Paper presented to:	Kent and Medway Joint Health Overview and Scrutiny Committee
Paper subject:	Kent and Medway Hyper Acute/Acute Stroke Services Review.
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Purpose of Paper:	To update the JHOSC on the progress of the Kent and Medway Stroke Hyper Acute/Acute Review; to consult on the emerging options and next steps.

Kent and Medway Joint Health Overview and Scrutiny Committee briefing

August 2016

Kent and Medway Stroke Services Review.

1.0 Background and Case for Change

The Kent and Medway Stroke Review commenced in December 2014 following concerns about performance and sustainability across the seven hospitals currently treating stroke patients.

There was also concern that the stroke service is unable to respond to the need for seven-day services within the current configuration and model of care.
The review has been presented to the joint Kent and Medway Overview and Scrutiny committee on two previous occasions.

A case for change was published and stakeholders invited to engage through a series of sessions that allowed feedback to be obtained. Key issues identified included:

- The need to deliver a sustainable seven-day acute stroke care across Kent and Medway has been made that meet national standards;
- The ability to improve and deliver a seven-day consultant led service is significantly limited by recruitment challenges;
- Ongoing issues associated with the recruitment of nurses that impact on the stroke services;

- Significant concerns around the supply of speech and language therapists
- A mixed picture for therapy services with some areas and hospitals being more successful in certain disciplines. However recruitment for Speech and Language therapists, which are key requirement within quality stroke care is a significant concern.

2.0 Executive summary of progress and current position.

The key outcome of the review is to ensure that there is a specialist consultant led sustainable stroke service for all Kent and Medway residents, which delivers high quality care and improved patient outcomes. This may result in some patients and relatives travelling further in order to receive care that will deliver the required clinical outcomes. These outcomes reduce the number of patients who die and minimise the long-term impacts of a stroke and ability to achieve personal independence. The clinical standards address the needs of all stroke patients including the 20% who may be eligible for thrombolysis through the delivery of a specialist focused 7 day service.

The review has worked through a long to short list of options and in phase two has focused on the 5,4 and 3 site options. This has been supported and underpinned by a range of engagement events.

2.1 A detailed workforce review has confirmed that a 3-site model is the optimum configuration to deliver the national staffing standards required. Previously noted clinical concerns have been discussed and there is now consensus that the current 7-site model is not sustainable.

On the basis of the detailed assessments, the 5-site option was formally removed by the RPB after consideration at its Board meeting in May 2016 and the clinical feedback on the current model was duly noted and accepted.

2.2 High-level financial and activity modeling has been undertaken by the finance and activity sub group of the RPB. This has been built to date using the HES data and the financial costs of the acute EK Stroke service and the available stroke tariff plus ranges of achieving the Best Practice tariff (BPT). Detailed costing analysis is being undertaken with individual providers to ascertain the financial implications for both Trusts and CCGs of the potential options.

2.3 The key messages from this modeling include;

- Assessment to date shows that the 3-site model delivers the optimum option for financial viability and sustainability, this is still being tested clinically.
- Achievement of the BPT creates a cost pressure for the K&M CCGS. Currently the key clinical indicators that deliver the enhanced tariff are not being achieved, this will change with a new quality compliant stroke service.
- The staffing rotas predominantly drive the costs and in particular the Consultant requirements which costs around £1million per site.

- A high level exercise demonstrated that a 3 site model achieving 100% BPT should deliver break even for the provider; this needs confirmation against provider costs.
- Length of stay (LoS) is a key driver of both quality and improved patient outcomes. A key assumption of the activity modeling is that with 7-day services, adequate discharge and rehabilitation flows, the LoS can reduce, improving the patient experience/outcome and maximising the scarce specialist resources.
- The modelling work has shown that there are multiple 3 site models that would ensure that patients are within 51 minutes of their nearest stroke site and would achieve the standard of 95% of stroke patients within 45 mins travel time.
- The bed modelling to date has only used confirmed stroke/ TIA patients and a percentage needs to be added for appropriate stroke mimic patients.

