manchester Primary Care Trusts (PCTs) in 2012 in response to a local review of the original network model for stroke services that showed continued inequity in patient access to acute stroke services. This was further supported by findings of an external advisory group who, having conducted a review in 2011 concluded that the system should be further centralised.

**Table 2. Current and future network model**

### **Current network model**

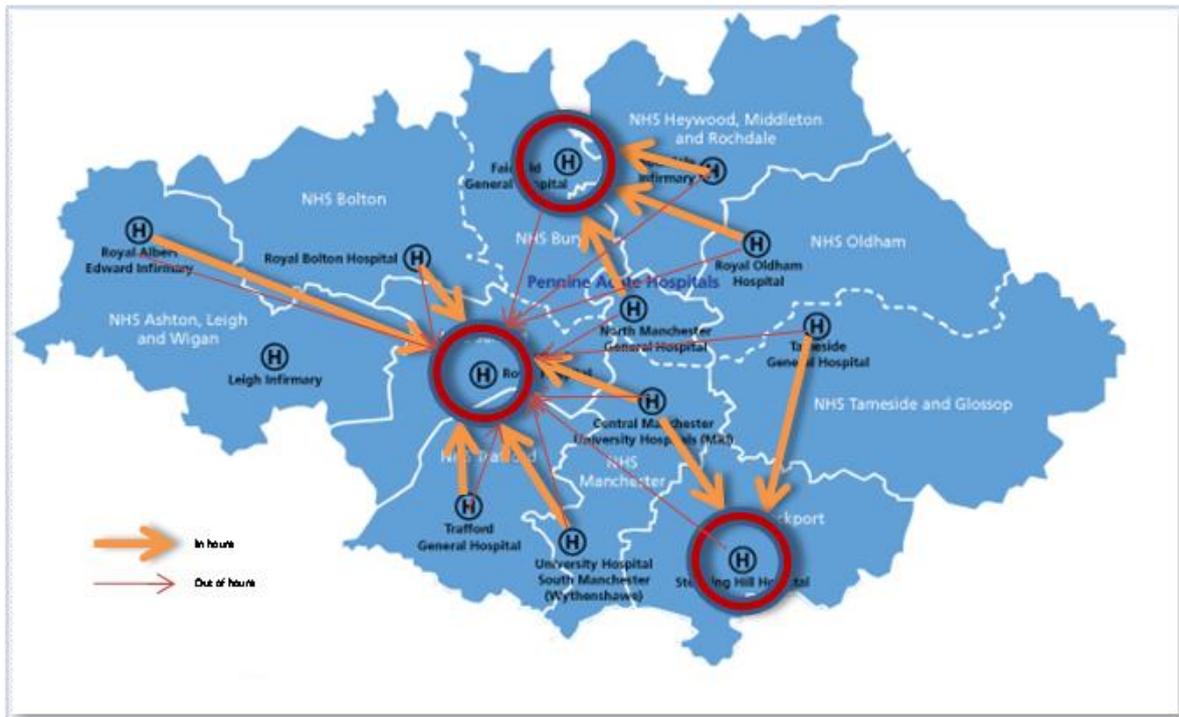
The local population of Greater Manchester is serviced by ten Trusts, providing District Stroke Centre (DSC) services; one Trust also hosts a Comprehensive Stroke Centre (CSC), which offers hyperacute stroke services in a neurosciences centre with access to interventional neuro-radiology and neurosurgery (24 hours per day, seven days per week); and two Trusts host Primary Stroke Centres (PSCs), providing thrombolysis (from 7am to 7 pm, Monday to Friday). Any individual presenting within four hours of developing stroke symptoms is transferred to a CSC or PSC for hyperacute care; once stable he/she is repatriated to a DSC, to a nursing home, or their own home. If presenting out with this four hour window, patients suspected with stroke are taken to the DSC to which they are nearest, much as they did prior to reconfiguration.

### **Future network model**

All individuals clinically assessed as presenting with symptoms of stroke will be taken to a hyperacute centre where they will receive a 72 hour acute care bundle, following which they will either be discharged or repatriated to their local DSC. The CSC will continue to offer 24/7 services, PSC will accept patients from 7am – 11pm, seven days per week. Out of hours (after 11pm and before 7am) all individuals with a suspected stroke will be taken to the CSC.

<sup>5</sup> Clinical Senates in England (2014) Single Operating Framework 2014-15

3.2 In response, GMISS are now moving apace to operationalise plans to reconfigure acute stroke services across GM. From 1<sup>st</sup> April 2015 all stroke patients with suspected stroke will be taken directly to a hyperacute centre where they will receive an evidence based acute care bundle. It is anticipated that the redesign will improve process indicators in the first 72 hours of care following a stroke which is correlated to improved long term functional outcomes after stroke. However, within the plans there is a recognition that the acute reconfiguration ‘may fail to deliver intended benefits’ unless a wider range of improvements, which are outwith the scope of the project, are made across the whole pathway. For ease of understanding, current and future network models are described in Table 2 and a map is presented below to show patient flow.



3.3 A request for support from the Clinical Senate was made on 14<sup>th</sup> May 2014 to the Senate Council by the programme lead for GMISS. Following this meeting, Senate Chair Professor Donal O’Donoghue and Alan Campbell, Accountable Officer for Salford CCG and Senior Responsible Officer for Greater Manchester Association of CCGs, outlined the scope and purpose of the Clinical Review.

3.4 The remit of the review was to examine the plans for acute stroke services across Greater Manchester, from the point at which the patient has completed the 72 hour care bundle, maintaining a particular focus on the ongoing aspects of care. Terms of Reference were agreed<sup>6</sup> following an iterative process and signed off in July 2014.

3.5 Objectives for the Clinical Review were agreed in the Terms of Reference (Appendix I) and are set out in Table 3:

<sup>6</sup> Clinical Review Terms of Reference (dated 23<sup>rd</sup> July 2014) Clinical Senate Review of Greater Manchester Integrated Stroke Service (Appendix I)

**Table 3. Objectives of the Clinical Review**

1. Provide clinical advice with regards to optimising the working of the agreed clinical model, from the point at which a patient is to be discharged from the hyperacute service, and
2. Maintain a particular focus on ongoing aspects of the pathway post discharge, (Early Supportive Discharge and Community Stroke Rehabilitation) that aim to optimise improvement of functional outcomes, and
3. Provide clinical advice on sustainability of the service and to support future proofing, for example in light of other potential reconfigurations.

