

Kent and Medway Stroke Services Review

Case for Change

July 2015

Version	Date	Author	Comments
10.0	06.07.15	Oena Windibank	Agreed at Stroke Review Programme Board 13.5.15 To South East Clinical Senate 14.5.15

Contents:

1.0 Executive summary

2.0 Purpose of the report.

3.0 Recommendations

4.0 Background.

4.1 Context to the current Kent and Medway stroke services review.

4.2 The aim of the Kent and Medway stroke services review.

4.3 The review approach.

4.4 Best practice and performance frameworks.

5.0 The national context.

5.1 Policy context and guidance.

5.2 Patient/user voice.

5.3 The NHS England stroke services configuration guidance 2015 ; NHS England (draft)

5.4 Literature review findings.

5.5 Sentinel Stroke National Audit programme (SSNAP)

5.6 South East Coast Cardiovascular Strategic Clinical Network.

5.7 Workforce recommendations.

5.8 Critical Co-dependencies.

5.9 Summary of national policy and guidance.

6.0 Current Kent and Medway provision/pathways.

6.1 Hyper acute/acute pathway.

6.2 Stroke incidence

6.3 CCG stroke profiles.

6.4 Public health data.

7.0 Kent and Medway performance against best practice/guidance.

7.1 Performance against the South East Coast 22 clinical and quality standards.

7.2 Performance against SSNAP.

7.3 Performance against the key acute domains (SSNAP)

7.4 Performance against outcome measures.

7.5 Performance against workforce requirements/recommendations.

7.6 Summary table of key indicators against current sites.

8.0 Summary of key findings across Kent and Medway admitting units.

8.1 Best practice/stroke standards

8.2 Activity

8.3 Workforce

8.4 Travel/Access

8.5 Summary.

9.0 Recommendations.

10.0 Next steps.

1.0 Executive summary.

National picture

Stroke is the third biggest killer in the UK and is the main cause of long term disability in the population.

Stroke care accounts for about 5% of total spending on healthcare in England.

Stroke services are commissioned by clinical commissioning groups (CCGs). Although there is no national specification in place for stroke services, the National Stroke Strategy 2007 provides guidance on recommended best practice.

This shows that key to successful outcomes for stroke patients is a high quality stroke unit with rapid access to diagnostics, specialist assessment and intervention. Evidence shows that rapid specialist assessment and intervention in the hyper-acute phase (the first 72 hours after a stroke) reduce mortality and improve long term outcomes for stroke patients. Key features of a successful hyper-acute/ acute stroke unit include a specialist workforce treating adequate volumes of patients (enabling them to sustain and improve their skills), and 24 hour access.

The key features of the National Strategy and the recommendation of the national lead articulate that recovery from a stroke is significantly influenced by the percentage of patients;

- Seeing a stroke consultant within 24 hours;
- Having a brain scan within 24 hours of admission;
- Being seen by a stroke-trained nurse and one therapist within 72 hours of admission;
- Being admitted to a dedicated stroke unit

And that the most significant interventions are:

- A nutritional assessment and swallowing assessment within 72 hours;
- Being given antiplatelet therapy within 72 hours;
- Receiving adequate food and fluids for the first 72 hours.

The Sentinel Stroke National Audit Programme (SSNAP) highlights that there is a high level of variability in the performance of stroke services across the country and recommends that doing nothing is not an option going forward.

The key requirements of a 'good' hyper acute/acute stroke service that delivers the best outcomes for patients are:

- **Access 24 hours, seven days a week**
- **Rapid and accurate diagnosis**
 - Clinical expertise
 - Access to imaging and good interpretation
- **Direct admission** to a specialist stroke unit
- **Immediate access** to treatment
- Specialist centres with sufficient **numbers** of patients and expert staff

- High quality **information and support** for patients and carers
- **Inpatient care** through a specialist unit
- The service **measures** what it does, publishes **data** and constantly **looks for improvements**.

The national recommendations are for stroke units to:

- Be a seven-day dedicated specialist unit with more than 600 confirmed stroke admissions and no more than 1500 admissions.
- Achieve rapid assessment and imagery; door to needle times of one hour, imaging within one hour.
- Have patients admitted directly onto a specialist stroke unit within four hours.
- Have patients stay in the stroke unit for 90% of the inpatient episode.
- Assess patients by specialist stroke consultant and stroke trained nurse and therapist within 24 hours.
- Have seven-day stroke consultant cover
- Have seven-day stroke trained nurse and therapist cover.

Currently, a number of these requirements are difficult for Kent and Medway admitting units to achieve or sustain.

Local picture

About 2,500 people in Kent and Medway have a stroke every year. Each of the seven local acute hospitals admits stroke patients who are in the hyper-acute phase. Performance against the South East Coast Clinical and Quality standards and SSNAP standards is variable across the county. The CCGs are committed to improving both the current performance and, in turn, the outcomes for Kent and Medway stroke patients.

The priority is to ensure that patients receive the best possible care, consistently and quickly within the first 72 hours and for the immediate acute rehabilitation element of their care. This hyper-acute/acute pathway must deliver care to patients according to best practice and be sustainable for the Kent and Medway population. This particularly relates to rapid assessment and intervention, seven-day specialist cover and access to the stroke unit within four hours.

Performance against the SSNAP domains by the Kent and Medway admitting units are variable and, in some cases, inconsistent; improvement has been slow. At a number of sites, performance is poor or below average when compared both to other units in the South region and nationally. It should be noted that the national average itself has considerable room for improvement.

Whilst the issue with performance is recognised by the provider Trusts, key challenges such as a shortage of specialist workforce and the ability to deliver services seven days a week are not easily resolved internally.

This, and the evidence that centres treating larger numbers of people achieve improved outcomes, have triggered this review across Kent and Medway.

There are concerns noted by all in the review in relation to the sustainability of the existing provision.

The Case for Change finds that no change is not an option.

Scope of this review

This review recognises that the acute pathway cannot be considered in isolation. A clear understanding of the management of risk factors across the county, the pattern of referral/access to urgent care, rehabilitation and long term health and social care support will be developed. It is clear that these factors will impact on the range and potential success of any solutions.

It is anticipated that the review will raise issues in relation to primary prevention and rehabilitation that individual CCGs should take forward as part of their local clinical strategies.

However, whilst particularly recognising the importance of effective primary prevention and rehabilitation services, this review is focused on improving treatment and care in the hyper-acute/acute phase. Resolving key issues in this area will assist across the pathway, in particular in relation to rehabilitation.

The aim of the review:

To ensure the delivery of clinically sustainable, high quality, hyper-acute/acute stroke services for the next ten to fifteen years, that are accessible to Kent and Medway residents 24 hours a day, seven days a week.

The review has the following objectives:

- To ensure that the needs of all Kent and Medway residents who experience a stroke or whose family members experience a stroke are considered within the delivery and configuration of hyper-acute / acute stroke care.
- To assess current service provision for stroke patients across Kent and Medway and make recommendations for evidence-based improved outcomes.
- To have an agreed hyper-acute/acute stroke service model in Kent and Medway that meets national evidence-based best practice.
- To develop a sustainable model of hyper-acute/acute stroke care that can meet the needs of residents in Kent and Medway going forward.

As part of this, we are engaging with local people across Kent and Medway, to understand their experience of hyper-acute care and their priorities for an effective hyper-acute/acute stroke service for the future. This review follows and builds on a local review in west Kent, initiated by Maidstone and Tunbridge Wells NHS Trust and supported by NHS West Kent Clinical Commissioning Group. This work asked local people for their views on quality standards, developed by the South East Coast Clinical Network and based on those in the SSNAP.