2.4 The 4-site option is considered by the Programme Board to be a risk because it is unlikely to;

- Deliver and sustain a 7-day service and meet the NHS requirements of consultant led services;
- Deliver the key clinical standards/outcomes;
- Support the recruitment of adequate numbers of consultants;
- Provide assurance around the provider costs.

The Board noted and highlighted concerns relating to capacity and resilience of 3 Kent and Medway HASU/ASU's and recognised that this needs to be tested.

2.5 The Stroke Programme Board (RPB) agreed at its May board that the 3 site option should be worked through in more detail. This includes understanding the key site configurations, the provider ability to deliver the activity levels and bed numbers, the likely time line and phasing requirements. The modeling work (including activity and travel times) indicates that a 3-site model is likely to result in a single East Kent site and 2 sites in North and West Kent. This will be further tested through the bed modeling work currently underway.

Detailed understanding and a gap analysis of the rehabilitation pathway is being completed to ensure the sustainability of this model.

It was also agreed that safe and effective implementation would require a phased approach developed in partnership with providers.

East Kent Hospitals Trust are considering the possible impact of implementing a 3-site model as part of its wider clinical strategy.

2.6 K&M CEOs and AOs have advised that a 3 site model is the most likely model to meet the quality and sustainability requirements and noted that the critical clinical co-dependencies will be key. This will require alignment to the

wider Five Year Forward View (FYFV), previously known as STP developments.

2.7 The Programme Board will consider at its August Board meeting the work on activity, finance and clinical delivery and assess the ability of a 3-site model to address the capacity and resilience concerns.

2.8 Further engagement sessions are being planned to engage the public, patients and key stakeholders on the assessment against the options to date and the emerging preferred option(s) and to inform the final recommendations and delivery plans. This will build on engagement activity undertaken earlier in the review process.

2.9 The site configurations are also currently being modeled however these require alignment with the wider STP(FYFV) in order to ensure that critical clinical co-dependencies are embedded into the options.

Work currently underway includes;

- Detailed appraisal of the 3-site model including the phasing required.
- Confirming the actual site bed numbers and activity per option and configuration.
- Confirmation of the detailed travel times per option and configuration
- Provider Trusts to consider/work up impact on their organisation and wider clinical strategies
- Working up and assessing the range of clinical delivery options/considerations and recommend likely risks and timelines, to include wider clinical engagement across K&M
- Confirmation of the rehabilitation and discharge pathways across K&M and ability to meet the requirements of the new model.
- Stroke review emerging recommendations to be considered by K&M CCGs through August/Sept, this will be within the context of the developing STP (FYFV)
- Further engagement events being undertaken over the next few months to test out the 3-site option with the public/key stakeholders. The findings of this will further inform the Quality/Equality Impact assessment (QEIA) work to date
- Aligning the emerging model with the STP/FYFV both in terms of delivery, decision-making and consultation.

3.0 Modelling work; Where are we/key findings to date.

An options appraisal process has considered centralising hyper acute and acute phase of stroke care into fewer acute hospital sites. There is a consensus agreement from clinicians, the public, patients and key stakeholders on the requirement to reduce the number of stroke units.

Key modeling areas have been considered to inform the appraisal process of the options and the final recommendations that include:

3.1 Out of Hospital Pathways:
There is a clear message from clinicians,the public and key stakeholders that without effective out of hospital care the patient flows will not work effectively.

The future hyper acute/acute model will have to consider the whole patient pathway if it is to be successful and sustainable. The review continues to build a picture of the current Early Supportive Discharge and rehabilitation services and pathways. This is informing a gap analysis and is being applied to the emerging model to ensure that delivery of the new model on fewer sites is deliverable and sustainable.
Recommendations on the out of hospital pathway will be incorporated into the recommendations for the Kent and Medway CCGs.

