

# Services for People with Stroke (Acute Phase) & TIA

## West Midlands Overview Report

Report Date: March 2011 Visit Dates: May to November 2010

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# SERVICES FOR PEOPLE WITH STROKE (ACUTE PHASE) & TRANSIENT ISCHAEMIC ATTACK

## WEST MIDLANDS OVERVIEW REPORT

### KEY POINTS

- 1 This report summarises the conclusions of the 2010 peer review visits to West Midlands services for stroke (acute phase) and transient ischaemic attack (TIA). These visits reviewed compliance with WMQRS Quality Standards which were based on the National Stroke Strategy and latest NICE guidance. The sections which follow give the evidence behind the 'key messages'. The percentage compliance with applicable Quality Standards for acute Trusts ranged from 31% to 93%.
- 2 Stroke services across the West Midlands are improving, supported by Cardiac and Stroke Networks, but most still have some way to go to achieve full implementation of NICE guidelines and the National Stroke Strategy.
- 3 'Stop-start' thrombolysis services create more complex pathways, with resulting difficulties for ambulance and Emergency Department staff. 24/7 thrombolysis could be achieved in all hospitals with acute stroke units through involvement of consultants from Emergency Departments, acute medicine and / or care of the elderly, with appropriate additional training, in the decision to thrombolysate. Rapid response from imaging services is essential. Involving a senior nurse from the acute stroke unit in managing the pathway from arrival at the hospital is likely to be helpful.
- 4 The West Midlands is approximately 50 stroke consultants short of the number needed for the current configuration of services and current ways of working. The expected availability of consultant stroke specialist care will not be achieved in the foreseeable future unless there is much more cross-service or network-wide working and /or reconfiguration of stroke services. The current number of stroke consultants is roughly sufficient if **either** some services combine **or** out of hours consultant rotas cover more than one hospital and consultants undertake a ward round in each of these hospitals at weekends. This would, of course, have implications for general medical rotas.
- 5 Work already taking place to ensure that nursing staff on acute stroke units have appropriate competences needs to continue.
- 6 Investment is needed in weekend physiotherapy, occupational therapy and speech and language therapy services so that patients with acute stroke can have an appropriate rehabilitation assessment within 24 hours of admission.
- 7 Many health economies are finding difficulty achieving TIA assessment for high risk patients at weekends. Given the small numbers of patients involved, models which utilise vascular in-patient service expertise in vascular imaging linked with the ward round of the stroke consultant (see above) should be achievable at minimal cost.
- 8 All clinicians, managers and commissioners need to recognise that stroke is an acute emergency and that lives can be saved and long term disability prevented by improving the acute services available for patients with stroke and TIA.

## INTRODUCTION

- 9 This report summarises the findings of the 2010 peer review visits to West Midlands services for people with stroke (acute phase) or TIA. This review programme was sponsored by the Regional Acute Stroke Steering Group on behalf of the West Midlands Cardiac and Stroke Networks. These visits reviewed compliance with the WMQRS Quality Standards – Services for People with Stroke (Acute Phase) and Transient Ischaemic Attack (2010) and identified related issues. The Quality Standards were based on the West Midlands service specifications for stroke thrombolysis and acute care (2009) and for services for patients with transient ischaemic attack and non-disabling / minor stroke (2010) which were, in turn, based on the *National Stroke Strategy*, NICE guidelines '*Diagnosis and initial management of acute stroke and transient ischaemic attack*' (2008) and Royal College of Physicians '*National Clinical Guidelines for Stroke*' (2008).
- 10 The aim of the standards and peer review programme was that:
- Service providers and commissioners will work together to improve service quality.
  - Quality review visits will give an independent view of service quality.
  - Reviewers will learn from taking part in review visits.
  - Good practice will be shared.
  - Patients and their families and carers will know more about services they can expect.
  - Commissioners will have better service specifications.
  - Service providers and commissioners will have better information to give to the Care Quality Commission and Monitor.
- 11 The reports of the review visits to each health economy are available on the WMQRS website [www.wmqi.westmidlands.nhs.uk/wmqrs](http://www.wmqi.westmidlands.nhs.uk/wmqrs). The visits identified many examples of good practice. This Overview Report inevitably dwells on some of the difficulties facing stroke and TIA services in the West Midlands. It must be read with the understanding that NHS organisations in the West Midlands agreed to undertake the peer review visits in order to help improve the quality of clinical services. We are the first region to have such a programme and knowledge of the strengths and weaknesses of our services will give us a greater chance of making them better.
- 12 This report describes the situation at the time of the peer review visits (May to November 2010). Services may have changed and developed since these visits, especially as Networks have been working towards implementation of the National Stroke Strategy and Accelerated Stroke Improvement Programme. The peer review reports are also only one source of information about stroke services with other information including Vital Signs and the results of the Stroke Sentinel Audit (organisational and clinical). This report does not include specific recommendations. The issues raised in the report will be addressed by the West Midlands Cardiac and Stroke Networks assessed by the Regional Acute Stroke Steering Group.
- 13 Visits took place to all health economies across the West Midlands except for South Birmingham health economy (Table 1). Table 2 shows the dates on which services were visited. The stroke reviews took place alongside reviews of urgent care, critical care and vascular services and links between services were considered.
- 14 Stroke services were generally reviewed by a stroke consultant and a stroke nurse, stroke coordinator or allied health professional (AHP) with particular expertise in the care of patients with stroke. An imaging specialist was sometimes part of the review team and commissioner, governance and management reviewers covered all pathways being reviewed. On later visits these reviewers were joined by one of the Cardiac and Stroke Network Directors. On two visits a stroke specialist was not available and this role was covered by a general physician. A specialist nurse or AHP was not available for one visit. Twenty-six stroke-specific reviewers did reviewer training and twenty-three stroke reviewers undertook at least one visit. This review programme could not have taken place without the reviewers and the willingness of organisations to release their staff and the time and expertise which they contributed is gratefully acknowledged.

