Kent & Medway
Fit for the Future

A Development Plan for
*Stroke Services*

January 2008
A Development Plan for Stroke Services

1. Introduction
In the treatment of stroke evidence exists that better quality preventative care, emergency treatment and rehabilitation in the most appropriate setting, with expert staff, can improve outcomes for patients and save money. Equally many strokes can be prevented and the impact minimised if specialist treatment and care are reached quickly. However, as a nation we spend more than most on stroke, a greater proportion of our health budget, but overall have worse outcomes.

Against this worrying background, the provision and quality of stroke services across the South East Coast SHA area, is falling behind that nationally and there are significant areas of concern across Kent & Medway (K&M) in particular. Within the joint K&M wide Fit for the Future (FFF) programme a number of specialised services were prioritised for urgent action; stroke is one of those.

This document describes what a world class, coordinated, consistent stroke service would look like as well as setting out the development planning process and timeframes for achieving it. These plans have been developed in agreement with all stakeholders across K&M and are in line with the recommendations of the new National Stroke Strategy published in December 2007 (ref: 1).

2. Background

• Every year approximately 110,000 people in England have a stroke.
• Stroke is the third largest cause of death in England: 11 per cent of deaths in England are as a result of stroke. Stroke contributes to the gap in life expectancy between the most deprived areas and the population as a whole.
• 20–30 per cent of people who have a stroke die within a month.
• 25 per cent of strokes occur in people who are under the age of 65.
• There are over 900,000 people living in England who have had a stroke.
• Stroke is the single largest cause of adult disability. 300,000 people in England live with moderate to severe disability as a result of stroke.
• People from certain ethnic minorities are at a higher risk of stroke.

National Stroke Strategy (ref: 1)

Within K&M the incidence is as follows¹, taken from the ASSET for Commissioners version 1.01, February 2007:

<table>
<thead>
<tr>
<th>Morbidity</th>
<th>West Kent PCT</th>
<th>East &amp; Coastal Kent PCT</th>
<th>Medway PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated total no. of strokes pa (i)</td>
<td>1440</td>
<td>1540</td>
<td>490</td>
</tr>
<tr>
<td>Estimated total no. of TIA’s (ii)</td>
<td>270</td>
<td>720</td>
<td>230</td>
</tr>
<tr>
<td>Stroke emergency admissions (iii)</td>
<td>672</td>
<td>963</td>
<td>301</td>
</tr>
<tr>
<td>Total no. of deaths due to stroke pa (iv)</td>
<td>620</td>
<td>665</td>
<td>199</td>
</tr>
</tbody>
</table>

(ii)“Differences in incidence of TIA according to definition and predicted clinical burden” P Rothwell. Currently unpublished
(iii)Hospital Episode Statistics 2004/5, Health and Social Care Information Centre (available at www.hesonline.nhs.uk)
(iv)ONS – 2004

¹ All figures being further validated via public health colleagues across the 3 K&M PCT’s
Stroke has a devastating and lasting impact on the lives of people and their families. Individuals often live with the effect for the rest of their lives. The effects can include aphasia, physical disability, loss of cognitive and communication skills (e.g. leading to aphasia), depression and other mental health problems.

Outcomes in the UK compare poorly internationally, despite our services being among the most expensive, with unnecessarily long lengths of stay and high levels of avoidable disability and mortality (ref: 2). We need to redesign services to ensure that we get the best out of the resources we currently invest.

The core elements of a good quality stroke service have been understood for a number of years. Best practice and how adherence to standards can either prevent strokes or improve outcomes and reduce deaths for those who have had one, have been documented and included in policy many times. For example the 2001 Older Peoples NSF (ref: 3) included a specific standard on stroke care with targets set for development of services. Also, the Royal College of Physicians guidelines on stroke (ref: 4), updated in 2004, lay down recommendations based on evidence and research and the Audit Commission report ‘Reducing Brain Damage: Faster access to better stroke care 2005 (ref: 5), set out ten recommendations for improving stroke services.

Compliance with the targets and guidance has been patchy and the Sentinel Audit (ref: 6), conducted two yearly to monitor progress, demonstrates disappointing results across K&M where, not only have services not improved as much as required but have, against a number of criteria, actually deteriorated.

Whilst helpful, the Sentinel Audit (ref: 6) only tells us about one section of the stroke pathway and further work is required to better understand the missing parts around prevention, information for public & professionals, emergency access and all elements of community rehabilitation, long term care and end of life care. However, given documented evidence and best practice about effective stroke services, the models operated in parts of K&M are not consistent with the standards required to deliver such services.

The current situation is indefensible in terms of the quality of services being provided given the research, guidance and policy imperative available to improve outcomes and reduce the number of deaths. Sustainable improvement must be made with quick wins achieved early and a longer-term programme of reform agreed and implemented.

3. FFF Process

A Stroke Steering Group was constituted as part of the K&M wide FFF programme to focus development attention on improving services across the county. Terms of reference and membership were agreed, commensurate with the scope and scale of work required to develop and implement the recommendations of the National Stroke Strategy (ref: 1) across K&M.

The terms of reference for the group were as follows:

- to set a clear strategic direction for the improvement programme for stroke services
- to coordinate the local delivery of the project, including ensuring appropriate local communication and engagement
- to define and authorise sub-projects to deliver the overall project objectives and support and monitor progress against implementation of the agreed plans
- to develop a strategy for Stroke Services across Kent & Medway in line with the National Stroke Strategy (ref: 1) and in harmony with local developments and plans.
- to agree stroke commissioning plans and pathways for the future in line with the new National Stroke Strategy (ref:1).
- to generate sustainable acute reconfiguration options that are sound from a financial, clinical and access perspective.
The planned benefits of this work are:

- Consistent, equitable standard of stroke service across Kent & Medway
- Enhanced outcomes for patients:
  - Reduced health inequalities
  - Increased life expectancy
  - Reduced levels of disability
  - Better value for money service

4. The vision for stroke care.

The features of a good stroke service have been described a number of times, most recently in the National Stroke Strategy, 2007 (ref: 1). But this is not new, one previous succinct but highly relevant example is the National Audit Office report of 2005, ‘Reducing Brain Damage: Faster access to better stroke care’ (ref: 5), another is from ‘Improving Stroke Services: a guide for commissioners’ 2006 (ref: 7) as follows:

- Maximise opportunities for preventing stroke through effectively targeted primary care management
- Treat TIA as a warning comparable to chest pain, which needs to be acted on as quickly as possible if strokes are to be avoided – and treated as a stroke whilst symptoms persist.
- Provide for rapid admission to a stroke unit following an urgent head scan with thrombolysis offered to appropriate patients
- Provide early and intensive physiological and neurological monitoring with treatment of abnormalities being guided by an evidence-based treatment protocol
- Provide stroke specialist multidisciplinary rehabilitation within the hospital sector and in the community
- Ensure people using services and their families are informed and empowered to take control of their care

The K&M Stroke Forum\(^2\) developed and agreed a pan-K&M Care Pathway, appendix 1, following extensive collaboration and consultation during 2007. The Care Pathway was developed to reflect this accepted best practice for stroke care as well as the standards described in the then draft National Stroke Strategy (ref:8). It interprets this and applies it into a local context.