**4. Methods**

4.1 The Clinical Senate convened an Independent Clinical Review Team, details of which are included within Terms of Reference. The Independent Clinical Review Team was asked to undertake key processes as part of the review outlined in Table 4.

**Table 4. Key processes of the Clinical Review**

1. A desktop review of the proposed clinical model and related information, including:
  - i. The GMISS Project Initiation Document with service modelling
  - ii. A gap analysis report for Early Supported Discharge services across GM
  - iii. The agreed service specifications for the hyperacute stroke unit
  - iv. The agreed quality standards for the hyperacute service
  - v. Results of a patient and carer survey carried out between February and May 2014
  - vi. Royal College of Physicians (2012) National Clinical Guideline for Stroke
  - vii. Department of Health (2007) The National Stroke Strategy
  - viii. NICE Stroke Rehabilitation Guidance
  - ix. NICE Guidance – Acute Stroke and TIA
2. An interview with the leaders of other proposed large scale reconfiguration programmes within the region.
3. Interviews with the lead clinician of the Strategic Clinical Network for Stroke and GMISS
4. A site visit to organisations to interview key staff involved in the service changes - including PSC, DSCs and the CSC.
5. Interviews with a panel of Early Supportive Discharge and Community Stroke Services from across GM (details of personnel interviewed are available in appendages).
6. An interview with a patient who has experienced the stroke pathway in its current form.
7. An interview with service development manager at North West Ambulance Service.

## 5. Results and analysis

### Desktop review of the proposed clinical model and related information

5.1 The information provided allowed a good understanding of the clinical evidence that underpinned the plans presented. The Project Initiation Document (PID) focussed on outcomes relating directly to improving acute care for stroke patients with clarity for clinical, financial and operational objectives in relation to how services can be designed to achieve this. Achieving outcomes in relation to rehabilitation for stroke patients were listed; however the delivery plan for this was not described.

5.2 The clinical pathway described in Figure 1 within the PID (page 4) outlines the project scope and proposed stroke pathway. However it does not include patients who are not FAST positive but who may have had a stroke, in particular patients who may have a posterior circulation stroke. The review team highlighted this as an area of possible inequity.

5.3 The section within the PID referring to activity flows (5.1) do not describe why there would be 13% fewer repatriations when there will be a 47% increase in patients taken to the CSC and PSC. It would be useful to do this for better ease of understanding. It would also be beneficial to clarify whether false positives for repatriation are factored into operational and financial modelling.

5.4 The PID contains detailed financial information but no detailed information regarding the clinical pathway. Patients eligible for ESD range from 10% - 40% of all patients, depending on the eligibility criteria used. The assumption in the modelling is that 40% of patients will be discharged directly from HASU to home, either via ESD or straight to community rehabilitation. GM Heads Of Commissioning are now working up a service specification which will provide a single point of discharge from hospital into a service which can provide ESD, CST or reablement as appropriate, so the 40% will all be discharged to that one service.

5.5 Details of local quality requirements relate to the acute care bundle and not to what happens after discharge from the hyperacute service. Therefore, the Independent Clinical Review Team are unable to assess from the information provided the quality of clinical model after this point, which is the focus of the Clinical Senate review.

5.6 The gap analysis report for ESD identifies that these services are currently inequitable and, as it stands, appear to present a risk to the seamless operation of centralised stroke services. The risk is in terms of flow through the whole system and the ability to guarantee the smooth and supported transition of patients back home or into a nursing home. This is an area that requires addressing prior to the launch of the future hyperacute service early in January 2015 if it is to minimise impact.

5.7 It is reported that Stockport (Stepping Hill Hospital), whilst being PSC does not have an ESD or a Community Stroke service for their patients. Salford, a CSC, has an ESD service but it is understaffed. It appears that Stockport has the longest LOS, which could be attributed to the lack of an ESD or community stroke service. In addition, Bolton is reported to only offer ESD services to patients discharged directly from Bolton Royal Hospital and not from the hyperacute centres.

5.8 Having reviewed the information provided, the Independent Clinical Review Team were of the opinion that without robust pathways for ESD there is likely to be bed blocking that may restrict the

ability of the hyperacute centres to admit new patients, and therefore impact on the ability of the model to consistently deliver hyperacute services.

## **6. Impact of other service reconfigurations within the region**

6.1 On the 17<sup>th</sup> September 2014 the members of the Independent Clinical Review Team met with Dr Martin Smith, Clinical Lead for Urgent Care for Healthier Together, and Tom Henderson, Senior Project Manager for the Healthier Together Programme. The Independent Clinical Review Team had an opportunity to discuss how the plans for the stroke service may impact, or interact, with plans proposed by Healthier Together.

6.2 Dr Smith confirmed that plans for Healthier Together involve adult General Surgery, Emergency Departments and Emergency General Surgery. Early discussions had taken place between the Stroke Network and Healthier Together though some time had passed since then (> 2 years) and it was acknowledged that it would be useful to resume these discussions in light of progress with GMISS plans.

6.3 It was also acknowledged that following the launch of the new stroke service there would be an increase in patients with and without stroke going to the PSC and CSC units and that there was a risk that this would have an impact on the modelling carried out by other reconfigurations on patient flow and finance.

6.4 The issue of work taking place in the South Sector with regard to Challenged Health Economies and the development of a concordant between Trusts arose. At the time of the review there was little information available to aid an understanding of the impact of this work, so an assessment could not be made in regards to the possible impact upon the stroke service.

**Recommendation 1:** GMISS and other service reconfiguration programmes would benefit from more regular communication relating to progress and planning. This is because it is important to ensure that there are no unintended consequences of the stroke model on other planned service changes. This is a whole system challenge, not just that of one individual programme.

## **8. Interview with the clinical lead for the Strategic Clinical Network (SCN) for Stroke and GMISS**

7.1 The Independent Clinical Review Team met with Dr Khalil Kawafi, Clinical Lead for the Stroke SCN and GMISS, and Kate Ritchie, Programme Lead for GMISS. This gave an opportunity to further explore the plans for stroke services across the system. In addition, Dr Kawafi was able to fully describe the stroke services, both current and future, in his own Trust which is a designated PSC (Fairfield Hospital, Bury).