**Table 1 Stroke and TIA Reviews**

Service	No. reviews	Comments
Primary Care	18	North and South Warwickshire were reviewed separately. South Staffordshire East and West were reviewed separately.
Acute Trust	19	Two Trusts had stroke services on two sites and one Trust on three sites. Services at Mid Staffordshire NHS Foundation Trust were reviewed even though patients with acute stroke were not admitted at the time of the visit.
Commissioning	17	North and South Warwickshire were reviewed separately. South Staffordshire East and West were reviewed separately. North Staffordshire and Stoke PCTs were reviewed together. South Birmingham PCT was not reviewed.

**Table 2 Visit dates**

Health Economy	Acute Trust	Visit dates 2010
South Warwickshire	South Warwickshire NHS Foundation Trust	11 May
North Warwickshire	George Eliot Hospital NHS Trust	20 May
Herefordshire	Hereford Hospitals NHS Trust	16 June
Worcestershire	Worcestershire Acute Hospitals NHS Trust	22 & 23 June
South Staffordshire (West) Locality	Mid Staffordshire NHS Foundation Trust	30 June
North Staffordshire	University Hospital of North Staffordshire NHS Trust	7 July
South Staffordshire (East) Locality	Burton Hospitals NHS Foundation Trust	14 July
Coventry and Rugby	University Hospitals Coventry & Warwickshire NHS Trust	7 September
Wolverhampton	The Royal Wolverhampton Hospitals NHS Trust	22 September
Shropshire	Shrewsbury & Telford Hospitals NHS Trust	28 & 29 September
Dudley	Dudley Group of Hospitals NHS Foundation Trust	6 October
Heart of Birmingham and Sandwell	Sandwell & West Birmingham Hospitals NHS Trust	13 & 14 October
Walsall	Walsall Hospitals NHS Trust	19 October
Birmingham East & North and Solihull	Heart of England NHS Foundation Trust	16 & 17 November