The Care Pathway, attached as appendix 1, includes service specification details for all services across the entire pathway and provides a framework upon which all providers in K&M have been developing high level development plans.

5. Needs assessment

The provision of services across K&M is patchy. There are pockets of good practice, pockets of poor practice but across all services there is recognition of the significant development need and a very real commitment to achieving the change.

5.1 Preventative Care

Information in the table below provides detail of the number of strokes that could be avoided if a small number of preventative measures were taken in primary care.

<table>
<thead>
<tr>
<th>Preventative intervention</th>
<th>West Kent PCT</th>
<th>East &amp; Coastal Kent PCT</th>
<th>Medway PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing all individuals currently treated for hypertension to below 140mmHg systolic BP</td>
<td>130</td>
<td>138</td>
<td>44</td>
</tr>
<tr>
<td>Warfarin where indicated for atrial</td>
<td>83</td>
<td>90</td>
<td>28</td>
</tr>
</tbody>
</table>

\(^2\) The K&M Stroke Forum is a group of clinicians, service managers and PPI representatives from across the patch that meet monthly and has acted as the clinical reference group to the FFF Stroke Steering Group. They have been operating as a local clinical network for many years – the FFF programme has provided the leadership and imperative to implement their aspirations.
There is evidence that the impact of these interventions will be additive, in other words if all 4 interventions are implemented, the sum of the strokes avoided will be realised – cumulatively a 20% reduction in incidence.

### Table 2

**5.2 Acute care**

The Sentinel Audit (ref: 6) is an independent assessment of acute stroke services, which is a useful benchmark; we have no equivalent for primary or community services. However the audit, conducted during 2006 and published in 2007 reflected a poor picture of acute services in K&M, which partly reflects the poor provision but also partly reflects ambiguous interpretation of the audit tool.

The results of the audit are presented below with reference to the results of the previous audit and the movement in service provision between those dates.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Trust</th>
<th>2004 score</th>
<th>2006 score</th>
<th>Movement between audits</th>
<th>SEC mean</th>
<th>National mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>% screened for swallowing disorder</td>
<td>EKH (WH)</td>
<td>48</td>
<td>48</td>
<td></td>
<td></td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>EKH (K&amp;C)</td>
<td>57</td>
<td>44</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>EKH (QEQM)</td>
<td>11</td>
<td>56</td>
<td></td>
<td></td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Medway Maritime</td>
<td>76</td>
<td>51</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>D&amp;G</td>
<td>97</td>
<td>51</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (K&amp;S)</td>
<td>50</td>
<td>41</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (Maidstone)</td>
<td>93</td>
<td>57</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>% having brain scan within 24hrs of stroke</td>
<td>EKH (WH)</td>
<td>49</td>
<td>24</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>EKH (K&amp;C)</td>
<td>33</td>
<td>48</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>EKH (QEQM)</td>
<td>73</td>
<td>59</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Medway Maritime</td>
<td>12</td>
<td>20</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>D&amp;G</td>
<td>56</td>
<td>28</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (K&amp;S)</td>
<td>40</td>
<td>54</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (Maidstone)</td>
<td>41</td>
<td>31</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>% receiving aspirin within 24hrs</td>
<td>EKH (WH)</td>
<td>79</td>
<td>69</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>EKH (K&amp;C)</td>
<td>36</td>
<td>66</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>EKH (QEQM)</td>
<td>65</td>
<td>52</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Medway Maritime</td>
<td>38</td>
<td>21</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>D&amp;G</td>
<td>68</td>
<td>33</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (K&amp;S)</td>
<td>52</td>
<td>63</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>MTW (Maidstone)</td>
<td>83</td>
<td>62</td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>% with rehabilitation goals set by MDT</td>
<td>EKH (WH)</td>
<td>62</td>
<td>73</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>EKH (K&amp;C)</td>
<td>18</td>
<td>80</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>EKH (QEQM)</td>
<td>81</td>
<td>62</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Medway Maritime</td>
<td>79</td>
<td>91</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>D&amp;G</td>
<td>22</td>
<td>72</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>MTW (K&amp;S)</td>
<td>46</td>
<td>18</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>MTW (Maidstone)</td>
<td>88</td>
<td>20</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>% weighed during admission</td>
<td>EKH (WH)</td>
<td>61</td>
<td>59</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>EKH (K&amp;C)</td>
<td>38</td>
<td>25</td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>EKH (QEQM)</td>
<td>9</td>
<td>29</td>
<td></td>
<td></td>
<td>67</td>
</tr>
</tbody>
</table>
### Table 3

Mapping some of this information against that produced by the Department of Health the improvement we could expect to see from some of the acute interventions is illustrated.

<table>
<thead>
<tr>
<th></th>
<th>DVH</th>
<th>MTW</th>
<th>Medway</th>
<th>EKH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke unit beds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>10</td>
<td>19</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>Recommended</td>
<td>24</td>
<td>15</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>if patients on stroke unit for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential bed days saved</td>
<td>1250</td>
<td>980</td>
<td>1210</td>
<td>1730</td>
</tr>
</tbody>
</table>

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5.3 Rehabilitative care

Similar independent information about rehabilitation services has not been collected but there is a wealth of information around what constitutes a good level of service and evidence of the impact this would have on outcomes and quality of life after stroke.