It found:

- There is public support for new higher standards of care covering the critical first 72 hours of a stroke patient's care and a need for the NHS to develop ways of achieving these
- The NHS needs to improve the whole of the stroke patient's pathway, including the care stroke patients receive out of hospital
- The NHS needs to improve the information and support available to patients and carers following a stroke
- Quality needs to be maintained within a timeframe that provides maximum opportunities of recovery for patients.
- The NHS needs to improve planning about how and when a stroke patient can leave hospital and the next steps in their rehabilitation

Ambition for stroke services in Kent and Medway

The ambition of this review is to ensure that stroke services in Kent and Medway aim towards achieving an 'A' SSNAP, going beyond average and delivering improved outcomes. Kent and Medway stroke services will be recognised as areas of good practice, where staff want to work and develop their practice.

The stroke services will be delivered robustly 24 hours, seven days a week, by an appropriately skilled, multi disciplinary team of professionals . The level of skill and expertise is maintained through an innovative and motivated workforce who delivers excellent outcomes and practice.

The services will be organised and delivered in a manner that maximizes effective use of scarce resources and skills. This will include the skills and support of a wide range of non stroke services.

Central to the review and its findings is for patients to benefit from improved outcomes, communications and support and for consistency of good practice across Kent and Medway.

Benefits for patients are central to the review and will include:

- Improved pathways of care and outcomes, particularly ensuring that patients are given the best possible chance of survival and minimised risk of disability.
- Sustainable stroke services for all Kent and Medway residents.
- Consistent high performance of hyper-acute/acute stroke care against the national best practice, delivering the associated positive patient outcomes.
- Access to 24 hour, seven-day specialist stroke care, including specialist and resilient stroke seven-day workforce comprising specialist consultants, stroke trained nurses and therapists.
- Consistency of hyper-acute/acute stroke care for Kent and Medway residents regardless of where they live.

2.0 Purpose of the Report.

The purpose of this report is to reflect the current position of hyper acute/acute stroke services in Kent and Medway within the context of the best practice standards, national guidance and sustainability going forward. The report will reflect the Kent and Medway issues and context and consider if there is a need to make recommendations that will look to develop solutions to identified issues. The report will consider if Kent and Medway has sustainable hyper acute stroke services that can consistently meet the needs of all its population.

The Case for Change will be reviewed to reflect the public/patient view post public listening events held through late spring early summer 2015 and informed by the feedback from the South East Clinical Senate.

3.0 Recommendations.

- To recognise that there is a Case for Change if hyper acute/acute stroke services in Kent and Medway are to:

Ensure the optimum outcomes for stroke patients.

Deliver 7 day, rapid access to specialist Stroke assessments and intervention.

Improve performance against the SSNAP measures.

Be compliant with the SE Stroke and TIA Service and Quality Standards 2014.

To comply with the national best practice guidance for hyper acute/acute stroke services.

Consistently meet the needs of all Kent and Medway residents.

Be sustainable and fit for the future for the next 10-15 years.

- To agree to proceeding with an option appraisal process to identify a consensus agreement on the preferred solution(s) going forward.

4.0 Background

A stroke is the brain equivalent of a heart attack. The blood supply to part of the brain is interrupted by either a blood clot or a bleed, and surrounding brain tissue is damaged or dies. There are two main types of stroke, ischaemic or haemorrhagic stroke.

Ischaemic strokes most common form of stroke, caused by a clot blocking or narrowing an artery carrying blood to the brain. The likelihood of suffering an ischaemic stroke increases with age.

Some patients may suffer from a Transient Ischaemic Attack (TIA), a temporary stroke that occurs when the blood supply to part of the brain is cut off for a short time only. This results on short term symptoms which normally disappear within 24 hours. This is often a warning that the patient may be at risk of a more serious stroke occurring.

Stroke is a major health problem in the UK. It is a preventable and treatable disease that is the third biggest cause of death in the UK and the largest single cause of severe disability.

Each year in England, approximately 110,000 people (Scarborough et al, 2009) have a first or recurrent stroke which costs the NHS over £2.8 billion. South Asians (Indians, Pakistanis and Bangladeshis) have a higher risk of stroke than the rest of the population.

Stroke mortality rates in the UK have been falling steadily since the late 1960s. The development of stroke units and the further reorganisation of services following the advent of thrombolysis, have resulted in further significant improvements in mortality and morbidity from stroke (National Sentinel Stroke Clinical Audit, 2011).

The burden of stroke is likely to increase in the future as a consequence of the ageing population.

The acute stroke pathway;

Hyper-acute stroke services (72 hours post symptoms) enable patients to have rapid access to the right skills and equipment and be treated 24/7 on a dedicated stroke unit, staffed by specialist teams.

Following a stroke, a patient is taken directly to a hyper-acute stroke unit where they will receive expert care, including immediate assessment, access to a CT scan and clot-busting drugs (if appropriate) within 30 minutes of arrival at the hospital.

It is clear that patients presenting with a stroke to hospital should be cared for in a specialist stroke unit, under the care of a multidisciplinary team including specialist nursing staff based in a designated for stroke unit.

The intensity and nature of care required by the patient depends on the time lapsed

after the stroke has occurred and the severity of the stroke.

Patients should receive their care on a specialist Stroke unit. Initially this will be on a hyper acute unit and then post 72 hours it will be on an acute unit, some units have combined units.

Hyper-acute stroke units (HASUs),

For the first 72 hours of care post-stroke, including assessment for, and the administration of, thrombolysis in suitable patients. Key features include: continuous physiological monitoring (Electrocardiography (ECG), oximetry, blood pressure); immediate access to scanning for urgent stroke patients; direct admission from Accident and Emergency (A&E)/front door; senior specialist ward rounds seven days a week; acute stroke protocols/guidelines; nurses trained in swallow screening; and nurses trained in stroke assessment and management.

Acute stroke units (ASUs) for subsequent (72 hrs +) acute hospital care. This includes ongoing specialist care, with 7 day therapies services (physiotherapy, occupational therapy, speech and language therapy, dietetics input), and effective Multi-Disciplinary Team (MDT) working.

4.1 Context to the current Kent and Medway Stroke Services review.

In Kent and Medway hyper acute/acute stroke care is provided across seven admitting hospital sites with a range of rehabilitation provision and Early Supported Discharge services available.

Kent and Medway providers have struggled to meet the standards of the national Stroke Sentinel Audit Programme (SSNAP) with a range of achievement from poor to good across the region. (E to B December Q3 14/15). The majority of scores are below average and although there has been some recent improvements since June 2014, this has been slow and is inconsistent.

Achievement of the SE Stroke and TIA Service and Quality Standards is also variable across the sites as is achievement of the measures within the National Stroke Strategy. This performance has raised concern with the CCGs and reviewing stroke services was identified as a Kent and Medway priority by the Commissioning Assembly in September 2014. A number of the CCGs have raised individual performance issues with providers and the Trusts themselves have recognised the need to address both performance and sustainability issues.

Sustainability is of concern across all providers with a particular focus on the workforce both in terms of numbers and coverage specifically in relation to out of hours.

A gap analysis has been undertaken across all providers with action plans at various stages of development and delivery. Stroke Improvement Processes have been initiated at East Kent Hospitals Foundation Trust and Maidstone and Tunbridge Wells Trust.

This review of stroke services was commissioned in December 2014 and is supported by NHS England South (South East) and the South East Cardiovascular Strategic Clinical Network (SE CVD SCN)

Nationally a number of reviews have taken place or are ongoing in order to address the variability and inconsistency of performance highlighted through SSNAP. The reviews in the East Midlands and more recently Birmingham have produced best practice indicators and guidance for subsequent reviews recognising that key principles can be built upon whilst reflecting the differences/needs of local communities. NHS England have commissioned a tool kit to support these reviews and this best practice guidance on configuring stroke services will be published later in 2015.

Currently there are stroke services reviews underway in Surrey and Sussex and a Kent, Surrey Sussex overview group is in place to consider the implications for each locality and cross boundary issues.