## PRIMARY CARE

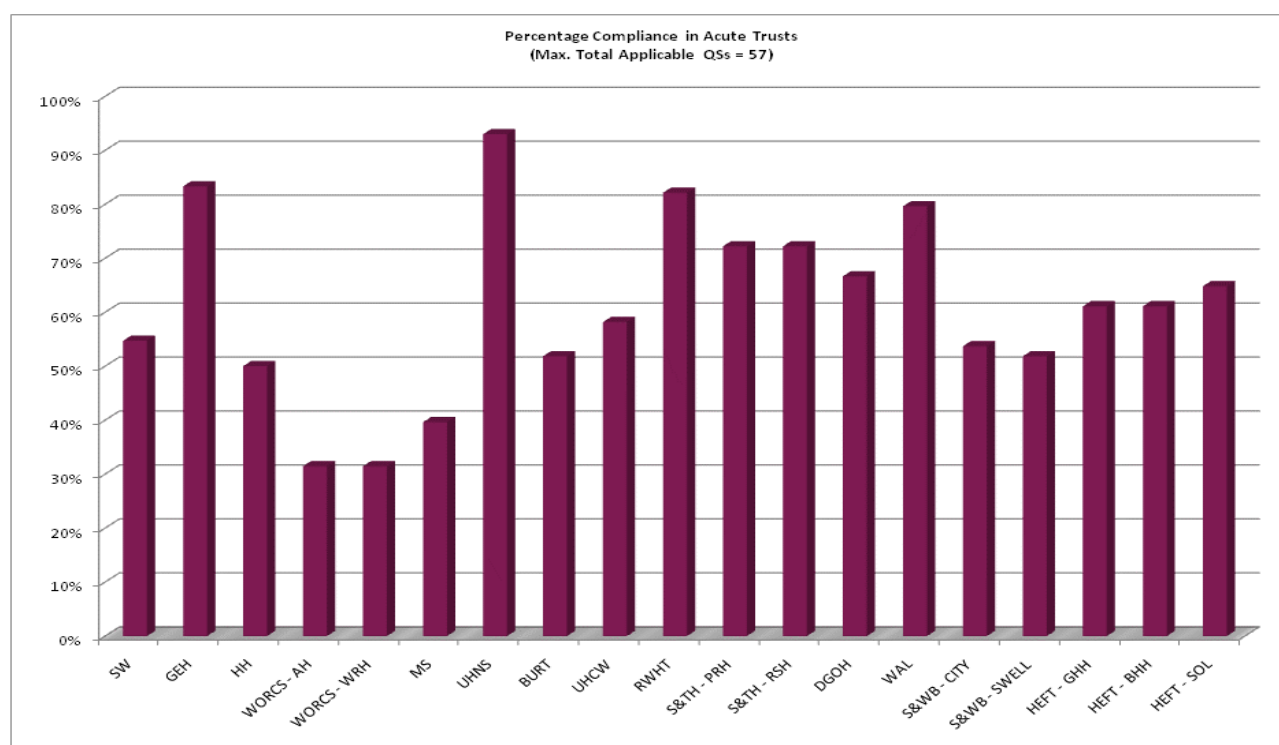
- 15 Only three Quality Standards are applicable to primary care services. The reviewers did not, however, meet GPs or look in detail at the primary care part of the stroke pathway. Each Standard was met in 12 of the 18 primary care reviews. It was clear during the visits that some health economies had already done a lot of work with their primary care services and others were just beginning to tackle this area.

## ACUTE TRUSTS

### Compliance with Quality Standards

16 The percentage compliance with the applicable Quality Standards for acute Trusts ranged from 31% to 93% with four services achieving 80% or more of the applicable Standards (Figure 1)<sup>1</sup>. Comparisons of percentage compliance should, however, be viewed with caution as Quality Standards are not of equal importance. Overall risk scores are also being developed for each service. Risk scores and percentage compliance taken together give a more reliable indication of the structure and process aspects of the quality of care for patients with stroke and TIA. On this basis, the service at University Hospital of North Staffordshire NHS Trust is commended for the standards of care that have been achieved. The service at Mid Staffordshire NHS Foundation Trust was not accepting admissions of patients with stroke at the time of the review and so should not be directly compared with other Trusts. Appendix 1 shows the number of services meeting each individual Quality Standard.

**Figure 1: Percentage Compliance with Quality Standards in each Acute Trust**



### Stroke (Acute Phase) Services

17 The West Midlands Ambulance Service had clear protocols for the management of patients with stroke and good awareness of pathways for patients potentially suitable for thrombolysis. Reviewers did find difficulties in some hospitals where thrombolysis was not available at all times, including confusion about what ambulance crews should do just before cut-off time for thrombolysis. There is the potential for a patient to be taken to one hospital only to find that, by the time they are seen, thrombolysis is no longer available whereas, if they had

<sup>1</sup> All graphs of percentage compliance are in visit order. Early visits (especially South Warwickshire and North Warwickshire) had significantly less time to prepare than those services reviewed later in the programme. Percentages are slightly different to those in the published reports for some health economies. For consistency, compliance with Qs CN-202 and CN-203 has been combined. In multi-site Trusts, all Qs have been counted for each service. Where published reports included multi-site compliance, these have been separated using the comments in the report to give a percentage compliance for each service. Also, QS CN-603 was incorrectly recorded as met in one report.

been taken directly to a hospital further away, they may have received thrombolysis. This has to be balanced with 'time is brain' and the benefit of getting a patient as quickly as possible to a hospital offering thrombolysis. 'Stop – start' thrombolysis services undoubtedly made the stroke pathway more complicated for the ambulance service and for Emergency Department staff. Robust procedures need to be developed to ensure patients are transferred to the right place for hyper-acute care if the 'stop-start' model of care is to continue.