The models provided across the three PCT’s have developed historically and are varied. Some variability is necessary to reflect local requirements and context however, there is no consistent standard or level of service for patients across the patch, which does not lend itself to maximising outcomes.

6. Service standards & models

The starting premise for service development across K&M has been the aspiration to deliver world-class stroke services as soon as is practically possible but within three years. The levels and standards should match the recommended levels and adhere to the best practice guidance as described in the National Stroke Strategy (ref: 1).

The agreed K&M Care Pathway, (appendix 1) is not intended to be site or provider specific since the range of services needed to deliver the entire Care Pathway are diverse and complex. They may be provided in different settings depending on various factors including; geography, service configuration, local partnership arrangements or clinical needs of the patient. A range of health and social care practitioners as well as private and voluntary organisations or informal carers may deliver them. Commissioners may wish to provide, supplement or enhance the services they commission from a variety or providers but always against the standards and quality within the agreed care pathway.

A K&M wide workshop was held in December 2007, with facilitation by national clinical leads\(^3\) in stroke, to discuss and agree models of care. The workshop concentrated on acute and community provision and the outcome of the discussions is described below.

It is acknowledged that significant service and personnel development will be required to deliver these standards; these are detailed in the development planning section.

### 6.1 Primary prevention

Prevention of stroke is achievable as is the minimising of disability and death if high quality and appropriate preventative measures are in place\(^4\). Promoting a healthy lifestyle, managing risks and appropriately responding to early warning signs and symptoms are all essential

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\(^3\) Damian Jenkinson, National Clinical Lead for Stroke and Consultant Physician at the Royal Bournemouth and Christchurch Hospitals NHS Trust. and Ian Golton, Director of Knowledge & innovation for the Heart Improvement Programme.

\(^4\) Refers to table on page 2 referenced from ASSET for Commissioners Version 1.01 2007.
elements, which can be effectively managed by primary healthcare and social care practitioners. Table 2 above illustrates how achievement of a small number of standards would impact on the incidence of Stroke in K&M; there are others that could be considered and all must reflect the variations, enhancements or additions required to ensure any preventative action fully accounts for any variances in known risk factors such as ethnicity, gender or social circumstances.

The Quality & Outcomes Framework (QOF) includes a number of indicators relevant to managing stroke prevention but a range of other interventions and strategies need to be employed to support this. Using QOF to achieve improvements is one potential model; others need to be explored and need to specifically reference how vulnerable ‘at risk’ groups will be particularly targeted to maximise equity of service provision.

6.2 Emergency response
Calls for an ambulance where a diagnosis of stroke or TIA is suspected are currently, in the main, allocated a category B response. This necessitates a 19 minute response. Within the National Stroke Strategy (ref: 1) it is recommended that this be ‘rapid response to a 999 call’.

The focus on emergency treatment for suspected stroke currently is immediate transfer, by blue light ambulance, to a hyper-acute stroke unit where assessments can be completed and suitability for thrombolysis established. In order for this to be effectively delivered a category A transport response, or equivalent if nationally redefined, is necessary to ensure the patient is transferred within the 3-6 hour window, from symptom onset, within which this treatment can be delivered if indicated.

There are workstreams in place nationally to look at the appropriate response to stroke patients. However, across K&M it is recommended that in lieu of a national decision being made to this effect, this modified standard of category A transport should be applied.

Best practice emergency treatment for TIA’s, where symptoms have completely resolved, is to refer to the next day TIA clinic for assessment. Across providers in K&M, within 7 days is the best standard achieved and this not universal.

Emergency treatment for TIA where symptoms have not completely resolved will be in line with that for a suspected stroke.

Any calls from GP’s or other healthcare professional which, do not specifically request this category of response, will be re-categorised accordingly.

6.3 Acute care
The incidence of stroke and TIA’s in K&M, according to DH guidance, makes it clinically and financially unviable to operate full 24hr hyper acute stroke services and 7day TIA clinics from all acute hospitals across the patch. However the management of suspected and actual stroke is intrinsic to the provision of medical services at each of the acute providers and sufficient need can be demonstrated to operate the services within a Monday-Friday 08.00-20.00 hours timeframe at each, backed up by the operation of an acute stroke unit and robust out-of-hours (OOH’s) provision for acute stroke care.

At the workshop in December 2007 acute providers agreed that they should all develop the necessary standard and levels of service to be able to offer the stroke services aspired to in the agreed care pathway. Each would offer this level and standard within core 08.00-20.00 hours, Monday – Friday. It was then agreed to put in place two OOH’s clinical rota’s to ensure access to this level of service using on-call facilities. All hospitals will be expected to have the required standards and levels of service in place before they can participate in the rota. One rota will incorporate the three hospitals within the East Kent Hospitals NHS Trust the other, the four hospitals across West Kent & Medway (WK&M).
6.3.1 The EKH rota
Each of the hospitals will receive emergency stroke admissions 24hrs a day, 7 days a week. However, only one of the three hospitals will have a specialist stroke team on duty, OOH’s, operating on a 1:3 rota across the sites.

Where patients are admitted to one of the hospitals without the specialist stroke team on duty and on site, telemedicine technology will be used by the specialist team to remotely assess the patient. Remote access to the electronic scan images will be used to support diagnosis. The patients will be admitted to dedicated stroke unit beds at their admission hospital with care handed over to the resident specialist stroke team the following day.

6.3.2 The West Kent & Medway rota
Each of the four hospitals will continue to receive emergency stroke admissions between 08.00-20.00 Monday to Friday. A 1:4 rota will operate between them with patients being admitted only to the hospital with the on-call specialist team OOH’s. South East Coast Ambulance will be notified, well in advance to allow forward planning, of the on-take hospital and will by-pass patients to the appropriate place. Depending on location of the patient this may be a hospital within the EKH rota area; every effort will be made to maintain the patient within the county boundaries.

The on-call specialist team will treat the patient accordingly and they will be admitted to the acute stroke unit, where indicated, until their condition is deemed stable. They will then be repatriated to their own local hospital. If a patient self-presents OOH’s to one of the three hospitals not on-take they will be transferred by blue light ambulance, if indicated, to the nearest available facility with acute stroke services.

6.4 Rehabilitative care
The tariff trim point for stroke care is 7 days, this is considered to be the clinically acute phase beyond which acute specialist care can be transferred to rehabilitation in the majority of cases and where clinically indicated. The average length of stay in an acute bed is currently much longer than this across all hospitals in K&M, see table 4 above, although this does, in general, include a period of rehabilitation.