7.2 It was reported that Pennine Acute Hospitals NHS Trust is fully supportive of the plans for centralisation. The review team were assured that the Trust had invested in capacity and capabilities to meet the expected increase in demand. Dr Khalil informed the review team that there is an advantage in Fairfield being part of the Pennine Trust, in terms of the potential to flex the site of the Stroke Unit, should this be necessary in light of other reconfigurations.

7.3 The plans for a network approach to ESD and community stroke rehabilitations had been discussed. However, the development of the plans were still in the early stages. The Independent Clinical Review Team was assured that an outcomes based tariff for ESD is being developed to incentivise commissioners; however, at time of writing, it is unclear when this will be available.

## **8. Site visits to organisations to interview key staff involved in service changes**

8.1 The Independent Clinical Review Team undertook planned site visits<sup>7</sup> on the 18<sup>th</sup> September and 17<sup>th</sup> October 2014 to meet the multi-disciplinary teams involved in the stroke pathway at designated CSC, PSC and a DSC sites. This included: Stepping Hill (PSC) and Wythenshawe Hospital (DSC) and Salford Royal Hospital (CSC)<sup>8</sup>. In addition, the Review Team had an opportunity to meet with a number of ESD and Community Rehabilitation Therapists<sup>9</sup> during a panel meeting in the afternoon of 18<sup>th</sup> September 2014.

8.2 The site visits provided a good opportunity for the Independent Clinical Review Team to gain a deeper understanding of the challenges and issues within the stroke pathway that are perceived by staff. Following discussions with the teams, and a visit to the facilities, the findings of the site visits and panel discussions have been organised into the following categories:

### **9. Communication**

9.1 It was evident from discussions that the network model will require robust communications systems to ensure the safe and effective hand off of patients between departments in Trusts, and between services. For the purpose of the review, the Independent Clinical Review Team focussed on the point at which a patient is discharged from the CSC and either repatriated back to the local DSC or discharged either home or to a Residential or Nursing Home. This part of the pathway is identified as a key point where good communication is vital for a seamless service.

9.2 Key components of good handovers that emerged from discussions included that they be standardised, comprehensive, and written by senior clinicians. Evidence was presented by the DSC that demonstrated that there were incidents in which communication was less than optimal. The review team were shown an example of a poorly written handover document that caused additional work for receiving staff (time spent investigating) and a poor experience for the patient (delay in confirmation of clinical management plan). No evidence that was presented to the Review Team demonstrated how often this occurred or the size of the problem, although the clinical lead at Stepping Hill alluded to current efforts to improve the handover document.

9.3 Nevertheless, the example supports the assertion that communication, specifically the clinical handover between HASUs and DSCs, can be suboptimal. This is an area that must be addressed urgently prior to implementation to prevent potential clinical incidents and consolidate further the benefits to patients accruing from the reorganisation. In the future, electronic communications between sites would benefit the network service.

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<sup>7</sup> Agenda 18<sup>th</sup> September 2014 – Clinical Senate Review of Stroke Services Site Visit (Appendix II)

<sup>8</sup> List of Clinical and Managerial Staff met during site visit 18<sup>th</sup> September 2014 (Appendix III)

<sup>9</sup> List of ESD and Stroke Community Rehabilitation Therapists (Appendix IV)

9.4 It is acknowledged within the GMISS governance framework that the Joint Implementation Team and DSC forum have a role in sharing information. However it was difficult for the Independent Clinical Review Team to comprehensively understand the communication requirements of the network model as there is currently no detailed network communication strategy in place. The development of a robust and comprehensive communications strategy would enhance operational and learning processes.

**Recommendation 2:** The Greater Manchester Integrated Stroke Service would benefit from the implementation of a comprehensive clinical communication strategy that would serve to review the current operational elements of communication to identify improvements. In particular, areas that involve both a hand off of patients between professions, departments and organisations; and communication requirements of other individuals or teams that are indirectly impacted upon by the stroke pathway, i.e. ED

9.5 A proposal to formalise an Operational Delivery Network (ODN) is being put forward by the GMISS programme leads to CCGs. This would provide a vehicle that would support the ongoing monitoring of the new network model and promote activities for continuous improvement.

**Recommendation 3:** That a managed system is set up that provides: 1) an ongoing operational monitoring system; 2) quality assurance to commissioners for the service delivered; 3) promotes development of the network model further with an early focus on ESD and Community Stroke Rehab; 4) promotes the ethos of a 'learning network' incorporating, clinical governance, quality improvement and research & development activities.

## 10. Equity of Access

10.1 Information contained in the gap analysis of ESD services in Greater Manchester report, as well as discussions that took place during the panel interviews with ESD and Community Rehabilitation therapists during the site visit, provided evidence of a marked inequity of access to ESD and Community Stroke Rehabilitation. This was primarily dependent upon where the patient lived and access to local CCG funding.

10.2 The Independent Clinical Review Team were particularly concerned to learn that even though investment has been made in Stockport becoming a PSC there is no ESD service for patients who live in this area. This means that whilst they receive gold standard hyperacute and acute stroke care, there is no further ESD provision on discharge from hospital for patients with a Stockport postcode.

10.3 This is not a unique phenomenon. Current geographical coverage of ESD teams across GM is patchy with ten ESD teams operational across Greater Manchester. Three CCGs do not have access to ESD (Stockport, East Cheshire and Trafford resident discharges from Trafford General Hospital). Of these ten operational teams only six are substantively commissioned, with two teams operating as pilots. The provision of Community Stroke Rehabilitation (as distinct from ESD) also varies widely between CCGs.

10.4 In addition, there is marked disparity in the waiting times for ESD and Community Stroke Rehabilitation between teams ranging from a few days to 17 weeks. One particular inconsistency that impacts on access highlighted to the Senate is that one CCG commissions ESD for their patients if leaving the DSC, but not if they are discharged straight from the HASU.

10.5 This inequity of access means that there is variable compliance across Greater Manchester with respect to the NICE National Clinical Guidance for Stroke (2.4.1) which recommends that:

Commissioning organisations should commission:

- i. Early supported discharge to deliver stroke specialist rehabilitation at home or in a care home
- ii. Rehabilitation services capable of meeting the specific health, social and vocational needs of people of all ages
- iii. Services capable of delivering specialist rehabilitation in outpatient and community settings in liaison with inpatient services, as recommended in this guideline.
- iv. In addition to commissioning an overall stroke rehabilitation service, commissioners should ensure that they specify within it, or commission separately, services capable of meeting all needs identified following assessments by members of the specialist stroke teams.