4.2 The aim of the Kent and Medway Strokes services review .

The aim of the review is to ensure the delivery of clinically sustainable high quality hyper acute/acute stroke services for the next ten to fifteen years, that are accessible to K&M residents 24hours a day seven days a week

A review of the existing stroke services across Kent and Medway is required to;

- Ensure that Kent and Medway hyper /acute stroke care seeks to meet the needs of all K&M residents.
- Improve and ensure the consistency of the hyper acute /acute Stroke pathway across Kent and Medway.
- Identify and make recommendations for the continued improvement of outcomes for stroke patients.

- Ensure that services across Kent and Medway are high quality, safe, sustainable and fit for the future population in Kent and Medway for the next 10 to 15 years.
- To ensure that hyper acute /acute stroke services are commissioned to be compliant with best practice guidance and work towards Level A in SSNAP.
- To ensure that Kent and Medway stroke services are delivered in accordance with the national evidence based best practice models and specification
- To ensure that the model for hyper acute /acute stroke care is financially and clinically viable

4.3 The review approach.

The review will undertake a phased approach:

- Recognising the national guidance and clinical best practice for Hyper Acute/acute Stroke services
- Scoping and identifying the current Hyper Acute/Acute stroke services provision available for Kent and Medway residents, benchmarking against the national guidance/best practice.
- Identifying gaps and issues in achieving best practice.
- Identifying solutions and options for resolving the gaps/issues.
- Recommending models of delivery that can achieve quality and sustainability going forward.
- Engaging and listening to patients, public and clinicians throughout the process.

The review will be conducted in line with the NHS England guidance on service developments and reconfiguration. There will be a programme of engagement with the public, clinicians both locally and externally and key stakeholders that underpins the review process. The review will be governed through a Review Programme Board with membership from all key stakeholders and regular communication will be undertaken with clinical commissioners. The process will be tested and evaluated at key points including the Case for Change , the development and agreement of the decision making process and the options appraisal process and agreement on final recommendation(s).

This Case for Change has been developed and informed by the review's Clinical Reference Group, national guidance, SE CVD SCN guidance and local discussions with Clinical Commissioning Groups. Evidence and lessons learnt from regional and national reviews have been considered and applied as appropriate.

Public engagement is central to the review its findings and recommendations. A sequence of engagement events is underway to both inform and test the Case for Change, which will be amended accordingly. This will be followed by public events developing solutions and final recommendations with members of the public/patients involved at both Board level, modeling groups and the Communication and Engagement sub group.

If the Case for Change is recognised and the direction of travel is approved by CCG governing bodies (June/July 2015) further work will be required to develop the range of options and to engage with the public and wider clinical community and key stakeholders. This will include a more in depth analysis of the clinical model, travel times, population growth, preventative strategies, workforce planning, capacity modeling and impacts

4.4 Best Practice and Performance frameworks

The review process has been undertaken within the requirements and recommendations of national and regional best practice for Stroke patients. This includes the;

- ❖ National Stroke Strategy 2007
- ❖ NHSW Midlands and East, Stroke Specification , 2012
- ❖ South East Coast, Integrated Stroke Specification, 2012 (under review)
- ❖ SEC CVD SCN Stroke Clinical Advisory Group; service/quality standards.
- ❖ Sentinel Stroke National Audit Programme (SSNAP)
- ❖ Published body of evidence. (through Literature review)
- ❖ NHS England guidance on the Configuration of Stroke Services 2015

4.5 The key elements of best practice for hyper acute/acute Stroke care include;

- ❖ Rapid specialist stroke assessment this includes imagery and assessment.
- ❖ Expert clinical assessment including 7 day consultant cover.
- ❖ 24 hour Stroke trained nurse cover with appropriate senior level skill mix and specialist stroke nurse leadership.
- ❖ The delivery of 7 day specialist therapy interventions and rapid access particularly to Speech and Language therapy
- ❖ 24 hour availability of rapid imagery and subsequent therapeutic Interventions, including 24/7 thrombolysis.
- ❖ MDT assessment, to include specialist physicians, nurses , therapists. A wider group of specialist is increasingly advised including clinical psychology, dietetics.
- ❖ Sufficient patient volumes that deliver clinical sustainability, maintain clinical expertise, and produce consistently good clinical outcomes.

5.0 The National Context.

Acute Stroke services are seen within the context of emergency care with the Stroke Strategy for England (2007) specifying that stroke is a medical emergency and that local networks need to plan to ensure that everyone who could benefit from urgent care is transferred to an acute stroke unit that provides ;

24-hour access to scans and specialist stroke care, including thrombolysis.

NHS England is clear that acute services should be delivered to a high standard regardless of the day of the week. Acute trusts are being encouraged to provide 7 days services such as diagnostics and therapies where they have traditionally been a Monday to Friday service or on call for emergency patients. This strategy supports stroke services as the TIA clinics should be accessed 7 days a week and the acute pathway 24 hours a day both of which require appropriate skilled workforce

The national guidance and Stroke National Clinical Director, Professor Tony Rudd, notes that the quality of the stroke unit is the single biggest factor that can improve a person's outcomes following a stroke. Successful stroke units are built around a stroke-skilled multi- disciplinary team that is able to meet the needs of the individuals.

The NHS Five Year Forward View, published in October 2014 by NHS England sets out a positive view for the future based around new models of care. Stroke services were recognised as falling under the new care model of specialised care. Within this new model there is the recognition that for some services, such as stroke, there is a compelling case for greater concentration of care.

More specifically it highlights the strong relationship between the number of patients and the quality of care, derived from the greater experience these more practiced clinicians have, access to costly specialised facilities and equipment, and the greater standardisation of care that tends to occur. The document references the London service change of consolidating 32 stroke units to 8 specialist ones and highlighted this achieves a 17% reduction in 30-day mortality and a 7% reduction in patient length of stay.

The Manchester review has also identified improvement in outcomes and performance due to centralization, however this took a number of years to achieve and was reviewed regularly until this improvement was achieved.

It is important to note that there are variances with the London and Manchester models that may not be relevant to Kent and Medway.

A review of Stroke services in Midlands and West 2011 resulted in a best practice model and specification.

As the review develops it will ensure that lessons are learned from other national reviews whilst recognizing the issues for Kent and Medway that may require specific/different consideration or a modified approach. For example understanding travel times and routes available locally.

NHS England commissioned a review of stroke configuration good practice (2015)

and have produced a guidance tool for use when undertaking a stroke review and deciding on stroke configuration. (ref)

5.1 Policy context; Standards and guidance.

- The National Stroke Strategy 2007, is a quality framework set to secure improvements across the stroke pathway over a period of ten years.

The strategy outlines 20 quality markers that improve stroke care across the whole stroke pathway. The strategy provided the evidence base for what key elements need to be implemented for high quality stroke care that would result in good clinical outcomes for patients.

The plan has two years left but organisations locally and nationally continue to struggle to deliver a service that meets all the quality markers.

The key features of the National Strategy and the recommendation of the National lead articulate that recovery from a stroke is significantly influenced by the percentage of patients;

- **Seeing a stroke Consultant within 24 hours;**
- **Having a brain scan within 24 hours of admission;**
- **Being seen by a stroke trained nurse & one therapist within 72 hours of admission;**
- **Being admitted to a dedicated stroke unit**

And that the most significant interventions are:

- **A nutritional assessment & swallowing assessment within 72 hours;**
- **Being given antiplatelet therapy within 72 hours;**
- **Receiving adequate food and fluids for the first 72 hour.**

5.2 Patient /User voice.

The K&M Stroke review is undertaking a patient and clinical engagement process which will inform both this Case for Change and the development of options and appraisal process going forward.

This will include Listening Events that discuss the Case for Change, illustrating the current position and the elements of good clinical practice that support good outcomes. The process will develop the engagement to pick up the important issues for patients and to ensure that when considering possible solutions to the issues the public are able to make informed choices. The patient and public will be actively encouraged to tell the review team about the things that are important to them and their families and the review will ensure that feedback informs the process and outcome.