There are a variety of explanations for this and the statistics can be interpreted in many ways but evidence indicates that speedy and effective transfer to specialist rehabilitation services improves outcomes for patients considerably (ref: 9).

There are a number of options for the provision of rehabilitation:

- remain in an acute hospital were acute stroke units have beds dedicated to rehabilitation.
- transfer to an inpatient intermediate care facility with specialist rehabilitation facilities
- transfer to an inpatient specialist neurological rehabilitation unit
- provide specialist rehabilitation as an outpatient but in either an intermediate care or specialist neurological rehabilitation centre
- treat the patient at their place of residence

All of these treatment options/venues can provide the standards and levels of care required and a combination is almost certainly the best model. This would enable local tailoring to fit the local context and provide patient choice.

National guidance has been developed on splitting the tariff to support effective payment pathways for the variety of options available, this continues to be explored by all three PCT’s.

6.5 Supporting strategies

6.5.1 Public awareness raising
Understanding the symptoms of stroke and TIA’s is crucial to accessing appropriate services quickly. It is as likely for a member of the public to be faced with someone experiencing these symptoms as it is a health professional and their ability to act appropriately will have a
significant impact on the outcome. There is significant work to be done to raise the levels of awareness and understanding across the public to ensure that the symptoms become as familiar to as many people as possible as those related to heart disease and heart attacks.

6.5.2 Professional awareness raising
Awareness raising will be required across all professionals who work on the periphery of stroke services or who come in contact with stroke patients. Familiarisation with the emergency response to symptoms as well as the considerations when treating a stroke patient for any related or unrelated subsequent condition will greatly improve the experience and outcome for the patient. In addition an extensive programme of training and development for all professionals will be required to ensure that all those engaged in stroke services have the latest skills and expertise available to support the world-class service aspired to.

6.5.3 Training & development
Extensive training and development will be required across all professionals involved in the delivery of specialist stroke services. Given the breadth and extent of the agenda this will take probably 2 years to complete. It would be sensible to take a pan-K&M, non-organisation, where appropriate non-professional, specific approach to developing skills and expertise, concentrating on a ‘whole care pathway’ approach to training.

6.5.4 Patient information
Keeping patients, their relatives and carers, informed of their condition, prognosis, treatment and on-going care options are all critical to the psychological well being of the patients as well as maximising their recovery potential. Current information is piecemeal and inconsistently delivered and a common standardised approach, developed by recovering stroke victims with their unique insight and experience is required. Since care is likely to be shared across K&M when the rotas are in place and operating effectively it makes sense to take a pan-K&M approach to producing patient information.

7. Service specification

7.1 Primary prevention
Primary Healthcare Professionals will provide primary intervention services – as a minimum:
- manage all individuals currently treated for hypertension to below 140mmHg systolic BP
- prescribe Warfarin, where indicated, for atrial fibrillation
- prescribe statins for all people with 20% risk of CVD in 10yrs
- provide smoking cessation support for all patients
- provide advice and support to help tackle obesity

7.2 Emergency Care
The Ambulance Care Pathway included in appendix 1, is already in operation. An updated integrated pre-hospital stroke and TIA pathway is being developed and is included as appendix 2. Whilst not all of the elements of the newer integrated Care Pathway can be undertaken by all clinicians, it is an aspirational guide for best practise and ensures equity of treatment for all patients, regardless of their point of first contact with the NHS when suffering stroke or TIA. This pathway is likely to be enhanced further by including further specificity for symptoms of TIA and minor stroke.

Initial assessment undertaken using the FAST test assessment tool and a history is taken to support initial diagnosis and assist the receiving medical team at A&E.

The Facial Arm Speech Test - FAST

<table>
<thead>
<tr>
<th>F</th>
<th>Facial weakness</th>
<th>Can the person smile? Has their mouth or eye dropped?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Arm weakness</td>
<td>Can the person raise both arms?</td>
</tr>
<tr>
<td>S</td>
<td>Speech problems</td>
<td>Can the person speak clearly and understand what you say?</td>
</tr>
</tbody>
</table>
The current pathway does not differentiate between Stroke & TIA but uses the time since onset of symptoms to drive decisions about treatment. The standard aimed for is for all patients, regardless of age and within 6hrs5 of symptom onset, to be transferred to the A&E with acute stroke facilities.

All ambulance technicians could be advised/trained how to make the distinction and transfer patients directly to TIA clinics where appropriate. Where TIA services do not operate out of hours however and a technician/paramedic crew attends the patient, a supplementary opinion will be required from a Paramedic Practitioner which will enable the patient to be ‘discharged’ from ambulance care, the patient will then take themselves to the TIA clinic at the next available time. This is only appropriate where symptoms have completely resolved — this must be tested using the appropriate assessment tool and not taken on the patients word.

7.3 All healthcare referrals

All healthcare professionals who receive a referral or attend a patient who is initially diagnosed as having stroke symptoms using the FAST assessment tool and the ABCD2 (ref: 10) scoring system should take a brief history to determine time of onset of symptoms and to establish if the symptoms are relieving or resolved completely.

Active symptoms:

- <6hrs\(^4\) since onset – dial 999, advise Ambulance control that it is a suspected stroke of less than 6hrs onset and requires a blue light transfer to nearest A&E with acute stroke care (including thrombolysis) facilities. Where the referral is from another healthcare practitioner a referral would be made to the receiving A&E and a clinical handover provided to the ambulance clinicians.
- >6hrs\(^4\) since onset – dial 999 advise Ambulance control that it is a suspected stroke of more than 6hrs onset and requires a blue light transfer to nearest A&E with acute stroke care facilities. Where the referral is from another healthcare practitioner a referral would be made to the receiving A&E and a clinical handover provided to the ambulance clinicians.

Resolved symptoms regardless of onset time:

Unless a transfer to hospital is indicated by other health or care concerns and the patient is otherwise apparently well, refer them to the next available, and no longer than 24hrs later, TIA clinic appointment.

7.4 Initial assessment

All suitably qualified/experienced healthcare professionals who receive a referral or attend a patient who is initially diagnosed as experiencing stroke symptoms should assess the patient using both the FAST (see page 10) assessment tool and the ABCD2 (10) scoring system. They should take a brief history to determine time of onset of symptoms and to establish if the symptoms are acute, resolving or completely resolved.