10.6 In addition to the NICE guidance, SSNAP level A requires 40% of patients to be discharged to ESD which is currently not the case in Greater Manchester

10.7 This inequity of access is likely to result in inequity of outcomes which will be counterproductive to the aims of the stroke reconfiguration and may dilute the benefits of the acute care bundle.

10.8 Anecdotal reports from the Stroke Therapists indicate that patients 'feel abandoned' if they are not provided with early rehabilitation after discharge and the early benefits that are seen whilst they are receiving therapy in hospital are lost. If there is a long wait for treatment not only are the early benefits lost but it is harder to engage and motivate the patient who by the time they are seen may have developed depression and have deteriorated physically, making effective physiotherapy harder.

10.9 These anecdotal reports were supported by a patient story obtained through interview:

*I felt emptiness once I got home, it was a funny feeling, an emptiness, and I couldn't explain why. It lasted for three months, my daughter came to visit me every day, I couldn't shake it. Nobody came to see me once I got home; I was in hospital for 22 days, then home'.*

*Patient interview 1*

10.10 Access to care pathways that assist with psychological adjustment to Stroke is an important co-relate of the ongoing pathway of care. National standards for a six week wait time for access to psychological therapies for depression and anxiety have been implemented. It is important that the

patient, carers and professionals have clear information that details how to access these services for patients.

10.11 In addition to inequity of access to therapy there is also inequity of access to Social Services provisions and re-enablement. This could mean that even if ESD is commissioned the patient may not be able to access it if there are social issues preventing discharge.

10.12 In terms of cost benefit, any financial investment required is likely to be offset by savings in length of hospital stay and improved outcomes resulting in patients needing less input after their rehabilitation phase. Having a completely integrated ESD/Community Rehabilitation team with the same therapists who can provide cross cover, rather than two separate teams is also likely to be more cost effective.

**Recommendation 4:** In addressing the inequity of access the Independent Clinical Review Team advise: 1) the urgent development of a network service specification for ESD and Community Stroke Rehabilitation services that compliments the gold standard acute treatment; 2) Commissioners examine how they can implement the specification and provide an integrated ESD and Community Stroke Rehabilitation service that is available to all eligible patients regardless of where they live, 3) information that details how to access psychological therapies for patients who have been discharged and may be suffering from depression or anxiety is available.

10.12 Finally, the Independent Clinical Review Team became aware of an issue which is not directly relevant to the scope of the review, but which they feel requires comment, whereby there may be inequity of access to the acute care bundle provided by PCS and CSC for the following patients:

- i. Patients who self -present to the ED rather than ringing an ambulance – these patients may wait longer for assessment and be disadvantaged in receiving time critical treatments such as thrombolysis and early assessment by a stroke specialist.
- ii. Patients who have a posterior circulation stroke and therefore may not be FAST positive – these patients may be taken to a DSC and not have access to the benefits of the HASU acute care bundle.
- iii. Patients who have a stroke whilst in hospital if they are not an inpatient in a hospital with a HASU – these patients may not be able to be transferred in time for them to receive thrombolysis even if they are eligible.

**Recommendation 5:** Protocols are agreed with all the relevant stakeholders including NWAS, Emergency Departments, Radiology, in-patient teams and Stroke Physicians to address inequity of access for patients who currently fall out with the plans for the future stroke service.

## 11. Equity of Outcomes

11.1 The ESD gap analysis paper spends much time on defining and contrasting the structure and processes of ESD services in the various GM health economies. There is little said about which outcomes are important, or how these might be measured. It is implicit that mortality outcomes will

be measured, and there is much said on the relative costs of each model, but there is less clarity on what other outcomes should be considered.

11.2 The Review Team considered that other outcomes should be specified, including morbidity outcomes such as disability and functional recovery; patient experience outcomes ranging from overall satisfaction to more detailed qualitative assessments of the service and carer impact and experience; outcomes related to harm such as injury during rehabilitation, relapse, pharmacological error or harm or other significant untoward incidents.

11.3 It is important to specify which of these outcomes will be measured, how they will be measured, and how often. Most importantly there should to equity of outcomes, so that those services that do not match the highest levels of outcome should be challenged to meet them in a supportive and developmental way.

**Recommendation 6:** That a comprehensive suite of clinical outcome measures is developed for the network system that describes how they will be measured and should include: 1) morbidity and functional recovery; 2) patient experience outcomes drawn from a range of qualitative assessments of service and carer impact and experience; 3) clinical outcomes relating to patient safety such as injury, relapse, medicines management or other significant untoward incidents.

## 12. Workforce

12.1 Radiology: The Review Team was able to interview a Consultant Radiologist at Stockport NHS Foundation Trust. They reported that the imaging of stroke patients for the hyperacute care (scan within one hour) and acute stroke care (scan within 24 hours) and access to neuroradiology are currently achieved, although the service at the PSC and DSCs is under great strain with a question over the service sustainability.

12.2 The causes of this are multi-factorial, and include:

I. An increase in the year on year request for CT and MRI with reduced thresholds for requesting such imaging;

II. A national shortage of radiologists with the North West being one of the worst affected areas.

III. The stroke service at Stockport (a PSC) is delivered by tele-radiology with support from Salford (CSC) though recently this support was withdrawn due to internal pressures resulting in Stockport seeking a temporary arrangement with a second tele-radiology service until a permanent solution is found.

IV. A shortage of Radiology trainees and although new trainee places have been created there has been no new monies to support this.

V. The Neuroradiology service required for reporting complex scans has re-negotiated agreements and will now only report 'difficult cases' meaning that the CSCs and DSCs are now required to report scans with insufficient specialist Neuroradiology support. Not all the Radiologists in these centres

are confident at reporting neuroradiology images and there will be a transition issue with this in regard to training and support.

**Recommendation 7:** The review team consider that provision of imaging across Greater Manchester will require individual focus with a view to developing solutions to issues highlighted that impact on other services. New ways of working will need to be identified to ensure that access to specialist radiology is equitable and sustainable.

12.3 Medical: Stepping Hill Hospital plans to recruit extra consultants to address increased workload both in the hyperacute, acute and rehabilitation areas. The current situation nationally is a shortage of applicants for these posts. However, the Clinical Lead is optimistic about being able to fill the posts.