- 18 Half of the services reviewed met the Quality Standard for clinical guidelines in use in the Emergency Department for the management of patients with suspected stroke and suspected TIA. Relevant Emergency Department staff did not always have a clear understanding of the stroke pathway and the need to act quickly. In some hospitals this was compensated for by active involvement of a senior stroke nurse, usually from the stroke unit, starting from the 'alert' that a patient with stroke was about to arrive. For example, at Warwick Hospital and Princess Royal Hospital, Telford nurse-led management of the early part of the acute stroke pathway was well-developed. This model may be valuable elsewhere, especially because change-over of junior and middle grade doctors in Emergency Departments and acute medical admissions units is likely to make maintaining awareness of the local stroke pathway an ongoing problem.
- 19 At the time of the review visits, thrombolysis was available at all times in eight of the services reviewed (Table 3). Three hospitals had robust pathways for patients potentially eligible for thrombolysis to be taken elsewhere. Eight services provided thrombolysis for limited hours, often 9am to 5pm Monday to Friday, with patients being taken to the nearest hospital where thrombolysis was available at other times – which could be over an hour away.

**Table 3 Thrombolysis Availability**

Thrombolysis Availability	Health Economy	Thrombolysis available at:
24 / 7 continuous	Coventry & Warwickshire	University Hospital, Coventry
	North Staffordshire	University Hospital of North Staffordshire
	South Staffordshire (West)	UHNS & RWHT
	Solihull	Solihull Hospital (HEFT)
	Heart of Birmingham and Sandwell	City Hospital and Sandwell Hospital (S&WB)
	Walsall	Manor Hospital (WAL)
	Wolverhampton	New Cross Hospital (RWHT)
	Dudley	Russells Hall Hospital (DGOH)
24 / 7 including 'stop-start'	Birmingham East & North	Good Hope Hospital or Birmingham Heartlands Hospital (HEFT) 9am – 5pm, Monday to Friday. Patients transferred to Solihull Hospital (HEFT) at other times
Limited hours with transfer to 'nearest hospital offering thrombolysis' outside these times	Herefordshire	Hereford Hospital 9am – 5pm, Monday to Friday.
	Worcestershire	Worcestershire Royal Hospital or Alexandra Hospital Redditch (WORCS) 9am – 5pm, Monday to Friday.
	Shropshire	Royal Shrewsbury Hospital or Princess Royal Hospital, Telford (S&TH) 8am – 8pm, Monday to Friday.
	South Staffordshire (East)	Queens Hospital, (BURT) 9am – 5pm, Monday to Friday with additional cover from Specialist Registrar 5pm – 8pm.