Nationally the collective evidence of the patient voice provides a view of priorities when reviewing/redesigning stroke services. These support;

- ❖ Seven day, 24 hour services
- ❖ Access to the right people, right time and equipment
- ❖ Scans within four hours to give a better chance of rehabilitation
- ❖ Quick ambulance response and quick entry into hospital
- ❖ Access to the right services in the first 72 hours. (BBCS 2014 Stroke review
patient event)

5.3 The Stroke Services Configuration guidance 2015 NHS England. (Draft)

Sandwell and West Birmingham CCG were commissioned by NHS England to provide an overview of the support and guidance available to Clinical Commissioning Groups (CCGs) and stakeholders/partners for reference when considering service change for stroke services.

The aim is to provide these CCGs and their partners with a suite of guidance documents, templates and analytical models based upon the work that has already been undertaken in areas of England where stroke reconfiguration has already progressed.

This guide is designed to be a framework, ensuring a consistent application of principles across England for stroke services.

The guidance is to be considered within the context of local circumstances in how they are applied.

The guidance reflects and builds on the work undertaken in the previous Stroke services reviews in London, Birmingham and the Black Country and more widely in the East of England and Midlands.

The guidance has been supported by the National Clinical Director for Stroke, Professor Tony Rudd and he summarises key issues below;

“The way that stroke services are organised will have a major impact on outcomes after stroke.

We have robust evidence that management on a stroke unit saves lives and reduces disability.

We know that that the most important interventions are maintaining homeostasis and preventing stroke associated complications.

We know that thrombolysis delivered quickly will reduce the chances of surviving with disability.

Effective prevention strategies after stroke and TIA will reduce the risk of recurrence and specialist rehabilitation both in hospital and in the community also have a strong evidence base.

Data from the Sentinel Stroke National Audit Programme (SSNAP) has shown that larger stroke services operate more efficiently than

smaller services and it is likely that they are more likely to be financially viable as well.

It has been shown that levels of nurse staffing also has a direct impact on the chance of patients surviving.

To deliver the best outcomes it is therefore vital that patients are managed in a well organised service that can deliver the best quality of care.”

Tony Rudd, Professor of Stroke Medicine National Clinical Director for Stroke, NHS England

The guidance toolkit provides advice on the review process and the recommended characteristics of a quality stroke unit.

These include;

- ❖ That the most important care for people with any form of stroke is prompt admission to a specialist stroke unit.
- ❖ That a stroke unit undertakes adequate volumes of activity to maintain clinical quality and outcomes.
- ❖ That 95 % of patients can access the Hyper acute unit within 45-30 minutes.
- ❖ That Hyper-acute stroke services enable patients to have rapid access to the right skills and equipment and be treated 24/7 on a dedicated stroke unit, staffed by specialist teams.
- ❖ To treat Transient Ischaemic Attack quickly if strokes are to be avoided, and must ne treated as a stroke whilst symptoms persist.
- ❖ Ambulance staff to use a validated screening tool and transfer suspected stroke patients to a specialist acute stroke unit within 1 hour.
- ❖ For urgent brain imaging within a maximum of 1 hour.
- ❖ For direct admission to a specialist stroke unit within 4 hours and receive thrombolysis if clinically indicated, (about 20% of patients)
- ❖ Early and intensive physiological and neurological monitoring and evidence based protocols for abnormalities ie bleeding, anaphylaxis, infection, VTE , Malignant MCA syndrome.
- ❖ Specialist swallow screening within 4 hours of admission, with assessment and planning for the provision of adequate nutrition
- ❖ Assessment and management by stroke trained nursing staff and one member of the specialist team within 24 hours and by all relevant members within 72 hours.
- ❖ Documented multi disciplinary goals should be in place.

The guidance recognizes the importance of and builds on the work from the **Sentinel Stroke National Audit Programme** and notes that the findings across the country indicate that there are still considerable variations in the quality of stroke care across England. This evidence demonstrates a clear need to look at the opportunities to improve the quality of stroke services and therefore ***doing nothing should no longer be an option.***

The impact of Telemedicine on the pathway.

Telemedicine is only able to replace the expert opinion on diagnosis and immediate management. It cannot replace the need for high quality stroke unit facilities, well trained stroke nurses on site and access to on-going specialist medical opinion that will be needed repeatedly during the course of an average stroke admission. A telemedicine consultation does not remove the need to provide specialist bedside assessment of the patient on a daily basis. It is unacceptable to provide an acute assessment using telemedicine on a Friday evening and then not provide a specialist bedside opinion until the Monday. There have been no studies evaluating the effectiveness or feasibility of conducting telemedicine ward rounds. There must always be the option of a bedside assessment of a patient where telemedicine is insufficient to address the patient's needs.

5.4 Literature Review findings.

The Kent and Medway Public Health teams have undertaken a literature review as part of the review. This is an evidence review in relation to Hyper acute stroke units. The review has considered a number of key aspects, these include a summary of standards, evidence of clinical and cost effectiveness. It considers reconfigurations elsewhere, Telemedicine and travel times.

Further analysis of the evidence is underway however early indications are that the findings suggest that Hyperacute Stroke units are both clinically effective and some evidence that these are cost effective. However, there is evidence to suggest that preventing a stroke is cost effective and prevention strategies should be implemented at a population level.

*Once completed the final findings will be considered against this Case for Change and applied as appropriate. The findings will also be utilised through the option appraisal process.

5.5 Sentinel Stroke National Audit Programme. (SSNAP)

The Sentinel Stroke National Audit Programme (SSNAP) aims to improve the quality of stroke care by auditing stroke services against evidence based standards, and national and local benchmarks. Building on 15 years of experience delivering the National Sentinel Stroke Audit (NSSA) and the Stroke Improvement National Audit Programme (SINAP), SSNAP is pioneering a new model of healthcare quality improvement through near real time data collection, analysis and reporting on the quality and outcomes of stroke care

SSNAP is the single source of stroke data and has 100% participation of acute hospitals in England, with 95% case ascertainment.

The audit considers 44 Key Indicators representative of high quality stroke care which are grouped into 10 domains covering key aspects of the process of stroke care.

- Domain 1: Scanning

Domain 2: Stroke unit

- Domain 3: Thrombolysis Assessment.
- Domain 5: Occupational therapy
- Domain 7: Speech & language therapy
- Domain 9: Standards by discharge processes.
- Domain 4: Specialist
- Domain 6: Physiotherapy
- Domain 8: MDT working.
- Domain 10: Discharge

Each domain is given a performance level (level A to E) and a total key indicator score is calculated based on the average of the 10 domain levels for both patient-centred and team-centred domains.

A combined total key indicator score is calculated by averaging the patient-centred and team-centred total key indicator scores. This combined total key indicator score is adjusted for case ascertainment and audit compliance to result in an overall SSNAP level.

Within the NHS England guidance on the configuration of stroke services there are recommendation for reviews/commissioning to focus on key indicators with a view to considering if a unit can deliver against these or can reasonably work towards them before accepting them as a HASU.

- Domain 1) Proportion to pts scanned at 1 hr and 12 hrs and median time between clock start and scan.
- Domain 2) Proportion of pts admitted to Stroke unit within 4 hours and who spend 90% of stay on unit. Median time between clock start and arrival.
- Domain 3) Proportion of thrombolysis for all Stroke pts/eligible pts and within 1 hour.
- Domain 4) Median time for assessment by consultant and nurse. Proportion with a swallow screen and then assessment.
- Domain 8) Applicable pts assessed by OT, Physio, SLT. Pts with rehab goals within 5 days and combination of all of the therapy and nurse assessments.

**** before they can admit: consider these domains and if not in place is there a robust plan for delivery.***

5.6 South East Cardiovascular Strategic Clinical Network;

The network has produced Stroke and TIA Service and Quality Standards for the hyper acute pathway and TIA pathway and is currently localising the recommended East Midlands stroke service specification for use across Kent, Surrey and Sussex. .