3.2 Stroke related activity;
The review has identified the total volume of stroke activity to determine the ability and impact of reducing hospital sites admitting stroke patients.
This has included confirming the number of;

- Confirmed stroke patients,
- Patients who have a TIA (trans-ischaemic attack),
- Patients with stroke symptoms who present at A&E and who do not have a final diagnosis of a stroke.

The modeling has undertaken a number of audits at each Trust and with SECamb, and has reviewed actual bed usage across the K&M acute hospitals. This has included consideration of all patients who are seen by the stroke team and all stroke patients in a hospital bed even if not on the stroke unit.

3.21 The modeling has confirmed that on average 35% of patients brought to hospital by ambulance with stroke symptoms will not have had a stroke. There are 25% of patients appropriately cared for on stroke units who do not have a stroke (stroke mimics). 10% of patients on the stroke unit are patients who have had a TIA.

The totality of these numbers is being included in appraisal against the site options to understand the impact on both patients and the hospital.
Initially this has been considered on an even share split. The work currently underway is confirming actual patient flows to named sites based on previous activity and patients and understanding the impact of this on the hospital.

The activity split will not be equal, dependent on the site configuration different hospitals will receive greater numbers of both total stroke activity and confirmed stroke numbers. SECAmb will also convey patients to the nearest stroke unit and this assumption is being used as the bed modeling develops.

3.23 The modeling on bed usage has shown that there are a number of patients with a long length of stay and there are outlier stroke patients on medical wards and vice versa. There are opportunities to improve the patient flows and to reduce many of the long length of stays. Adequate and specialist staff including stroke pathway coordinators and Early Supported Discharge

teams can facilitate these improvements. This improvement has been evident in other stroke reconfigurations across the country. Work is currently underway between the finance /activity group and the CRG to review the average length of stay and the long stay patients to inform the bed modeling. Modelling work in Surrey and Sussex has used a 10 – 12 day average length of stay.

3.24 The review has worked with the public health team to consider the future projection of stroke incidence. This has shown that the current number of 2,500 confirmed stroke patients per year is not anticipated to increase significantly. This has included consideration of known population growth and demographics and the current primary care management of prevention and potential stroke cause/ symptoms. This in line with the national picture/expectations and is reflected in the audits and activity modeling undertaken by the review team

3.3 Workforce

The review has undertaken a gap analysis with the local acute Trusts, this demonstrates considerable gaps at consultant and nurse level with a differing picture across therapy services.

3.31 The consultant recommendation is for 6 consultants per unit and the current position is around 30 % of that target. There are also a number of longstanding vacancies and a history of recruitment difficulties across Kent and Medway. This position has a direct impact on the rota requirements of the consultants and therefore the ability to recruit staff. The local clinicians have considered alternative models however this is not easily resolved due to the competency requirements and co-existing medical staff pressures.

3.32 All site options will be difficult to recruit consultants to and the fewer the units the less the gap, there are however concerns that some consultants may choose not to work in the new centralised service. This will be risk assessed and mitigation put in place particularly during the transition phase, this may include the use of neurologists and bespoke consultant job plans.

A centre of excellence with sustainable rotas is more likely to attract both junior and consultant level staff.
The workforce modeling shows that a 3-site option is the most likely to meet the consultant requirements.

3.33 The recommendation for nurse and therapy staffing relates to bed numbers. The qualified nurse gap varies across all sites on average being around 25% below the requirements. Recruitment is generally challenging although it can be easier to recruit specialist nurses or ‘grow’ staff through stroke competency frameworks.

Therapy recruitment is variable with some success evident although there are still gaps and in particular within Speech and Language therapy.

The bed number modeling, based on actual patient usage and an improved length of stay, illustrates that the bed numbers will reduce and therefore the ability to staff the units consistently across 7 days is much improved.