12.4 Therapists: The panel meeting with the ESD and neuro-rehabilitation teams highlighted current reductions in workforce planned within neuro-rehabilitation so that waiting times for post ESD ongoing rehabilitation is up to 17 weeks (Rochdale). This will present difficulties in providing a seamless service. The teams are well motivated but further resources are needed to ensure adequate staff to provide the level of early ESD to support flow from PSCs and CSCs, and to enable the units to cope with demand.

12.5 Social Services: Urgent dialogue is required with relevant authorities to understand the support required and to achieve joint planning for the service.

12.6 North West Ambulance Service (NWAS): Salman Desai, Head of Services Development for NWAS explained that with the new integrated stroke service all patients who are FAST positive irrespective of the time window will be taken to a HASU.

11.7 To determine the impact of the new proposed stroke services on NWAS, an impact model has been put forward (undertaken by a third party - Commissioners Business Services). The model suggests that the impact will be minimal based on the number of patients currently presenting as FAST positive along with the proposed increase in additional patients admitted to HASU.

12.8 The new integrated stroke service will involve NWAS transporting patients from Cheshire and Macclesfield into GM. The implications of this are that there will be a greater impact on the service with regards to the greater distance and travel time involved, with resource taken out of the area.

**Recommendation 8:** A workforce gap analysis of ESD and Community Stroke Rehabilitation should be performed to inform workforce planning to deliver these services across GM, and that can be used to inform business case development for an equitable and sustainable ESD and Community Stroke Rehabilitation service. The gap analysis should also take into consideration social services and local authority re-enablement personnel for a truly integrated review.

### 13. Seamless Service

13.1 Optimisation of centralised services requires a seamless pathway from admission to the CSC or PSC to subsequent discharge to home, a nursing home or to the patient's local hospital. Managing discharges requires good communication and multi-agency working.

13.2 To ensure equity of services, the PCS and CSC should work to reduce variation of process, with established protocols and lines of communication that are used across the network model. It will also require services to be aligned with no gaps between stages of treatment. Currently there is evidence of variation in ESD and Community Stroke Rehabilitation.

13.3 The current variation in services post discharge will cause issues with repatriation, and it is likely that this will present with readmission to hospitals (causing re-do work at local centres). The lack of ESD services can lead to bottlenecks within the system due to delayed discharges. Alternatively, patients may have an unnecessary repatriation to their local District Stroke Centre as an inpatient. This could be a particular issue at weekends without seven day services in place.

13.4 Although there is an aspiration to provide ESDs across all areas, the funding for this appears to rely on the changes in acute care through the introduction of the Comprehensive Stroke Centre (CSC) and two Primary Stroke Centres (PSCs) and the expected decrease in length of hospital stay. Initially, therefore, until the introduction of ESD and Community Stroke Teams across all areas there will be gaps in service causing inequities in patient care.

13.5 Further issues were identified from therapists working in the various ESD and Community Teams in access to Social Services, re-enablement and equipment provision. This varies from area to area and can rely on the patients' postcode. This may cause delays in discharge or prolong recovery. A closer integration of services between health and social care providers is required to provide optimum outcomes for patients.

13.6 There was concern from the therapists about communication from the HASUs to the ESDs, particularly for patients going home at weekend. The community teams and therapists are having discussions to share common issues and attempt to provide solutions though this will require ongoing programme management and structured support to deliver.

**Recommendation 9:** Provision of a facilitated forum for ESD, Community Rehabilitation and Social Services personnel to inform the development of a workforce plan, comprehensive service specification, clinical outcome measures and to increase sharing of learning.

### 14. Limitations of the Review

14.1 The Independent Clinical Review Team was able to review the stroke services and focus on the ongoing pathway. As in any review, there are challenges that only become apparent once the process has been initiated. This particular review would have benefitted from input from a Local Authority perspective but in the interests of time it was not achieved, although this perspective could be incorporated at a later date.

14.2 It is important to the Clinical Senate that the patient voice is heard and a patient/citizen representative was allocated to the review. Unfortunately, due to unforeseen circumstances this individual had to pull out at the last minute. In an attempt to include this perspective a patient interview was conducted and the Clinical Senate thanks the Stroke Association for assisting us in finding an individual to interview.

14.3 The Independent Clinical Review Team were unable to determine the impact of the psychological effects of stroke for patients fully, this could be investigated further.

## **15. Conclusion**

15.1 GMISS have done excellent work in progressing and delivering high quality hyperacute and acute stroke services and managing the change processes that a whole system change requires. It is acknowledged that health and care services bring great complexity and the GMISS team have brought the tenacity and vision to cut through much of the complexity. As a result, the plans for further centralisation can only improve clinical outcomes for patients further.

15.2 However, it was found that the plans for care post 72 hour care bundle were less robust and would benefit from the same focus of effort that has been afforded the hyperacute and acute stroke pathway to allow gold standard treatment from beginning to end.

15.3 The current service provision for Early Supportive Discharge and community rehabilitation varies across the patch resulting in inequity of access which in turn will affect equity of outcomes and places a risk to the flow of patients out of the hyperacute and acute stroke units.

15.4 The Independent Clinical Review Team have made a number of recommendations relating to the original questions that they would advise should be implemented to improve the stroke service further. These are:

### **1. Provide clinical advice with regards to optimising the working of the agreed clinical model, from the point at which a patient is to be discharged from the hyperacute stroke service.**

The Independent Clinical Review Team recommended (set out more fully in recommendations 2, 3, 5 & 6) that:

- 1) The Greater Manchester Integrated Stroke Service (GMISS) would benefit from implementing a comprehensive clinical communication strategy;
- 2) That a managed system should be set up to support ongoing monitoring and improvement of the network model further;
- 3) Protocols are agreed with stakeholders to address equity of access for patients who fall out with the scope of the current plans; and
- 4) A comprehensive suite of clinical outcome measures are developed for the network model. It is the view of the Independent Clinical Review Team that developing and implementing these recommendations will go some way to optimising the clinical model.