The SE CVD SCN Hyper acute Stroke and TIA service and Quality standards are 22 clinical standards used by the Kent and Medway providers to assess their performance against the best practice stroke practice. The standards reflect the SSNAP domains and indicators for the Stroke hyper acute and TIA pathway. These standards currently form the basis of the gap analysis undertaken by the K&M

admitting units. (appendix 1)

This will include and reflect workforce requirements and access /travel times that enable achievement of the standards.

5.7 Workforce guidance:

The National Clinical Guidelines for stroke 2012, highlight the importance of ensuring stroke services not only have appropriate organisation structures, but also that physical structures such as staff. Evidence on the appropriate number of the different resources is limited,

Progress over the management of stroke over the last 10-15 years has increased demand for the provision of Consultant based specialist services for people with stroke.

The current SEC Stroke and TIA Service and Quality standards reflect the BASP guidance for staffing levels.

They recommend 24 hour , 7 day specialist cover by Stroke specialists including nursing, 7 day therapy ,7 day consultant ward rounds and 24 hour 7 day thrombolysis rotas

The BASP recommended staffing numbers for a HASU are;

Professional group.	Recommended levels	
Specialist Stroke consultants	1.3 per 100,000 pop	22.1. total for K&M
Stroke trained nurses	2.9 wte per bed	Per unit
Therapists;		Per unit.
Physio	1 wte/per 5 beds.	
OT	.68 wte/ per 5 beds.	
SALT	.68 wte/ per 10 beds	
Dietician.	.5 wte/per 20 beds	

Clinical psychologist	1.0 per 40 beds.	
------------------------------	------------------	--

The National Institute for Health and Care Excellence (NICE) has also published guidance on nursing skill mix required to ensure that acute care is delivered 7 days a week. Evidence has suggested that there is a significant risk of increased mortality if stroke patients are admitted at a weekend .

It is essential that the review understands the workforce required to run a HASU and how this will be delivered. There may not be adequate staff to run two separate HASU and ASU units and consideration needs to be given to how this would be addressed.

5.8 Critical Co-Dependencies

The Sussex CCGs requested the South East Clinical Senate to completed an independent clinical review of the evidence base for the critical co-dependencies of acute patient services, and where in the absence of evidence, to provide a clinical consensus view of service inter-dependencies. The aim was to provide a framework for the commissioners' future discussions with stakeholders on how their hospital infrastructure is configured. The CCGs specified that this work should be generic and not county or region-specific.

A grid of the co-dependencies was produced and for Stroke services it makes the following recommendations for co-location.

HASU/ASU

- A&E/Emergency Medicine
- Acute Cardiology
- Acute and general Medicine
- X-Ray and Diagnostic Ultrasound
- Elderly Medicine
- CT Scan
- Respiratory Medicine
- Occupational Therapy and Physiotherapy
- Adult Critical Care
- Acute Mental Health Services
- General Anaesthetics

HASU or ASU specific:

- Urgent GI Endoscopy(upper and Lower) – HASU only
- MRI scan – HASU only
- Acute Inpatient Rehabilitation – ASU only

Other services are coded as being:

- Red - services coming to the patient i.e. via inreach (physically or via telemedicine) but not in same hospital
- Amber – Ideally on same site but alternatively via robust emergency and elective referrals and transfer protocols
- Green – does not need to be on same site

5.9 Summary of the national guidance and policy:

In summary of the national and regional guidance and requirements the key features of a quality Hyper acute stroke unit would be;

- Unit volumes of > 600 and < 1500 confirmed stroke patients per year.
- Access times that meet the call to door and door to needle times ie 30 to 45 minutes travel time.
- Adequate specialist staffing to meet 7 day specialist Stroke services cover, including consultants, nursing and therapists.
- An acute pathway that meets the following standards;
 - Assessment by ambulance staff using a validated tool, transfer to specialist admitting site..... within 1 hour.
 - Prompt admission to a specialist stroke unit.....within 4 hours.
 - Access to rapid expert Consultant Clinical Assessment ...within 1 hour
 - 24 hr Rapid access to brain imagery.....within 1 hour
 - Thrombolysis offered to appropriate patients (20%)... within 1 hr (door to needle)
 - Early and intensive physiological and neurological monitoring with immediate recognition and treatment of abnormalities using evidence-based treatment protocols.
 - Specialist swallowing screening..... within 4 hours of admission.
 - Assessment/ management by stroke nursing staff and at least one member of the specialist rehabilitation team... within 24 hours of admission.
 - Assessment by all relevant members of the MDT team.. within 72 hours.
 - Documented multidisciplinary goals should be agreed... within 5 days i.e. nutrition, hydration,
 - 90 % of patient stay within a specialist stroke unit.

6.0 Current Kent and Medway Provision/Pathways

This review considered the stroke pathway across Kent and Medway, there is no significant out of K&M activity for Stroke patients into neighbouring admitting units or rehabilitation providers.

The admitting units do however also serve out of Kent/Medway population supporting patients from East Sussex and South London. This accounts for approx. 65 patients per year from East Sussex and 70 patients per year from South London.

6.1 Hyper acute/acute pathway.

Across Kent and Medway there are currently seven admitting units for acute stroke care, and they provide both hyper acute (up to 72hours) and acute care. However none of the units deliver within the HASU model.

Suspected Stroke patients are designated and responded to as Red1 and Red2 calls by SECAMB (*here is some CAT3 activity Which has been included but will impact on the door to needle time*)

The patients are then transferred to the nearest admitting unit and assessed within the emergency department whenever possible this is by stroke consultants or specialist nurses.

It is recognized that a small number of patients will choose not to call an ambulance and will self present at hospital and this also needs to be understood from a local perspective in any review of stroke service configuration.

24 hour Thrombolysis rotas are in place across Kent and Medway and patients are accessed within the ED. This is supported by telemedicine out of hours.

Where appropriate rapid imagery is accessed from the ED departments.

Confirmed Stroke patients are admitted wherever possible directly onto the acute Stroke units, stroke mimics are also admitted onto the units.

Generally the stroke unit beds are not protected and therefore when there are acute pressures in the system medical patients may be admitted into the stroke beds. This can lead to outliers where stroke patients are not admitted onto a stroke unit.

All the existing admitting units will strive to keep the Stroke patients on the unit for the duration of their acute phase.

Stroke mimics are admitted onto the Stroke units as their care echoes that of a stroke patient. It is difficult to accurately identify the number of Stroke mimics although an initial mini audit suggests this to be around 30 to 35 % of the total activity.

Rehabilitation care is provided in a combination of on site and local rehabilitation beds.

The admitting/acute care units are under the management of four acute Trusts with additional provision from two community providers for rehabilitation care.

Early Supported discharge (ESD) is offered across the units although this provision is variable.

** Further assessment is needed to confirm the full range of rehabilitation provision and nature/extent of ESD.

Table 1; Current hyper acute/acute Stroke units in Kent and Medway.

<i>Provider</i>	<i>Location</i>	<i>Service</i>
EKHUFT	WHH, Ashford KCH, Canterbury. QEQM, Margate.	Full acute service on all sites
MTW	Tunbridge Wells Hospital.(TWH)	Full acute services on all sites.

	Maidstone Hospital,(MH) .	Rehabilitation at Tonbridge Cottage Hospital.
Darent Valley Acute Trust	Darent Valley Hospital, (DVH) Dartford	Full acute services on site.
Medway Maritime Foundation Trust	Medway Hospital, (MFT) Gillingham.	Full acute service on site.

Stroke Rehabilitation beds are provided in a number of sites across Kent and Medway predominantly by Kent Community Health Foundation Trust , Medway Community Healthcare , MTW and Kent and Medway Partnership Trust.

The referral and care pathways for these beds is variable and not all are dedicated to Stroke patients. The multi disciplinary team approach also differs across the units.

Early Supported Discharge services are also variable across Kent and Medway.