Where symptoms are completely resolved the ABCD2 (10) score will direct action. Patients with a score >5 should be treated as a hyper-acute patient and routed to an acute stroke unit (operating with full thrombolysis facilities) 24hrs a day. All others should have a standardised faxed assessment sent through to the local TIA service, which should aim to provide a next day assessment. This assessment should include appropriate imaging. Current evidence suggests that Diffusion Weighted MRI is the modality of choice for brain imaging plus a Carotid Doppler.

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5 The national recommendation is for treatment within 3 hours of symptom onset – this is consistent with the license for use of thrombolytic drugs. A trial is currently underway to extend the use of drugs to 6 hours post symptom onset and to encompass patients who are over 80yrs of age. Patients presenting to K&M hospitals, out of these license guidelines, will be registered for the trial and treated accordingly.
7.5 A&E – no stroke facilities
Acute stroke services, including facilities to deliver a thrombolysis service may not be available at all A&E’s 24hrs, 7 days a week. Ambulance control will be advised which hospital is ‘on-take’ and where to transfer emergency admissions to ensure all patients have access to all appropriate services. Patients may however, self-present at any facility, if they present at an A&E that is not providing the acute services an ambulance should be called to transfer them – on blue lights/sirens if clinically indicated.

Immediate assessment by the triage nurse should be carried out to confirm diagnosis using the FAST test and ROSIER\(^6\) assessment or the best practice equivalent whichever is indicated.

If it is within 6hrs of symptom onset the patient should be transferred, by ambulance on blue lights/sirens to the nearest acute stroke facility. They do not need a further clinician assessment before being transferred.

7.6 A&E with acute stroke facilities
Acute stroke services (including thrombolysis) will be provided 24hrs, 7 days a week from agreed and designated A&E’s across K&M. Ambulance control will be advised which are in operation and where to transfer emergency admissions to ensure all patients have access to all appropriate services.

These facilities must include:
- Expert stroke care team on duty
- Access to 24hr CT and scanning facilities, with skilled radiological and clinical interpretation available. This should be prioritised into the next available slot and within 60mins.
- Access to MRI scanning within 24hrs, including expertise to read and report.
- Carotid imaging – Doppler and magnetic resonance angiography within 24hrs.
- Thrombolysis service
- All physiological monitoring
- Swallowing assessment
- Access to intensive care facilities including neurointensivist care.
- Admission to acute stroke unit

7.7 TIA clinics
TIA clinics will be provided daily, 365 days a year at designated sites staffed by professionals with expertise in stroke care. All patients diagnosed with suspected TIA will be referred for urgent specialist assessment within 24hrs of referral. No patients should be discharged and advised to see their GP in due course.

Treatment will include, where clinically indicated:
- Administer 300mg aspirin immediately
- Emergency transfer to acute stroke unit if indicated
- Access to MRI scanning with skilled radiological and clinical interpretation available, as part of and at same time as urgent specialist assessment. This may be supplemented or replaced by MRA (magnetic resonance angiography) in due course in line with best practice guidance.
- Carotid imaging – Doppler and magnetic resonance angiography as part of and at same time as urgent specialist assessment\(^7\).
- Echo and ECG where indicated and within 72hrs of initial assessment.
- Access to emergency carotid endarterectomy to be performed within 48hrs.
- Patients will be followed up by the Stroke Physician according to clinical need.

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\(^6\) ROSIER - Recognition of stroke in the emergency room
\(^7\) DH acknowledges this is a challenge and is planning to publish a stroke imaging plan by the end of the year.
Where a patient is not admitted processes must be put in place to co-ordinate the diagnostic tests to ensure, as far as possible, that the patient does not have to return for multiple visits.

7.8 Admit to an acute stroke unit

All acute trusts will provide an acute stroke care facility. The number of beds will be consistent with that recommended by the Department of Health and calculated according to local demography and demand. All stroke patients will be admitted to an acute stroke unit on the day of admission and treated on the acute stroke unit until they are medically stable. They will then be transferred to appropriate rehabilitation services.

An acute stroke unit will:

• Be staffed by a multi-disciplinary stroke care team who have expertise in stroke and rehabilitation
• Have weekly meetings of the MDT
• Provide 7-day a week rehabilitation across a range of therapy services
• Have robust and effective joint working arrangements with their associated rehabilitation services both in-patient and community.

7.9 Refer to Neurology/Cardiology

After initial diagnosis the patient may need a referral to neurology or cardiology services. This should be undertaken without delay according to the clinical assessment of need. The patient will then be treated according to the relevant care pathway.

7.10 Discharge from acute care

Once treatment and/or initial rehabilitation have been completed a MDT assessment will be made and a package of community services put in place consistent with the identified ongoing needs of the patient. There should be seamless transfer of care from hospital to home involving community services, social care, primary care and voluntary support. All patients will have a care plan.

The MDT will include all members of the Rehabilitation team including the Consultant, inpatient nurses, receiving community team and social services staff.

Hospital services will have a protocol in place to ensure that:

• patients and families are involved in plans for transfer to the community
• all necessary equipment and support services are in place
• any continuing rehabilitation starts without delay
• patients are given information about local services
• patients are given information and contact details for key members of their follow-up care team.

7.11 Early supported discharge

All patients should receive as much therapy, appropriate to their needs, as they are willing and able to tolerate. Once the patient is assessed as medically stable and suitable to undertake a programme of rehabilitation they will be transferred to an inpatient rehabilitation facility or considered for Early Supported Discharge (ESD).

Patients suitable for ESD will be agreed by the MDT and will typically be those who have good support structures at home, who may require minimal equipment or adaptations and have lower levels of disability.