**2. Maintain a particular focus on ongoing aspects of the pathway post discharge, (Early Supportive Discharge and Community Stroke Rehabilitation) that aim to optimise improvement of functional outcomes.**

The Independent Clinical Review Team set out more fully in recommendations 4 & 8 the advice that:

- 1) GMISS urgently move to focus on the development of a service specification for Early Supported Discharge (ESD) and Community Stroke Rehabilitation that complements the gold standard acute service; and
- 2) An examination of how the specification can be implemented to provide an integrated ESD and Community Stroke Rehabilitation service to all eligible patients regardless of where they live is undertaken. This work will require to be complimented with a workforce analysis (see below)
- 3) A workforce analysis is carried out to inform the planning and delivery of these services across Greater Manchester (GM) that can be used to inform business case development for an equitable and sustainable ESD and community stroke service to ensure a seamless service that will optimise functional outcomes for patients.
- 4) Information is developed that details how to access psychological therapies for patients who have been discharged and may be suffering from depression or anxiety.

**3. Provide clinical advice on sustainability of the service and to support future proofing, for example in light of other potential reconfigurations.**

The Independent Clinical Review Team recommend that GMISS and other services planning service change or reconfigurations would benefit from more regular communication relating to progress and planning. This is because it is important to ensure there are no unintended consequences of the stroke model on other planned service changes. This is a whole system challenge, not just that of one individual programme.

Finally, the Independent Clinical Review Team has made a recommendation (7) in relation to a specialist imaging services across GM. It was found that the whole radiology service provision for GM would benefit from specific focus for improvement due to the the issues that arose, and the potential impact on other services. It was out with the scope of this review to explore further. Nonetheless, the review team felt the risks identified potentially impact upon stroke services.

## **Appendix I**

### **1. CLINICAL REVIEW: TERMS OF REFERENCE**

**Title:** Clinical Senate Review of Greater Manchester Integrated Stroke Service

**Sponsoring Organisation:** Greater Manchester Association of CCGs

**Clinical Senate:** Greater Manchester, Lancashire & South Cumbria

**NHS England regional or area team:**

**Terms of reference agreed by:** Professor Donal O'Donoghue on behalf Greater Manchester, Lancashire & South Cumbria Clinical Senate and Alan Campbell, Accountable Officer for Salford CCG and Senior Responsible Officer for Greater Manchester Association of CCGs.

**Date:** 23<sup>rd</sup> July 2014

### **2. INDEPENDENT CLINICAL REVIEW TEAM MEMBERS**

**2.1 Clinical Senate Review Chair:** Vats Patel, Pharmacist, Greater Manchester

**2.2 Citizen Representatives:** Paul Egerton, Stroke Survivor & Citizen Representative

**2.3 Clinical Senate Review Team Members:**

Dr Ivan Benett, GP, Greater Manchester CCG

Dr Carole Gavin, Consultant in Emergency Medicine, Salford Royal Foundation Trust

Dr Anil Sharma, Stroke Consultant, Aintree University Hospitals Foundation Trust

Dr Irfan Zafar, GP, Blackburn

Pauline Gorrill, Stroke Physiotherapist, East Lancashire Teaching Hospitals

### **3. Methodology**

#### **3.1 Aims and objectives of the clinical review**

- 1.** Provide clinical advice with regards to optimising the working of the agreed clinical model, from the point at which a patient is to be discharged from the hyper acute service, and
  - 2.** Maintain a particular focus on ongoing aspects of the pathway post discharge, (Early Supportive Discharge and Community Stroke Rehabilitation) that aim to optimise improvement of functional outcomes, and
  - 3.** Provide clinical advice on sustainability of the service and to support future proofing, for example in light of other potential reconfigurations (in particular Healthier Together).
- 3.1 Aims and objectives of the clinical review

### **3.2 Scope of the review**

From when the patient is ready to be discharged from the Hyper Acute Service (after 72 hour care bundle) to the community or to a local hospital to ongoing support in the community.

### **3.3 Timeline:** Report completed by 20<sup>th</sup> October 2014

(See timeline in additional Gantt chart)

### **3.4 Reporting arrangements**

The Independent Clinical Review Team will report to the clinical senate council which will agree the report and be accountable for the advice contained in the final report. The report will be given to the sponsoring organisation.

## **4. Key Processes**

### *Stage 1. Desktop review of the proposed Clinical Models- information submitted by 25<sup>th</sup> August 2014*

The Clinical Senate Review Team will require information and data to enable them to gain an in-depth understanding of the new model of care. It is expected that the sponsoring organisation will provide the team with the relevant data required prior to the introductory meeting. This includes (where available): details of the model(s) of care, standards that underpin the models, any demographic data used in modelling, activity and audit data available (SSNAP), demand and capacity data, transport analysis, any job descriptions for new and redesigned roles within the models, evidence of patient and carer involvement, any relevant national guidance. This is not an exhaustive list and after initial review of data provided the Clinical Senate Review Team may request further data they feel is necessary to complete their review.

### *Stage2. An introductory meeting of the lead clinicians and managers and the Clinical Senate Review Team 17<sup>th</sup> September 2014*

The Clinical Senate Review Team will have an introductory meeting with the key leaders of the GMISS programme. This will provide an opportunity for the Independent Clinical Review Team to have a more in-depth overview of the programme of work, to be able to ask questions of the Leaders, and to further understand the data provided.

### *Stage 3. A one day site visit to walk the whole pathway on the 18<sup>th</sup> September 2014*

The Independent Clinical Review Team will undertake a site visit to achieve the following objectives:

- To gain an understanding of the current facilities and resources available and planned and how these will optimise clinical outcomes for the ongoing pathway of care, and
- To have an opportunity to meet both formally and informally with staff and service users involved in designing and delivering current and future services and to understand how staff perceive any changes, and
- To gain an understanding of the geographical area and demographic issues that impact upon the design of the proposed models of care.

The Clinical Senate will liaise with the sponsoring organisation to design an agenda for the review team, and to identify key individuals and teams for the review team to meet. The Clinical Senate support team will work with the clinical experts to edit and draft the final report.

### **1. Report**

A draft clinical senate assurance report will be made to the sponsoring organisation for fact checking prior to publication on 10<sup>th</sup> October 2014.

Comments/ correction must be received by 15<sup>th</sup> October 2014; the final report will be submitted by the Clinical Senate to the sponsoring organisation by 20<sup>th</sup> October 2014.

### **2. Communication and media handling**

The Greater Manchester, Lancashire & South Cumbria Clinical Senate aim to be open and transparent in the work that it does. The Clinical Senate would encourage the sponsoring organisation publish any clinical advice and recommendations made.

In discussion with the SRO an agreement will be reached in relation to the potential timing and process of publication and develop a media handling plan.

### **3. Resources**

The Greater Manchester, Lancashire & South Cumbria clinical senate will provide administrative support to the review team, including setting up the meetings and other duties as appropriate.