3.4 Access and Travel:

The review has reflected expert clinical advice and best practice to ensure that the future travel times will maximise improved health outcomes for patients. The preferred options will meet the recommended timelines for effective therapeutic interventions.

3.41 There is a considerable focus on ensuring that thrombolysis patients get to a hospital in a timely manner. Recent clinical recommendations both nationally and through the South East Clinical Senate have advised that access and treatment/travel times should be considered across both the out of hospital early phase and the initial in-hospital acute phase.

This working across the pathway will result on a shared standard from 'call to needle' of 120 minutes, (as opposed to the separate 60 minutes for out of and in hospital care)

This also ensures that there is a wider area of access for patients who live further away from the hospital with no negative health impact for them. Thrombolysis accounts for around 20% of all stroke patients and the needs of the remaining 80% of patients must be duly considered and addressed. There is evidence and best practice guidance that the availability of a specialist service 24/7 benefits all patients. Key outcome measures include access to the stroke unit within 4 hours, specialist assessments, and in particular swallow screening within four hours.

3.42 There are a number of options for centralising the hyper acute /acute stroke services onto fewer sites and these have been tested against both achieving a 45 travel time for 95% of patients and being able to deliver the recommended 120 minute call to needle standard.

3.43 Stakeholder engagement has identified some concerns in relation to travel times, the reality of travel times/journeys and in particular for patients residing on the outskirts of the county.

Further detailed work using a number of algorithms has been undertaken assessing the patient travel times from lower super output areas and has identified specific travel times per minute for each possible configuration. (appendix 1)
This data is being used to assess each possible option and the impact on the ability to meet the optimum travel times and the 120 minute call to needle standard.

3.5 Options appraisal for 5, 4 and 3 sites.

The 5,4 and 3 site options have all been tested against the key red flag criteria (appendix 2) and have been discussed and shared with the public, patients and key stakeholders.

3.51 The modeling has shown that workforce is a key limiting factor for all the options, the gap reduces as the site numbers are reduced. There are several configurations in each option that deliver the required access times.
The review is currently identifying the optimum point at which there is a balance between the ability to reduce the sites to meet the workforce required and the ability to have the capacity required to safely meet demand and to retain staff.

In order to deliver the required standards each option needs to be able to deliver a 24/7 consultant led service. The achievement of the standards also provides the financial envelope required to adequately staff the service.

Currently no Trust is able to achieve the standards to the level where they can attract the full tariff. The review is therefore working with the Trusts to ensure that the risks are recognised and managed effectively.

3.52 The review has concluded that a five-site model is highly unlikely to be able to be staffed to a level where a 24/7 consultant led service is deliverable. This option also creates significant financial pressures for the hospital Trusts. **The assessment is therefore that a 5 site model will not deliver the service model required to meet the standards and improve patient outcomes.**

3.53 A 4-site model will also be difficult to staff and deliver across 24/7 and the volumes levels are at the minimum level required. The programme Board has noted concerns that this option may be a risky option, struggling to staff the units and hence meet the standards whilst creating financial risk for some providers who have low volumes.

3.54 A 3-site model is considered the most effective option when taking into account the workforce gap and ability to staff units with specialists, especially the consultant workforce critical to the delivery of required clinical standards.

This model is most likely to deliver financial balance and possibly enable investment into early supported discharge teams.

There have been concerns raised regarding the capacity and resilience of the service if it is reduced to 3 sites for hyper acute/acute stroke care.
This model will take time to implement in order to mitigate against the capacity and resilience issues and needs to be part of the wider strategic discussions.

Key to the reconfiguration is the ability to align the changes to the critical clinical co-dependencies. These have been embedded into the criteria used for the options appraisal. These will however need to be reflected in the developing FYFV that may impact on the core services available at K&M hospital sites. Any stroke service reconfiguration will need to align to the broader FYFV to ensure that clinical co-dependencies are not negatively impacted/lost.