The therapy services available will be equal to those provided within an inpatient rehabilitation facility. All patients should receive rehabilitation services until they have either reached their rehabilitation potential or have goals set that will empower them to continue their rehabilitation on their own.
Rehabilitation services should include:

- Interdisciplinary / team approach to rehabilitation
- Access to therapy daily
- Access to any support necessary with activities of daily living whilst undertaking rehabilitation
- Physiotherapy at a level consistent with reducing neurological impairment, providing education and facilitating necessary adaptation to maximise functional ability
- Occupational therapy at a level consistent with offering assessment & on-going therapy in all areas of cognition, function and environmental management.
- Speech & Language Therapy at a level consistent with providing assessment and on-going therapy for swallowing and communication disorders
- Psychology service at a level offering neuropsychological assessment of cognitive impairment, early and continued assessment of mood disorder, support to the MDT in the management of complex cases including challenging behaviour and therapeutic input to support psychosocial adjustment of the individual and their families post stroke.
- Social Work support to work alongside and build on work of psychological services. Working with the patient and family as they adjust to the loss and change caused by their stroke and identifying the barriers to independence and planning coping strategies and support plans
- Dietetics
- Access to Optometry
- Access to equipment and splinting
- Access to spasticity services
- Information about income maximisation and available benefits

All services should be regularly reviewed and as a minimum 6wks post discharge.

7.12 Inpatient rehabilitation
All patients should receive as much therapy, appropriate to their needs, as they are willing and able to tolerate. Once the patient is assessed as medically stable and suitable to undertake a programme of rehabilitation they will be transferred to an impatient rehabilitation facility or considered for ESD.

Those selected for inpatient rehabilitation will typically be those who may not have adequate support structures at home, who are likely to require significant equipment or major adaptations all of which may be mitigated following a major period of intense rehabilitation and/or have higher levels of disability.

All patients should be admitted to an inpatient rehabilitation unit where this is clinically indicated. All patients should remain in a rehabilitation facility until they have reached their rehabilitation potential or have goals set that will empower them to continue their rehabilitation on their own. All rehabilitation units will provide 7day/week therapy services. Patient’s progress and ongoing care needs will be kept under review and continually reassessed by the multi-disciplinary health and social care team. Patients are to have the information they need to make informed decisions about their care and treatment and, where appropriate, to support them to manage their condition themselves. Wherever possible the patient returning to their own home will be the goal.

7.13 Secondary prevention
There is a shared responsibility to minimise the risk of a repeat stroke. A number of measures will be put in place prior to discharge from inpatient or outpatient hospital care:

- An individualised plan for stroke prevention should be in place within 7 days post TIA or acute stroke.
- Management of BP as appropriate
- Anticoagulation should be started for patients with atrial fibrillation unless contraindicated
- Commence statins where indicated
• Support with lifestyle advice/changes i.e. giving up smoking, taking regular exercise
• Carotid endarterectomy performed within 48hrs of TIA where indicated
• Management of obesity
• Use of Expert Patient Programme – for development of self management and self care strategies
• Promotion of Voluntary/Third Sector to play a part in stroke prevention strategies

Additionally all GP practices will hold an up-to-date register comprising the following:

☐ Medication, age and sex of patient (assume if patient on register these are minimum details retained)
☐ Professionals currently involved in supporting the patient in the community at each visit
☐ Social Factors [target 80% in year 1 and 90% in year 2]
  - Driving status [target 90%]
  - Employment status (for links to social services)
  - Social circumstance e.g. lives alone, with family, etc. (as predictor of social morbidity
  - Secondary prevention parameters [see below]
  - Stigma (feelings about own condition, attitudes from others)
  - Patients who are currently under hospital care – Including the name of the consultant[s] they are under
  - Medication

Key interventions will include:

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>Further reduction of blood pressure should be undertaken using a thiazide diuretic or an ACE inhibitor (National Clinical Guideline for Stroke)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target BP should be &lt; 130/80 (JBS2) variance for those with diabetes as below?</td>
</tr>
<tr>
<td>Cholesterol lowering</td>
<td>Treatment with a statin should be given to patients with ischaemic stroke or TIA and total cholesterol of &gt;3.5mmol/l unless contra-indicated (National Clinical Guideline for Stroke)</td>
</tr>
<tr>
<td>Anti-thrombotic therapy</td>
<td>The combination of modified-release (MR) dipyridamole and aspirin is recommended for people who have had an ischaemic stroke or a transient ischaemic attack for a period of 2 years from the most recent event. Thereafter, or if MR dipyridamole is not tolerated, preventative therapy should revert to standard care (including long-term treatment with low-dose aspirin or clopidogrel) (NICE Technology Appraisal)</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>People with previous ischaemic stroke/TIA in AF should be anticoagulated with adjusted dose warfarin unless there are contra-indications</td>
</tr>
</tbody>
</table>

7.13 Long term management
Rehabilitation should continue until it is clear that maximum recovery has been achieved. Some patients and their carers will need ongoing support, possibly for many years. They should have access to a contact person for stroke services e.g. a stroke co-ordinator who can: provide advice, arrange reassessment when needs change, co-ordinate long-term support, arrange for specialist care. Any patient reporting a disability at 6 months post-stroke should be re-assessed and offered further targeted rehabilitation where this can help them recover further function. Likewise discharged patients should be contacted periodically to assess any ongoing or emerging healthcare needs and to reinforce secondary prevention messages. Health and social care services will work together to provide care and support to enable people to achieve maximum choice and control in decisions regarding achieving as much independence as possible.
Long term support will include:

- providing patients and carers with the name of a contact person for stroke services, e.g. stroke co-ordinator
- hospital outreach/community teams providing input to patients in their own homes
- regular reviews of medication and nutritional well-being
- providing patients with advice, support and treatment to reduce risk of further stroke
- providing social and emotional support to minimise loss of independence and help manage the consequences of stroke
- income and benefit maximisation
- provision of appropriate care package or advice and planning support to set up direct payment to meet ongoing needs
- support for carers and access to appropriate services that recognise their needs both in their role as carer and in their own right
- ensure that accommodation after discharge meets individual needs and that adaptations and community equipment services are provided where appropriate.
- refer on to stroke groups or support clubs.
- annual health and social care check
- signposting relevant statutory and voluntary services available
- providing advice and support re employment, retraining, or educational opportunities
- provide information about re-accessing services post discharge should the need arise – generally via GP.

7.14 End of life care
20-30% of people who have a stroke will die very shortly after onset of symptoms or within the first month (1). Whilst the provision of palliative care has not been considered as part of this development planning it is absolutely the case that patients who have experienced a stroke and will die as a result should have access to care provided in the most appropriate environment, which should be at, or as close to, home as possible. If the patient has been transferred to hospital their care should be provided in line with the end of life care pathway.