The Independent Clinical Review Team will request any additional resources, including the commissioning of any further work, from the sponsoring organisation.

### **4. Accountability and Governance**

The Independent Clinical Review Team is part of the Greater Manchester, Lancashire & South Cumbria Clinical Senate accountability and governance structure.

The Greater Manchester, Lancashire & South Cumbria clinical senate is a non - statutory advisory body and will submit the report to the sponsoring organisation.

The sponsoring organisation remains accountable for decision making but the review report may wish to draw attention to any risks that the sponsoring organisation may wish to fully consider and address before progressing their proposals.

### **5. Functions, responsibilities and roles**

The sponsoring organisation will

- i. provide the clinical review panel with the case for change, options appraisal and relevant background and current information, identifying relevant best practice and guidance. Background information may include, among other things, relevant data and activity, internal and external reviews and audits, impact assessments, relevant workforce information and population projection, evidence of alignment with national, regional and local strategies and guidance (e.g. NHS

Constitution and outcomes framework, Joint Strategic Needs Assessments, CCG two and five year plans and commissioning intentions). The sponsoring organisation will provide any other additional background information requested by the Independent Clinical Review Team.

- ii. respond within the agreed timescale to the draft report on matter of factual inaccuracy.
- iii. undertake not to attempt to unduly influence any members of the Clinical Review Team during the review.
- iv. submit the final report to NHS England for inclusion in its formal service change assurance process.

Clinical senate council and the sponsoring organisation will

- i. agree the terms of reference for the clinical review, including scope, timelines, methodology and reporting arrangements.

Clinical Senate council will

- i. appoint a Independent Clinical Review Team, this may be formed by members of the senate, external experts, and / or others with relevant expertise. It will appoint a chair or lead member.
- ii. Advise on and endorse the terms of reference, timetable and methodology for the review
- iii. consider the review recommendations and report (and may wish to make further recommendations)
- iv. provide suitable support to the team and
- v. submit the final report to the sponsoring organisation

Independent Clinical Review Team will

- i. undertake its review in line the methodology agreed in the terms of reference
- ii. follow the report template and provide the sponsoring organisation with a draft report to check for factual inaccuracies.
- iii. submit the draft report to clinical senate council for comments and will consider any such comments and incorporate relevant amendments to the report. The team will subsequently submit final draft of the report to the Clinical Senate Council.
- iv. keep accurate notes of meetings
- v. Independent Clinical Review Team members will undertake to
- i. commit fully to the review and attend all briefings, meetings, interviews, panels etc that are part of the review ( as defined in methodology).
- ii. contribute fully to the process and review report
- iii. ensure that the report accurately represents the consensus of opinion of the Independent Clinical Review Team

iv. comply with a confidentiality agreement and not discuss the scope of the review nor the content of the draft or final report with anyone not immediately involved in it. Additionally they will declare, to the chair or lead member of the Independent Clinical Review Team and the clinical senate manager, any conflict of interest prior to the start of the review and /or materialise during the review

## Appendix II – Personnel Interviewed

<b>Interview 16<sup>th</sup> September 2014</b>		
1	Dr Martin Smith	Clinical Lead Urgent Care for Healthier Together, Consultant ED Salford Royal Hospital
2	Tom Henderson	Senior Project Manager, Healthier Together
<b>Interviewed 17<sup>th</sup> September 2014</b>		
3	Dr Khalil Kawafi	Clinical Lead for GMISS and the GMLSC SCN, Consultant Stroke Physician, Pennine Acute Hospitals
4	Kate Ritchie	Programme Lead, GMISS
<b>Interviews 18<sup>th</sup> September 2014</b>		
5	Dr Niall Lynch	Consultant Radiologist, Stockport NHS Foundation Trust
6	Dr Krishnamoorthy	Lead Consultant Stroke, Stockport NHS Foundation Trust
7	Anne Bullock	Stroke Specialist Nurse , Stockport NHS Foundation Trust
8	Claire McQuaker	Therapies Lead, Stockport NHS Foundation Trust
9	David Taylor	Business Manager, Stockport NHS Foundation Trust
10	Dr Ed Gamble	Consultant Elderly Care Medicine and Stroke Lead, University Hospitals South Manchester
11	Sally Sutton	Advanced Nurse Practitioner, University Hospital South Manchester
12	Joanna Williams	Service Manager, University Hospitals South Manchester
13	Simon Crozier	Principal Service Lead Stroke Therapy / Neurology (Long Term Conditions)Bolton NHS Foundation Trust
14	Jayne Cross	Physiotherapy Lead For ESDT/CST for Tameside and Glossop Community Services Business Group.
15	Jo Stevens	Stroke Services Co-ordinator Pennine Care NHS Foundation Trust
16	Apurba Chakraborty	Physiotherapist, Pennine Care NHS Foundation Trust
17	Ashleigh Knowles	Physiotherapist Pennine Care NHS Foundation Trust
18	Joanne Ritchie	Senior Specialist Physiotherapist, Manchester Royal Infirmary
<b>Interviews 7<sup>th</sup> October</b>		
19	Patient representative	Stroke Association
<b>Interviews 16<sup>th</sup> October</b>		
20	Dr Jane Molloy	Consultant Stroke Physician, Salford Royal Foundation Trust
21	Lee Hay	Senior Manager, Neurology Salford Royal Foundation Trust
22	Louise Hood	Sister, Acute Stroke Unit, Salford Royal Foundation Trust
23	Angela Salisbury	Physiotherapist, Salford Royal Foundation Trust
<b>Interviews October 2<sup>nd</sup> 2014</b>		
24	Salman Desai	Service Development Manager, NWAS

## Appendix III – Independent Clinical Review Team Biographies

### **Vats Patel, Pharmacist & Chair of the Independent Clinical Review**

Vats graduated in 1993 from the University of Sunderland with a BSc. (honours) degree in Pharmacy and an MBA (with merit) from the University of Manchester in 2011. Vats has worked in Community Pharmacy since 1994. In 1995 she joined the Medical Information Department at Janssen-Cilag Limited where she managed and led the Medical Information team on numerous occasions dealing with, amongst others, Strategic Business Units, scientific writing, research, the launch of new products and license indications.