- 20 Ten of the 16 services which provided thrombolysis had a senior healthcare professional with specialist training and expertise in stroke diagnosis and stroke thrombolysis available for the times when the service admitted patients who may need thrombolysis<sup>2</sup>. A range of healthcare professionals was involved. Some services ran a consultant-led model involving only stroke specialists. Some involved acute physicians and Emergency Department consultants as well. One Trust involved middle grade doctors and consultants in acute medicine and the Emergency Departments who undertook a one day training course in stroke thrombolysis. Reviewers did not consider that this was sufficient training but it does demonstrate the range of approaches which are being taken.
- 21 The definition of a “senior healthcare professional with specialist training and expertise in stroke diagnosis and stroke thrombolysis” has significant implications for the configuration of services offering thrombolysis and therefore for the distance which patients potentially eligible for thrombolysis have to travel. The current variation in approaches across the region cannot be justified and further work is needed to clarify the competences which are expected and therefore the types of healthcare professional who can undertake this role.
- 22 Only three of the 19 services, UHCW, UHNS and Solihull, had the expected availability of stroke consultants<sup>3</sup> for management of complications of thrombolysis and care of other patients with acute stroke. Many services had only one or two stroke consultants although some had plans to increase their consultant staffing. There were particular problems at night and weekends but some services were struggling to provide consultant stroke specialist cover during normal working hours, especially at times of sickness, annual leave or study leave. As a result, only three services achieved a daily ward round by a senior member of the stroke team (consultant stroke specialist or specialist registrar with appropriate experience)<sup>4</sup>. Sometimes this was met because consultants were working significantly over and above their contracted hours. Unless we have confidence in the availability of specialist registrars with appropriate experience, the West Midlands is approximately 50 stroke consultants short of the number needed for the current configuration of services and current ways of working.<sup>5</sup> The expected availability of consultant stroke specialist care will not be achieved in the foreseeable future unless there is much more cross-service or network-wide working and /or reconfiguration of stroke services.
- 23 The competences needed for stroke diagnosis and stroke thrombolysis then becomes crucial. If acute medicine and Emergency Department consultants with appropriate additional training have these competences, then the current number of stroke specialists is broadly sufficient to provide out of hours care for patients with complications of thrombolysis and weekend ward rounds **if either** the number of acute stroke services is reduced **or** stroke consultants cover more than one service. Health economies will not want to reduce the availability of acute stroke care if this results in a clinically unacceptable increase in travel times. In two multi-site Trusts reviewers suggested combining acute stroke services may be feasible. Shared out of hours rotas would, of course, have implications for these consultants’ general medical commitments and for general medical rotas but is a more realistic option for some parts of the region. Significant effort may be needed to overcome organisational and personality barriers to this being achieved.
- 24 The speed of response of imaging services to the arrival of a patient with stroke was also variable and three services did not have the expected availability of CT scanning and reporting. Some services had a very rapid response achieved, for example, through including a CT radiographer in the ‘stroke alert’ (Burton Hospitals NHS Foundation Trust) and nurse requesting of CT scans (Walsall Hospitals NHS Trust). In others, CT scanning met a

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<sup>2</sup> UHNS, UHCW, RWH, PRH, RSH, DGOH, WAL, GHH, BHH, SOL

<sup>3</sup> Expected availability is as follows: at all times for services offering thrombolysis and on all days when emergency admissions are accepted and the following day for services which did not provide thrombolysis.

<sup>4</sup> UHNS, UHCW, WAL

<sup>5</sup> Calculated on the basis of: 3 services had sufficient consultants for their model of service (UHNS, UHCW, MS), 16 others had approximately 2 consultants each. 5 consultants needed for 7 day rota (assuming current configuration and ways of working). Shortfall: 3x16=48.

range of delays, for example, services where nurses were not allowed to request CT scans or where consultant to consultant referral was needed for out of hours CT scanning – with associated delays.

- 25 Services were trying to increase the proportion of patients admitted directly to the Acute Stroke Unit but often had difficulty keeping a bed free for an acute stroke patient because of hospital-wide pressures on capacity. Services also varied in the extent to which patients with stroke admitted to other wards, or those who had a stroke during their hospital stay, received swallow screening, rehabilitation assessment and care from the stroke team. Only Mid Staffordshire NHS Foundation Trust had robust arrangements for identifying these patients. Their stroke team was proactive in going round the wards in the hospital to identify stroke patients and physiotherapy, speech and language therapy and occupational therapy were available daily for patients with stroke.
- 26 Only five<sup>6</sup> of the 19 services could show that their Acute Stroke Units were staffed by sufficient nurses and HCAs with appropriate competences in the care of patients with stroke. Reviewers were particularly impressed by the competence framework in use at University Hospital of North Staffordshire NHS Trust. Several services were developing competence frameworks and had plans to undertake additional training but seven services had neither nursing staff with appropriate competences or a training plan<sup>7</sup> - although all were making progress. Reviewers were very concerned about low nurse staffing levels on the Acute Stroke Unit in two services<sup>8</sup>.
- 27 Ten services had a healthcare professional on each shift with competences in swallow screening and nearly all services had plans to achieve this Standard. Ten services had at least one nurse with competences in the management of acutely ill and deteriorating patients on each shift. A stroke coordinator (or equivalent) with cover for absences was available in ten of the services reviewed.
- 28 No hospital in the West Midlands which admitted acute stroke patients could guarantee a rehabilitation assessment within 24 hours of admission<sup>9</sup>. Physiotherapy, speech and language therapy and occupational therapy were usually available on weekdays but often not at weekends and bank holidays, and four<sup>10</sup> services did not have weekday availability of speech and language therapy.
- 29 Seven services had all of the clinical guidelines and protocols expected by the Quality Standards<sup>11</sup>. Others were missing between one and seven of the eight sets of guidelines.
- 30 Sixteen of the 19 services reviewed had multi-disciplinary meetings at least weekly. Services generally had less formalised neuro-radiology meetings and arrangements for multi-disciplinary discussion with vascular services about patients' suitability for surgery. These Quality Standards were met by nine and eight services respectively.
- 31 Eleven services could demonstrate that they were collecting the expected national data sets regularly<sup>12</sup>. Some stroke co-ordinators spent a great deal of time on data collection. Only eight of the 19 services reviewed could demonstrate a programme of audit of compliance with stroke-related guidelines<sup>13</sup>.
- 32 Information and support for patients and carers was good in most Trusts with most meeting the relevant Quality Standards. The greatest scope for improvement was in the mechanisms for receiving feedback from patients and carers and for involving them in decisions about the organisation of services.