8. Development plan
Each of the provider organisations has been engaged in developing their local high level development plans which will enable them to deliver the standards described in the Care Pathway and detailed above under service specification. These have been agreed internally to each organisation but will require significant additional working-up into detailed project plans against which they can be monitored and evaluated.

The tables below detail the extent of early planning indicating when the high level targets will be achieved in broad pursuit of the standards. It is understood that there are a number of critical factors, which need to be in place to support their delivery:

- **Funding where indicated.** PCT’s are in the process of agreeing Operating Plans for 08/09 and each has identified a budget for improving stroke services. The extent to which this will meet the service development needs has yet to be specified in detail or, indeed, the impact on the overall timetable if funding is insufficient to support the change. In addition all provider services are expected to identify efficiencies within current services to support the change. The current stroke tariff assumes a service consistent with best practice although not necessarily consistent with the complete expectations of the new National Stroke Strategy (1). It is for provider services to identify, in conjunction with PCT’s, how they will derive efficiencies to contribute to the overall cost of service improvements.

- **Available resources** There will be a huge reliance on new and specialist staff to support stroke development and the operation of the new enhanced services. It is likely that this level of expertise will not be readily available. As such recruitment delays may compromise delivery of target dates or new staff may need training and development to meet the requirements of the posts.

- **Co-ordination of all plans** Elements of the new service will be heavily dependant on each other, often across organisational boundaries; this will need careful management to
ensure that good coordination is maintained. If this is not managed appropriately the maximum potential from the development will not be derived and potentially could be detrimental to the longer-term success of the whole process.
## 8.1 Acute services

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Kent &amp; Medway wide</th>
<th>DVH</th>
<th>Maidstone</th>
<th>K&amp;S</th>
<th>Medway Maritime</th>
<th>EKH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immediate</strong></td>
<td>● Approve Network. ● Finalise Development Plans for FFF Steering Group</td>
<td>● CT scan within 24hrs for all A&amp;E stroke admissions 7days pw</td>
<td>● CT scan within 24hrs for all A&amp;E stroke admissions 7days pw</td>
<td>● Continue with 9-5 thrombolysis service ● Continue 24hr CT scanning for all A&amp;E stroke admissions if symptom onset time unknown</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>April 08</strong></td>
<td>● Establish Network and appoint Director ● Progress work in development plans agreed for pan-K&amp;M Network inc: public awareness raising, developing patient information</td>
<td>● 2008 Sentinel audit ● Provide ‘same day’ TIA service, weekdays only. Same visit – Doppler, MRI appointment given. ● CT scan within 24hrs for all A&amp;E stroke admissions 7days pw ● agree 1wte Consultant appoint – progress appoint for rota to commence in Nov 08</td>
<td>● 2008 Sentinel audit ● Stroke unit opened with acute and rehab facility ● Provide ‘same day’ TIA service, weekdays only. Same visit – Doppler, MRI scan appointment given ● agree 1wte Consultant appoint – progress appoint for rota to commence in Nov 08</td>
<td>● 2008 Sentinel audit ● 6 bed stroke unit opened and operational ● Provide ‘same day’ TIA service, weekdays only. Same visit – Doppler &amp; CT scan</td>
<td>● MAY - Provide ‘same day’ TIA service, 7/7. ● MAY - extend thrombolysis service to 8-8 7/7 including 3hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Review and develop stroke services to enable provision of 7/7 therapy ● Complete training needs analysis for all acute based staff</td>
<td></td>
</tr>
<tr>
<td><strong>November 08</strong></td>
<td>● All processes and structures in place to support the 2 K&amp;M Clinical Rota’s ● Expert specialist stroke team in place ● TIA clinics provided weekdays, same visit Doppler &amp; MRI. W/E’s &amp; BH’s in rotation with WK Stroke Services Rota. ● 6hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Full thrombolysis service offered weekdays at DVH and W/E’s &amp; BH’s in rotation with WK Clinical rota</td>
<td>● Expert specialist stroke team in place ● TIA clinics provided weekdays, same visit Doppler &amp; MRI. W/E’s &amp; BH’s in rotation with WK Stroke Services Rota. ● 6hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Full thrombolysis service offered weekdays at Maidstone and W/E’s &amp; BH’s in rotation with WK Clinical rota</td>
<td>● Expert specialist stroke team in place ● TIA clinics provided weekdays, same visit Doppler &amp; MRI. W/E’s &amp; BH’s in rotation with WK Stroke Services Rota. ● 6hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Full thrombolysis service offered weekdays at Medway and W/E’s &amp; BH’s in rotation with WK Clinical rota</td>
<td>● Full thrombolysis service offered weekdays at Medway and W/E’s &amp; BH’s in rotation with WK Clinical rota</td>
<td>● Specialist therapy service available on the acute stroke units 7/7 ● MRI &amp; MRA for all TIA’s on day of attendance</td>
<td></td>
</tr>
</tbody>
</table>
8.2 Primary & Community Care services

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Primary Care</th>
<th>West Kent PCT Provider Services</th>
<th>Medway PCT Provider Services</th>
<th>East &amp; Coastal Kent PCT Provider Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>● Audit clinical rota models. Consider future options for delivery.</td>
<td>● 3hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Full in-patient rehabilitation supported within tariff ● Review service provision</td>
<td>● 3hr CT scanning for all A&amp;E stroke admissions if symptom onset time known ● Full in-patient rehabilitation supported within tariff ● Review service provision</td>
<td>● Agree appropriate configuration of services</td>
</tr>
<tr>
<td>By April 08</td>
<td>● Agree approach to incentivisation of GP’s to implement primary prevention arrangements</td>
<td>● Action plan agreed and in place to implement agreed configuration plans ● Complete training needs analysis for all community staff</td>
<td>● Complete training needs analysis for all community based staff ● Review and develop stroke services to enable provision of 7/7 therapy ● Spasticity services</td>
<td>● Agreement of Specialist Psychologists and support staff ● Appointment of 3 community based nurse consultants</td>
</tr>
<tr>
<td>By July 08</td>
<td>● Awareness raising and training for GP’s on management of TIA (WK &amp; Medway PCT) ● Programme of information and updating on stroke care pathway (WK &amp; Medway PCT)</td>
<td>● Agree configuration and re-design of community neuro teams by JUNE 08. ● Appointment of Specialist Psychologists and support staff ● Establish multidisciplinary community neuro teams in each locality- identify core membership ● Develop specific health and social care pathways to community beds appropriate to needs of patient e.g. rehab, slow stream rehab, recuperative, long term placement</td>
<td>● Improve access to psychological support. Assess gap &amp; to determine if additional support required</td>
<td>● Appointment of Specialist Psychologists and support staff</td>
</tr>
<tr>
<td>November 08</td>
<td>● First tranche training completed ● Multidisciplinary community neuro teams in each locality- with core membership operational ● Development of business plan to</td>
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</tr>
</tbody>
</table>