In 2000 Vats moved into Sales Management at Janssen-Cilag Limited specialising in female healthcare, gastroenterology and old age psychiatry. From 2002 she worked predominantly in mental health – schizophrenia and managed multi-matrix stakeholder environments. Vats was involved in strategic business and organisational changes and assisted in decision making at a senior level. Vats continued to work as a locum Pharmacist at the weekends during her tenure at Janssen-Cilag Limited and left in 2009 to work full time in Community Pharmacy.

Vats is a member of the Manchester Local Pharmaceutical Committee where she hope to use her experience and energy to promote an integrated and efficient primary care health service and optimise healthcare pathways through integration of Health Care Professionals. In May 2014 she became a member of The Greater Manchester, Lancashire & South Cumbria Clinical Senate Council. Vats is also a member of the GPhC and RPS.

### **Pauline Goril, Stroke Physiotherapist**

Pauline is the lead physiotherapist for stroke at East Lancashire Hospitals Trust and for neurology at RBH. Pauline has specialised in neurology since 1990 and has been working in stroke care since 1999. Having held a number of posts across the North West her interest in stroke began when on placement as a student in Manchester having had the fortune to work with very skilled staff and became passionate about what a difference physiotherapy can make to the lives of stroke patients and its impact on their recovery. Pauline’s career has always leant toward rehabilitation, stroke and neurology and has a strong belief in the difference therapists can make in these areas.

### **Dr Anil Sharma, Consultant Stroke Physician**

Dr Sharma has been a consultant physician at University Hospital Aintree since 1980 having trained in Liverpool since first coming to the UK in 1972 after qualifying from Amritsar Medical College, Punjab, India. He set up one of the first acute stroke units in the country in 1993 and has developed acute stroke services and set up a stroke research unit in 1994. Over the last 20 years clinical and research activity in stroke saw the progression of stroke services at Aintree Hospital and many publications and presentations. He was the clinical director of the department of medicine for the elderly for 17 years until 2007 and divisional medical director of medicine 2003-2009. He has lectured widely at national and local meetings and peer reviewed other stroke services in the country via the peer review stroke group at the RCP.

### **Dr Ivan Benett, General Practitioner**

Dr Benett has been a GP in Central Manchester for 30 years, and more recently with a Special Interest in cardiology. He is currently the Clinical Director for Central Manchester Clinical Commissioning Group and in this role has lead responsibility for safeguarding & quality assurance, and service reform & redesign. He is also an LMC member representing sessional GPs in Manchester. He has several Greater Manchester and National roles:

The ‘Primary Care Clinical champion’ for the Healthier Together programme of NHS redesign in Greater Manchester.

A member of the Greater Manchester, Lancashire and South Cumbria Clinical Senate.

A member of NHS England Primary care Safety Expert group.  
A lead commissioner role in Specialised Commissioning for Greater Manchester on behalf of the Association of Greater Manchester CCGs

He has held various educational posts and has been PCG chair and then chair of the PCT professional executive committee until 2005. Following this he gained a postgraduate diploma in Cardiology and became a GP with a special interest in cardiology. He has been on the NICE guideline groups for CKD and Post-MI care, as well as the NICE topic expert group for Quality Standards in Heart Failure and CKD care. He is a Fellow of the Royal Colleges of GPs and of Physicians.

**Dr Irfan Zafar**

Dr Zafar is a GP from Blackburn, Lancashire.

**Dr Carole Gavin, Consultant in Emergency Medicine**

Dr Gavin has been a Consultant in Emergency Medicine at Salford Royal NHS Foundation Trust since 2001. Prior to this she was a Clinical Lecturer in Emergency Medicine at Manchester University during which time Carole completed an MD in the Role of Inflammation in Acute Stroke. In addition to her clinical duties in the Emergency Department, Carole's main managerial role is as departmental lead for Clinical Governance and Patient Safety. Carole also has a number of National roles including being a Senior Examiner for the College of Emergency Medicine, a member of the College of Emergency Medicine Safer Care Committee, and a GMC performance assessor. Carole also works as a Forensic Physician at St Mary's Sexual Assault Referral Centre and has an interest in Legal Medicine.

**Juliette Kumar, Senate Manager**

Juliette is a former paediatric and learning disability nurse and has worked in service and quality improvement in large acute and network organisations for a number of years. She is driven by a desire to improve services for the benefit of both patients and staff and has worked with frontline teams from a variety of backgrounds to improve services, develop teams and strengthen leadership. Juliette's postgraduate studies and research in improvement science allow her to bridge the gap between theory and practice and earns her better clinical 'buy in' with the work that she does. Juliette is the Senate Manager for Greater Manchester, Lancashire & South Cumbria Clinical Senate and facilitates independent clinical reviews for the Clinical Senate.

## Appendix IV – Terms and Abbreviations Used in the Document

CCG	<b>Clinical Commissioning Group</b> – NHS organisations which succeeded PCTs in April 2013 with responsibility for commissioning (ensuring the provision of) general and specialist clinical services for the population in the geographical area they cover
CSC	<b>Comprehensive Stroke Centre</b> - a unit offering hyperacute stroke services in a neurosciences centre with access to interventional neuro-radiology and neurosurgery 24 hours per day, seven days per week
DSC	<b>District Stroke Centre</b> – District General Hospital level provision for patients presenting more than four hours after developing stroke signs and symptoms
ED	<b>Emergency Department</b> (also known as Accident and Emergency, A&E or Casualty)
ESD	<b>Early Supported Discharge</b>
FAST	Salford Royal Foundation Trust – an acronym which assists in the identification of stroke signs and symptoms
GM	<b>Greater Manchester</b>
GMISS	<b>Greater Manchester Integrated Stroke Service</b>
HASU	<b>Hyperacute Stroke Unit</b>
LOS	<b>Length Of Stay</b> (normally refers to hospital stays)
NWAS	<b>North West Ambulance Service</b>
PCT	<b>Primary Care Trust</b> – until April 2013, NHS body responsible for ensuring the availability of “primary care” services – GPs, pharmacists, opticians, dentists etc. in the geographical are for which they were responsible
PSC	<b>Primary Stroke Centre</b> – a centre hosted by a hospital Trust providing thrombolysis from 7am to 7 pm, Monday to Friday)

SCN	<b>Strategic Clinical Network</b> – NHS body bringing together those who use, provide and commission the service to make improvements in outcomes for complex patient pathways using an integrated, whole system approach.
SSNAP	<b>Sentinal Stroke Audit Programme</b> , organised and administered by the Royal College of Physicians