4.0 Impact assessment:

The Quality, Equality and Health Impact Assessment process shows that achievement of the clinical standards produces positive impacts for stroke patients including the protected characteristics groups.
This is based on an even split across the county in terms of travel times and supports the delivery of a reconfiguration for the benefit of stroke patients across Kent and Medway. Mitigation of the negative impacts needs to be part of the delivery plans and provider models including support to relatives and staff.

4.1 The key negative Issues relate to relative travel times and costs, access to rehabilitation in certain areas and concerns re staffing impacts of travel times and costs.

There will be increased travel times for some patients. The appraisal will assess the ability for all patients in Kent and Medway to be treated within the emerging 120 minute standard and meet the four-hour assessment targets.

4.2 The impact on the workforce is unclear and will be initially risk assessed and monitored. It is anticipated that there will be some loss of existing staff but that the new model will be more attractive to new staff. Individual Trusts are working to determine the impact on individual staff and mitigation for them in relation to travel times and costs. Each Trust will identify workforce plans to address these concerns and maximise opportunities for new ways of working for staff.

4.3 Development of the stroke model will impact on the wider health economy particularly flows into A&E departments and medical beds for non-stroke patients. This is being considered at individual Trust level and SECAmb are assessing the impact on their wider operational delivery

4.4 The impact of increased and/or reduced stroke activity on other clinical services will be developed through the wider STP discussions.

5.0 Next steps/ work progressing.

The Stroke Programme Board agreed at its May meeting to remove the 5-site option from the option appraisal process, to understand the risk of delivering a 4 site model and to assess the ability to deliver the hyper acute/acute service across 3 sites.

5.1 The modeling includes alignment to the critical clinical co-dependencies in particular;

- 24/7 A&E departments with full facilities including acute medical rotas
- Rapid access 7 days/ 24hrs to imaging facilities
- Critical care support
- Multi-disciplinary Team access 7 days a week.
- Acute and general medicine, elderly medicine, respiratory medicine,
- Urgent GI endoscopy service,
- Acute cardiology.

The alignment to the critical co-dependencies needs to be aligned to the development and outputs of the K&M STP (ie delivery of the five year forward view)

5.2 The work underway includes consideration of the phasing of the new model over a number of years and alignment to the wider strategic planning decisions.

5.3 This work is underway with the hospital Trusts to fully reflect the capacity and pressures in their system and their ability to deliver the new model. This will include the pathways for A&E, medical beds, discharges home and the patient experience.

5.4 Understanding and managing the workforce risks per option and Trust are being determined and workforce plans developed. This includes consideration of attrition, additional travel times and costs.

5.5 The Early Supported discharge and rehabilitation services are being mapped against the options to ensure that the pathways can work effectively and to identify any gaps or blockages. These will form recommendations to the K&M CCGs, including how to make optimum use of existing effective pathways.

5.6 The Programme Board is commencing further engagement with the public, patients, clinicians and key stakeholders to share and discuss the emerging findings and consider mitigation of transition, travel times.

NHS England South have advised that any formal consultation process around stroke services will need to align to the wider STP/FYFV consultation. This will allow any feedback and decisions made to be informed by the broader strategic issues identified through the STP/FYFV process, specifically in relation to any future locations of emergency and specialised services.

5.7 The process will review and assess the findings to date of the QEIA impact assessment and apply feedback from the engagement events taking place. The review process will work with the providers to identify mitigation against negative impacts of increased travel times for relatives and staff.

5.8 The Clinical Reference Group is developing the clinical delivery model that identifies improved patient flows and maximizes the ability to deliver the clinical outcomes. This will include discharge pathways and out of hospital provision and will be the focus of wider clinical engagement. The focus of this work is to ensure a clinically sustainable delivery of excellent stroke care, improving patient outcomes and experience including length of stay and returning home.
The CRG will shift their emphasis to supporting the commissioners in identifying and ensuring delivery of the implementation plan including the phasing requirements alongside reference to broader STP/FYFV.