**Kee m M e d s S t r o o k k e S e r v i c e s D e v e l o p m e n t P l a n**

January 2008
support the above
• develop transfer protocols between general, community neuro and rapid response teams to ensure seamless continuity of service as appropriate to patient need

### Beyond 09/10

<table>
<thead>
<tr>
<th>Kent &amp; Medway wide</th>
<th>SEC Ambulance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Full 7/7 therapy services in all community rehab settings, including home where indicated</td>
<td>• 3x Community based Nurse Consultants to be in post</td>
</tr>
<tr>
<td>• Further assessment of potential gaps arising from full implementation of Kent and Medway Stroke Strategy.</td>
<td>• Full 7/7 therapy services in all community rehab settings, including home where indicated</td>
</tr>
<tr>
<td>• Securing wider range of in patient facilities outside of acute environment to sustain required levels of rehab for individual need</td>
<td>• as above for optometry</td>
</tr>
<tr>
<td>• Capital development of fit for purpose rehab facilities – one 'hub' per locality.</td>
<td>• Business plan in place to support.</td>
</tr>
</tbody>
</table>

#### 8.3 K&M wide services

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Kent &amp; Medway wide</th>
<th>SEC Ambulance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immediate</strong></td>
<td>• Approve Network.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Finalise Development Plans for FFF Steering Group</td>
<td>• Undertake assessment of training needs for all staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All stroke calls to be categorised to at least Category B</td>
</tr>
<tr>
<td><strong>April 08</strong></td>
<td>• Establish Network and appoint Director</td>
<td>• Develop training plan for TIA’s recognition and treatment in the first instance</td>
</tr>
<tr>
<td></td>
<td>• Progress work in development plans agreed for pan-K&amp;M Network inc: public awareness raising, developing patient information</td>
<td>• Local development arrangements in place to implement a revised response (category A transport) more applicable to stroke care</td>
</tr>
<tr>
<td><strong>November 08</strong></td>
<td>• All processes and structures in place to support the 2 K&amp;M Clinical Rota’s</td>
<td>• Establish protocols to enable by-pass of A&amp;E to on-take hospital in WK&amp;M in time for rota to commence in December 07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All stroke calls categorised as Category A transport (unless superseded by a national re-categorisation for stroke patients) – dependent on successful implementation of new CAD system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TIA training schedule to be in place with training underway</td>
</tr>
<tr>
<td><strong>Beyond 09/10</strong></td>
<td>• Audit clinical rota models. Consider future options for delivery.</td>
<td>• All TIA training completed, programme of training in place for stroke</td>
</tr>
<tr>
<td>Kent &amp; Medway Stroke Services Development Plan</td>
<td>January 2008</td>
<td></td>
</tr>
</tbody>
</table>
9. Conclusion
This document sets out an ambitious and challenging timetable of development work for all providers. The detail however is limited.

Each provider organisation will now need to develop clear and detailed project plans to describe how they will achieve each of the targets, highlighting internally the resources and actions needed to achieve the targets. Support will be available from the Network team once established.

Commissioners will be working closely with providers to manage implementation and ensure the developments are delivered to plan.
10. References

5. ‘Reducing Brain Damage: Faster access to better stroke care’: National Audit Office. 2005

11. List of Appendices

1. K&M Stroke Care Pathway
2. South East Coast Ambulance Care Pathway - existing
3. South East Coast Ambulance Integrated Care Pathway – under development
# 12. Contributors

<table>
<thead>
<tr>
<th>Name</th>
<th>Role/Position</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akhurst Pam</td>
<td>Commissioning Lead Physical Disability and Long Term Conditions</td>
<td>East &amp; Coastal Kent PCT</td>
</tr>
<tr>
<td>Benson Elissa</td>
<td>Clinical Lead for Stroke Services</td>
<td>West Kent PCT</td>
</tr>
<tr>
<td>Carmichael Sheena</td>
<td>PPI representative</td>
<td></td>
</tr>
<tr>
<td>Cartmel Carmen</td>
<td>Deputy Team Coordinator for the Community Neurorehabilitation Team</td>
<td>West Kent PCT</td>
</tr>
<tr>
<td>Chris Thom</td>
<td>Consultant – stroke specialist</td>
<td>Maidstone &amp; Tunbridge Wells NHS Trust</td>
</tr>
<tr>
<td>Davis David</td>
<td>Stroke Care Development Lead/Paramedic</td>
<td>SEC Ambulance NHS Trust</td>
</tr>
<tr>
<td>Dixon-Jones Maureen</td>
<td>Matron</td>
<td>West Kent PCT</td>
</tr>
<tr>
<td>Duckworth Steven</td>
<td>Nurse Consultant in Stroke Care</td>
<td>Medway PCT</td>
</tr>
<tr>
<td>Groom Peta</td>
<td>PPI representative</td>
<td></td>
</tr>
<tr>
<td>Hanson Emma</td>
<td>Policy Manager</td>
<td>Kent Adult Social Services</td>
</tr>
<tr>
<td>Hargroves David</td>
<td>Consultant – stroke specialist</td>
<td>East Kent Hospitals NHS Trust</td>
</tr>
<tr>
<td>Hicks-John Zoe</td>
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<tr>
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<td>Jenkins Fiona</td>
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<td>Jones Sharon</td>
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<td>Lindon-Taylor Debbie</td>
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<td>Maskell Peter</td>
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<tr>
<td>Sandifer Quentin</td>
<td>Deputy Regional Director of Public Health</td>
<td>South East Coast SHA</td>
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<td>Saunders Emma</td>
<td>NHS Management Trainee</td>
<td>West Kent PCT</td>
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<tr>
<td>Wheat Geoffrey</td>
<td>Director</td>
<td>K&amp;M Cardiac Network</td>
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