6.2 Stroke incidence.

Current K&M activity;

	DVH	MFT	MH	TWH	WHH	KCH	QEQM	Total K&M
12/13	343 (inc 70 Bexley pts)	368	294	375 (inc 65 E.S pts)	440	292	319	2,431
13/14	324	417	321	325	473	366	346	2,572

**This is coded using;

I61 Intracerebral Haemorrhage, I63 Cerebral Infarction and I64 Stroke not specified as Haemorrhage or Infarction. Also included are I60 Subarachnoid Haemorrhage and I62 Other Nontraumatic Intracranial Haemorrhage as these patients receive the same care as confirmed Stroke patients.

Generally between 20 to 40 % of suspected stroke patients will not be confirmed as strokes however will require the same treatment pathway and therefore are included in the numbers for capacity planning.

This includes the activity from East Sussex into TWH and Bexley into DVH.

SECAMB will convey all suspected patients who are FAST positive to the nearest Emergency department.

Between April 2014 to September 2014 SECAMB conveyed 3359 patients into the seven admitting units with a designation of a Stroke or neurological condition.

On average around 50% of these patients will not be diagnosed with a Stroke but this activity needs to be verified and modelled into the planning for both stroke units, ED capacity and medical beds. There may also be an impact on repatriation in any further configuration discussions that must be considered in any future modeling.

The activity data shows a marginal increase across Kent and Medway in 13/14 of 141 patients with KCH and MFT seeing the largest increase in confirmed strokes (74 and 49 respectively).

Early analysis of the first three quarters activity for 14/15 shows a similar trend.

This activity data reflects actual numbers per admitting unit, consideration of rate per 100,000 pop shows greater activity in Ashford, Thanet and Swale with a sharp increase in Canterbury and Coastal CCG. This will need to be further analysed when considering possible options. This does not include TIAs although the pattern is similar re trend increases with East Kent showing a sharp increase.

6.3 CCG Stroke profiles (Public Health England, 2014);

CCG Stroke profiles; August 2014

	WK	DGS	Medway	Swale	Ashford	C.Coastal	SKC	Thanet
Stroke prevalence; 2.0 national	1.9	1.9	1.8	2.2	1.9	2.1	2.5	2.7
A.F Prevalence; 1.5 national	1.8	1.5	1.3	1.4	2.1	2.1	2.1	1.9
pop	463,500	249,000	268,000	108,000	120,000	200,500	203,000	135,500
> 65	83,000	41,500	39,000	18,800	21,500	40,000	41,500	29,500
deprivation	2.5%	8.2%	14.8%	22.6%	6.1%	7.8%	20.0%	31.5%
Admitting units	TWH, MH, (MFT)	DVH	MFT	MFT	WHH	KCH, QEQM	WHH, KCH	QEQM

6.4 Public Health Analysis;

The current K&M population is 1,747,000. (2014 CCG profiles)

The Kent and Medway population is currently growing in line with national population growth.

- Population projections for the period 2013 to 2020 show the greatest increase in the older age bands;
 - 17% within the 65-74 age band
 - 22% within the 75-84 age band
 - 29% within the 85 plus age band.
- There are a couple of key housing developments anticipated. This includes the garden city development at Ebsfleet in the North of the county with a maximum of 10,000 houses planned.
- There is also a planned theme park development due to open in 2020 on the Swanscombe peninsula, expected to bring 27,000 new jobs and families to the area.
- The population projections relating to these developments are currently being worked through however this will be more relevant in the younger age groups ie below 65 years of age.

Initial findings (to be finalised) from the public health analysis identifies that:

Stroke prevalence across the Kent and Medway CCGs are around the national average of 1.9% with higher prevalence in Swale (2.2), SKC(2.5) Canterbury (2.1) and Thanet (2.7)

This picture is reflected in AF prevalence, an understanding of effective AF and hyper tension management is underway to inform potential primary care prevention opportunities.

The Incidence of stroke increases with age, East Kent has the highest population over 65 years of age and therefore sees the highest level of stroke incidence. Across Kent and Medway the West Kent region is projected to have the highest percentage increase in population aged 65 years and over between 2012 and 2020. However East Kent will see the greatest number of individuals within this age group.

East Kent also has the highest prevalence of risk factors, hypertension, Atrial Fibrillation and Diabetes

The research demonstrates a higher incidence of stroke within the black ethnic group. This needs to be considered within the context of the K&M population.

***The complete public health data analysis will be utilised to both identify and inform the Options appraisal.*

7.0 K&M performance against Best Practice/Standards.

7.1 Performance against the SEC 22 Clinical and Quality standards.

All Kent and Medway providers have (or are in the process of) completing a gap analysis against the 22 SEC Stroke and TIA Service and Quality Standards.

There are common themes across the providers, these relate to workforce, specialist assessments, thrombolysis and scan within 60 minutes, access to the stroke unit within 4 hours and timely swallow screening and assessments

Key issues table; summary from combined gap analysis against the 22 SEC standards per admitting unit.

	7 day workforce	Thrombolysis within 60 mins (95%)	Scan within 60 mins(50%)	Stroke unit access within 4hrs
DVH	No	33%	48%	50%
MFT	No	11.1%	33.7%	45%
MH	No	66.7%	43%	59.5%
TWH	Only cons	20%	50%	31.4%
WWH	No	16.7%	55.2%	59%
KCH	No	50%	71%	25%
QEQM	No	33.3%	65.4%	59%

7.2 Performance against SSNAP.

All Kent and Medway providers actively participate in the SSNAP and where there have been historic gaps, investment in data /administrative support has improved compliance and subsequently results.

Performance is variable across Kent and Medway with SSNAP levels ranging from E to B.

The table below shows the SSNAP performance for K&M admitting units as of Dec 2014 (Q3 2014/15) and the previous two Quarters

	DVH Q3/Q2/Q1	MFT	MH	TWH	WWH	KCH	QEQM
SSNAP level	D/D /D	E/ E /D	C/D /D	D/D/ D	B/ A/ C	D/D/E	D/C/C
Combined score	C/D/D	D/E/D	C/B/D	D/D/D	B/A/C	D/D/D	B/C/C

7.3 Performance against the key acute domains (SSNAP)

The following table identifies performance by the K&M admitting units against the key Domains relating to HASU/ASU performance (as noted in the Configuration guidance)

The review needs to understand the high levels of compliance with specialist assessments where there is no 7 day working,

Current admitting Units performance against key domains.
This table reflects the 2014/15 Q 2 and 3 performance.

	Domain 1 Scanning. <1 hour 44.1% < 12 hrs 87.7%	Domain 2 Stroke unit 4 hrs;59.8% 90% stay; 84.3%	Domain 3 Thrombolysis 1 hr: 50% Eligible pts; 79.4% All pts; 11.7%	Domain 4 Specialist Assessment. Cons; 76.4%. Nurse 87.8% Swallow screen 79.2% Swallow assessment; 83.6%	Domain 8. MDT
DVH	Just above average. Improvement Q3	? below, 4 hr access. Improvement Q3	Just below, 1 hr thrombolysis. Improvement Q3	Average, therapy assessment,4hr swallow. No Change	Average. Slight deterioration Q3
DVH Performance in key indicators Q2/Q3	1 hour target; 47.5% /58.1% 12 hour; 96.7%/ 98.6%	4 hour access; 50% /66.7% 90% stay; 88.9% /86.2%	All pts; 9.8% / 13.5% Eligible pts; 100%/ 90% 1 hour target 33.3%/	24hr Stroke con/assessment; 70.5% /70.3% 24hr Nurse ass; ??/86.5% 4 hr Swallow screen ; 66.7% /70.4% 72 hr Swallow ass;	