7.0 Revised Summary Timeline

Key Action	By who	During and by when
Long list to short list	Review programme board	December 15 Completed
Red Flag criteria appraisal	Programme Board	March 16 Completed
Challenge session to review findings and agree next steps	Programme Board	March 16 Completed
Initial Provider Capacity	Provider CEOs, AOs and Programme Board	June/July 16 Underway
Geographic configurations identified and appraised in relation to bed numbers and travel. Align to the STP developments	Programme Board alongside discussions with provider CEO's STP Board	May/June 16 July/August 16
Clinical delivery model developed through clinical engagement. Bed modeling to be confirmed Wider clinical workshop Key risks identified Possible implementation plan development	CRG with wider clinical engagement CRG and finance/activity group	Through June/July/August August 16 Sept/Oct 16 Sept 16
Public and stakeholder engagement on emerging options	Communication an engagement group	Sept/Oct 16
Recommendation of short list to programme Board. Emerging option to K&M CCGs Presentation and discussion of recommendations to JHOSC	SRO/Programme Director	June/July 16 August/Sept 16 August 16 ? Oct 16
Recommendations for consultation Alignment to wider strategic consultation plans and decision making timelines	CCG governing bodies	Summer 16 Autumn 16

9.0 The Joint Committee is invited to:

i) Consider and comment on the appraisal process findings to date;

ii) Decide if any further information is required

iii) Refer any relevant comments to the Review Programme Board and request that they be taken into account,

iv) Invite Kent and Medway CCGs to present the final options for public consultation to the Committee.

Appendix 1:

Travel times for 3 site combinations.

Three Site Combinations										
KCH	QEQM	WHH	Maid	TWH	Med	DVH	Max time	Pop outside 45 mins	>75 pop	Strokes Outside 45 mins
							00:40:55	-	-	-
							00:40:55	-	-	-
							00:44:10	-	-	-
							00:44:41	-	-	-
							00:44:41	-	-	-
							00:44:41	-	-	-
							00:44:41	-	-	-
							00:44:41	-	-	-
							00:44:41	-	-	-
							00:44:52	-	-	-
							00:46:59	2,593	211	3
							00:48:42	13,985	1,211	21
							00:50:22	16,695	1,485	27
							00:50:22	14,102	1,274	24
							00:50:22	14,102	1,274	24
							00:51:06	95,063	8,882	289
							00:51:06	95,063	8,882	289
							00:51:06	95,063	8,882	289
							00:51:06	95,063	8,882	289
							00:51:06	95,063	8,882	289
							00:51:06	95,063	8,882	289
							00:51:11	3,320	197	5
							00:51:11	6,342	433	12
							00:51:36	16,146	1,954	70
							00:51:36	16,146	1,954	70
							00:51:36	16,146	1,954	70
							00:52:54	10,720	1,506	46
							00:52:54	10,720	1,506	46
							00:57:35	3,320	197	5
							00:59:52	35,066	4,083	136
							01:01:48	239,702	18,162	401
							01:03:51	272,049	27,872	943
							01:03:51	272,049	27,872	943
							01:03:51	272,049	27,872	943
							01:09:36	337,389	34,563	1,209

Appendix 2

Red Flag Criteria:

- 7 day consultant cover; daily moving to twice daily ward rounds
- 7 day therapy service for Physiotherapy, Occupational therapy and Speech and Language therapy
- 7 day nursing cover
- Nursing and therapy staff to be compliant with the SE integrated stroke services specification
- BASP workforce levels for consultant staff (1:6 rota)
- Min/max activity volumes; >600….<1500 confirmed stroke patients per annum
- 45 min travel times for 95% of patients incorporated into achievement of the 120 minute call to needle standard
- 120 mins call to needle time/standard
- 24 /7 CT imaging provision with timely access
- HASU sited on a HOT ED site.
- Critical co-dependencies in place.