				78.6% /81.3%	
MFT	Below ave;1 hr screening. Improvement Q3	Below average 4 hr access. Marked deterioration Q3	Below ave,no within 1 hour poor. Improvement Q3	Below average, esp consultant assessment, swallow screening. No Change, Q3	Below ave. No Change Q3
MFT Performance in key indicators Q2/Q3	1 hour target; 32.9% /42.9% 12 hour; 92.7% /97.6%	4 hour access; 44.3% /25.6% 90% stay ; 83.3% /74.3%	All pts; 11% /14.3% Eligible pts; 90% /100% 1 hour target; 11.1% /16.7%	24hr stroke cons assessment; 61% /54.8% 24hr nurse ass; 80.5% /83.3% 4 hr Swallow screening; 62.7% /61.4% 72hr Swallow ass; 65.5% /67.4%	
MH	Variable. Below average, deterioration Q3	Average. Deterioration Q3	Average with some improvements. Deterioration Q3	Just below, consultant assessments and 4hr swallow indicators. No Change Q3	Below average. Slight improvement Q3
MH Performance in key indicators Q2/Q3	1 hour target; 43% /30.7% 12 hour access; 87.3% /89.7%	4 hour access; 59.5% /56.8% 90% stay; 90.6% /85.1%	All pts; 3.8%/5.7% Eligible pts; 100%/80% 1 hour target; 66.7%/20%	24hr stroke con assessment; 67.1% /62.5% 24hr nurse ass; ?? /94.3% 4 hr swallow screen; 70.6 /79.7% 72 hr swallow assessment; 78.8??/90.6% check these	

TWH	just above average. Deterioration Q3	Below average Deterioration Q3	Below average. Improvement Q3	Average. Improvement in Q3	Below average. Improvement in Q3
TWH Performance in key indicators Q2/Q3	1 hour target; 50% /43.2 12 hour access; 94.3/87.7	4 hour access; 31.4% /31.3% 90% stay; 82.8% /71.2%	All pts; 5.7% /9.9% Eligible pts; 100%/ 88.9% 1 hour target; 20% /37.5%	24hr stroke con assessment; 84.1% /81.5% 24hr nurse ass; 85.2% /91.4% 4 hr swallow screen; 82.4%/ 76.6% 72 hr swallow assessment; 72% /80.8%	
WHH	Above average. Slight deterioration in Q3	Just above average Deterioration in Q3	Above average. Deterioration In Q3	Above average. No change in Q3	Below average. Slight deterioration in Q3
WHH Performance in key indicators Q2/Q3	1 hour target; 71.6% /55.2% 12 hour access; /95.2%	4 hour access; 76.4% /59% 90% stay; 90.8% /86.4%	All pts; 17.4% /11.4% Eligible pts; 81.3% / 69.2% 1 hour target; 50.1% /16.7%	24hr stroke con assessment; 89% /79% 24hr nurse ass; //93.3% 4 hr swallow screen; 89.5% /83.3% 72 hr swallow assessment; 89.2% / 96.6%	
KCH	Just above average. Slight deterioration in Q3	Just above average, below on 4 hr access. Deterioration in Q3	Just above average; just below re eligibility indicators. Deterioration in Q3	Just above, struggles with nurse and therapy indicators. Deterioration in Q3	Below Average. Deterioration in Q3
KCH Performance in key indicators Q2/Q3	1 hour target; 76.3% /71% 12 hour access; 98.7% /93.1%	4 hour access; 56.6% /25% 90% stay; 84.3%/94.6%	All pts; 15.85 /11.6% Eligible pts; 76.3% /87.5%	24hr stroke con assessment; ??100% /85.5% 24hr nurse ass; /93.3%	

			1 hour target; 58.3% /50%	4 hr swallow screen; 80.4% /65.4% 72 hr swallow assessment 100% / 96.6%	
QEQM	Just above average. Slight deterioration in Q3	Just above average. Deterioration in Q3	Average, below on eligibility. Deterioration in Q3	Slightly above, average. Nurse and swallow 4hr indicator below. Improvement in Q3	Below average. Deterioration in Q3
QEQM Performance in key indicators Q2/Q3	1 hour target; 64.4% /65.4% 12 hour access; 92.2%/ 89.7%	4 hour access; 64.4% /59% 90% stay; 83.7% /83.8%	All pts; 13.3% /19.2% Eligible pts; 66.7% /60% 1 hour target; 66.7% /33.3%	24hr stroke con assessment; 80% / 88.5% 24hr nurse ass; 81.1% / 82.1% 4 hr swallow screen; 61.9% /86.7% 72 hr swallow assessment; 94% /94.6%	

Quarter 3 (2014/15) shows variable performance across Kent and Medway with DVH seeing general improvement, WHH has a general deterioration on its previous good performance, other providers showing a mixed picture.

In relation to Domains;/ Domain 2, Stroke Unit shows a consistent deterioration across the admitting units and this relates to Access to the stroke unit within 4 hours.

The performance shows average performance in relation to specialist assessments which needs to be validated within the context of no 7 day cover.

7.4 Performance against Outcome measures.

Quarter 3 (2014/15) shows a general increase across Kent and Medway in mortality at 7 day and 30 day inpatient stay and 90 day and one year post discharge. A number of units are experiencing an increase in readmission rates (30 day target) in particular TWH, DVH, MFT and MH. There is a reduction in the East Kent hospitals however against a backdrop of an increasing trend at WHH.

All providers are either close to or above the national averages.

There is a variable picture relating to length of stay, all units are around the national average, except WHH which is below.

The table below illustrates Q3 (2014/15) performance against the key outcome measures and the national average.

	DVH	MFT	MH	TWH	WHH	KCH	QEQM	national
In pt Mortality; 30 days	14%	17%	15%	18%	15%	15%	19%	14%
In pt Mortality 7 days	7%	12%	9%	15%	9%	9%	9%	9%
Mortality; 90 days	19%	21%	18%	22%	18%	18%	22%	18%
Mortality; One year.	22%	22%	21%	26%	20%	18%	23%	21%
Readmissions (30 days)	15%	12%	16%	17%	14%	14%	12%	13%
LoS (days)	12.3	10.9	14.2	16	9.7	12.3	12.7	13

7.5 Performance against workforce requirements/recommendations.

The following table reflects the workforce currently in place per Trust.

	K&M	DVH	MFT	EK	MTW
Current consultant numbers	12.1	1.5	1.5	6.3	2.8
Rec per CCG pop		3.25	4.84	8.45	5.85
pop		(249)	(376)	(658)	(463)
gap	10.29	1.75	3.34	2.15	3.05
Nursing 24/7	No	No	No	?no	No
Therapists 7 days	No	No	No	No	No
Consultants 7 days	No	No	No	No	Only tunbridge wells site
Meeting	No	No	No	No	No

workforce requirements within SEC quality standards						
--	--	--	--	--	--	--

The options appraisal will require clear agreement re the interpretation and delivery of the BASP recommendations.

7.6 Summary table of key indicators against current sites.

	DVH	MFT	MH	TWH	WHH	KCH	QEQM
SSNAP level Dec 14	D	E	C	D	B	D	D
Combined SSNAP KI Dec 14	C	D	C	D	B	D	B
7 day consultant cover	no	no	no	yes	no	no	no
30 min travel time for CCG pop	yes	yes	yes	yes	yes	yes	yes
Volumes (600 – 1500)	no	no	no	no	no	no	no
Volumes plus mimics	No ?	no	no	no	yes	no	No.
7 day spec/senior Nurse cover	no	no	no	no	no	no	no
7 day therapy	no	no	no	no	no	no	no

8.0 Summary of key findings across Kent and Medway admitting units:

8.1 Best practice/Stroke Standards:

Assessment against best practice illustrates that across Kent and Medway achievement of the standards and best practice is variable. All providers recognize that they are currently struggling to meet best practice, they particularly raise

concerns re the ability to further improve, to sustain improvements and quality measures that they have achieved and to deliver 7 day working across all the specialists.

The CRG have recognized that 7 day cover for consultants, adequate senior trained nurses and therapists are a key priority. A number of the units also highlight the lack of ring fenced beds and bed capacity results in poor achievement of the access targets.

Performance against SSNAP is variable across Kent and Medway, however most units struggle to deliver the key clinical indicators required for a Hyper acute unit. In some cases this may be in line with the national average such as 4 hour access and one hour thrombolysis however there is room for improvement for Kent and Medway patients. There has been minimal improvement across the county in the past twelve months despite improvement plans being in place in most units.

Currently a number of Kent and Medway units are within the lowest quartile of performance and compare poorly with the rest of South East Coast units.

Assessment against the key hyper acute/acute elements of both the SEC Stroke and TIA Service and Quality standards and the SSNAP framework identifies issues meeting;

- The four hour access target.
- One hour thrombolysis target.
- One hour scanning target.
- 24 hour specialist assessments.
- 7 day cover; consultants, nurses and therapists

Only a small number of outcomes are identified across stroke units however the recent picture of deterioration in mortality and readmission rates needs to be monitored to ensure these are not indicative of trends.

8.2 Activity:

Activity data shows that none of the current 7 admitting units meet the recommended minimum volume of 600 confirmed stroke patients. The closest unit sees around 475 stroke patients per annum with other units being around 300 to 400.

Reviewing 2012/13 and 2013/14 activity shows a small increase, * currently determining the likely impact on activity.

It is recognized that Stroke units need to manage stroke mimics in the same way as confirmed stroke patients and this activity needs to be modelled into any discussions re bed modeling. Currently this is estimated at around 30 - 35% of activity but will need detailed analysis as part of the capacity modeling phase.

This activity is currently managed on the stroke units across Kent and Medway. It is also important to note that SECAMB will convey a number of patients to admitting sites who present as FAST positive but who do not subsequently require

care on a stroke unit. This currently equates to similar numbers as those who do require stroke unit care. Any subsequent modelling will need to understand the impact of any reconfiguration of HASU on ED's and/or repatriation of non stroke patients brought to the HASU by ambulance.

Whilst some HASUs achieve good results and outcomes with fewer than the nationally recommended minimum stroke activity of 600 cases per year, the *aim* of review is to use this as a benchmark. Any designated HASU in Kent and Medway should achieve this minimum activity, based on the wide range of clinical benefits seen in larger units unless there is clear evidence that sustainable care and best patient outcomes can be achieved by the HASU

8.3 Workforce:

The review has identified that both current and future workforce are key issues across all the Kent and Medway providers. The numbers are almost 50% lower than the recommendations across the county and are worse in MFT and MTW. With the exception of a weekend rota at Tunbridge Wells hospital no unit provides 7 day consultant cover which is a key recommendation.

It is difficult to ascertain if this is having an adverse effect currently as there is no evidence of this however the national best practice is clear that this is a key requirement.

There is no specific recommendation relating to specialist nurses however senior stroke trained nurses' being available 24 hours a day 7 days a week is identified as significant for good patient outcomes. No current Kent and Medway admitting unit has this provision available. All the units are heavily reliant on one or two individuals to both provide this role and to train the nursing workforce.

Therapists are central to the stroke pathway and no K&M unit is currently providing 7 day cover, it is particularly difficult in relation to speech and language therapists who play a key role in the hyper acute /acute phase.

The gap analysis also shows that no current unit is meeting the BASP recommendation for a HASU .

It is generally difficult to recruit to stroke specialist roles, there are no workforce plans evident across the Kent and Medway providers that will make a significant difference to this picture.

8.4 Travel/Access:

Currently all the admitting units are accessible within the recommended 30 minutes travel time by ambulance. This also results in a number of residents from East Sussex and South London (Bexley) being conveyed to Kent units.

SECAMB currently meets the national indicator of one hour call to door time. Potential options will consider the travel times and impact on call to door times, including the impact of peak travel times.

The Options appraisal process will model the access times against the possible solutions and identify key negative impacts.

8.5 Summary.

This Case for Change illustrates that there are both current and future concerns re the delivery of hyper acute/acute Stroke services across Kent and Medway.

Do nothing is not an option if improvements are to be made and services are to be sustainable.

Improved performance against SSNAP and delivery of best practice recommendations is required by all K&M CCGs.

The ability to improve against the indicators is likely to be limited by the workforce issues.

An added value of larger units include the ability to drive quality improvements and the benefits of economies of scale to a larger number of people.

The low volume levels across the admitting units do not meet the national recommendation for adequate volumes to deliver good outcomes. It is likely that this may also be impacting on the financial positions of the providers as they struggle to staff low volume centres.

The current staffing levels also makes 7 day working impossible to achieve across the existing sites.

Development of possible options must consider the intended and unintended consequences/impacts across both the patient pathway and the Kent and Medway Strategic planning of clinical commissioners and individual Trusts.

Whilst the review is focusing on the hyper acute/acute stroke pathway the options will need to consider the impact of current and planned Primary Care preventative strategies.

The review Programme Board notes that the key measures for success will be a Kent and Medway hyper acute/acute model that delivers ;

Evidence of consistently good outcomes for patients reducing both mortality and morbidity rates.

Improved performance in relation to SSNAP across Kent and Medway with all admitting sites aiming for level A.

Compliance against the SEC Clinical and Quality standards.

Achievement of the key clinical targets;

Call to door (one hour) and door to needle (one hour) times.

Rapid imagery (one hour)

Four hour access to the stroke unit.

90% stay on a stroke unit.

Timely specialist assessments.

Seven day cover by specialist stroke consultants/nurses and therapists.

Consistency of performance across Kent and Medway to ensure all patients receive high quality hyper acute stroke care regardless of where they live in the county.

Sustainable hyper acute/acute stroke services, that can meet demand and has a workforce that is fit for the future. (10 to 15 years).

Evidence of good recruitment and retention with motivated high caliber professional choosing to work in K&M.

Development of innovative clinical practice.

Conclusion;

The K&M CCGs aspire to deliver excellent stroke care for the residents of Kent and Medway.

The Case for Change illustrates that the current performance across K&M Medway is not at an acceptable level. Whilst this is recognised by the provider Trusts, key issues such as the workforce and ability to deliver across 7 days are not easily resolved within single organisations.

Best practice also recommends that higher volumes of activity benefit patients with regards to improved outcomes.

The current configuration of admitting units needs to be reviewed and options for delivering improved patient outcomes developed. There are concerns noted by all in the review in relation to the sustainability of the existing provision.

The aspiration of the review is to deliver high quality best practice for Kent and Medway residents and to have ambitions beyond average.

9.0 Recommendations:

- The Case for Change to be agreed by the Review Programme Board and ratified by the Kent and Medway CCGs (once public engagement feedback considered/ incorporated)
- To proceed to identify options that can deliver the requirements noted and meet best practice and deliver a sustainable hyper acute/acute model.

The benefits we expect for patients include;

- **Improved pathways of care and outcomes, particularly ensuring that patients are given the best possible chance of survival and minimisation of disability.**

- **Access to 24 hour, 7 day specialist stroke care regardless of where in Kent and Medway the patient resides.**
- **Sustainable Stroke services for all Kent and Medway residents**
- **Consistent high performance of hyper acute/acute stroke care against the national best practice.**
- **A specialist and resilient Stroke 7 day workforce including specialist consultants, stroke trained nurses and therapists.**
- **Consistency of hyper acute /acute Stroke care for Kent and Medway residents regardless of where they live.**

10.0 Next Steps:

The Case for Change will be reviewed to reflect the public/patient view post public listening events.

The Review Programme Board will;
Develop and agree the decision making process and criteria; to reflect national best practice, sustainability, financial modeling, health impact assessment and the clinical and public voice

Build on the current travel times modelling work to assess impact of options of achieving call to door to times, including the possible changes to the current time lines.

Profile activity models and impact on emergency departments and medical wards, to include non stroke patients and stroke mimics.

Assess the impact of possible configurations on treatment rates and disabilities.

Review options against the SEC Clinical Senate Critical Co-dependencies framework and K&M Trust strategic plans.

Undertake a cost benefit analysis of possible options including financial modelling exercises.

The options development to fully consider and describe how the HASU and ASU relationship will work, if separate units, including the impacts of this model on travel times, workforce and repatriation.