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<sup>6</sup> SW, GEH, HH, UHNS, PRH

<sup>7</sup> N for CN 204 and 208: AH, MS, UHCW, DGOH, SWELL, CITY, WAL.

<sup>8</sup> WRH, RSH

<sup>9</sup> DGOH met the relevant QS but had limited S&LT availability for rehabilitation assessment at weekends.

<sup>10</sup> SW, AH, WRH, WAL

<sup>11</sup> GEH, UHNS, RWHT, GHH, BHH, SOL

<sup>12</sup> SW, GEH, HH, UHNS, BURT, UHCW, RWHT, PRH, RSH, DGOH, WAL

<sup>13</sup> GEH, HH, UHNS, RWHT, PRH, RSH, WAL, SWELL



- 33 The main commissioning-related Quality Standards were not reviewed in these visits; PCTs are expected to agree action plans resulting from stroke and TIA services' annual reports but it was considered too soon for these to have been produced. Most commissioners had strategies for stroke services but these sometimes did not recognise the difficulties providers faced in achieving expected standards and were not clear about expected milestones for achievement. Services varied in the extent to which they were aware of, and taking advantage of, 'best practice tariff' for stroke services.

### TIA Services

- 34 One service, University Hospitals Coventry and Warwickshire NHS Trust, was offering neuro-vascular assessment service for patients with suspected TIA seven days a week. Most other services were offering five day a week TIA assessment although, at the time of the visit, three services were not achieving this, including availability of vascular ultrasound<sup>14</sup>. In seven services reviewers were concerned that the TIA pathway was not robust. Reviewers were concerned about data collection in a few services as it appeared that national definitions of TIA assessment may not have been consistently applied.
- 35 At weekends and bank holidays, services generally faced difficulty with all three aspects of the Quality Standard for TIA assessment:
- A healthcare professional who is a member of the stroke team and has competences in neurovascular assessment
  - Ultrasound duplex devices and a member of staff with competences in vascular ultrasound
  - A consultant stroke physician available for advice

A and c are, in essence, the same issues discussed above about availability of stroke consultants. The same points about network solutions apply, especially as patients with high risk TIA are fit to travel to a service some distance away. Services were generally not cooperating with vascular services where staff with competences in vascular ultrasound may be available at weekends. Patients with high risk TIA were sometimes being admitted at weekends either because of concerns that they may have a stroke or in order to speed up access to investigations.

### Changing Expectations

- 36 The priority apparently being given to improving services for people with stroke and TIA varied considerably across the West Midlands. One reviewer commented: "Some of these units aren't treating stroke as an acute emergency." Key messages such as 'time is brain', 'early rehabilitation prevents long-term disability' and 'action after high risk TIA can prevent a stroke' did not appear to be fully appreciated by some clinical staff, managers and commissioners. Increasing awareness of the improved outcomes which can be achieved by implementing national guidance on care of patients with stroke and TIA may help to drive change. Raising awareness of the very high cost to patients, their carers, and to NHS and social services of **not** making these changes is also needed.

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<sup>14</sup> SW, GEH, GHH

## KEY TO ABBREVIATIONS:

BURT	Burton Hospitals NHS Foundation Trust
DGOH	Dudley Group of Hospitals NHS Foundation Trust
GEH	George Eliot Hospital NHS Trust
HEFT - GHH	Heart of England NHS Foundation Trust – Good Hope Hospital
HEFT - BHH	Heart of England NHS Foundation Trust – Heartlands Hospital
HEFT – SOL	Heart of England NHS Foundation Trust – Solihull Hospital
HH	Hereford Hospitals NHS Trust
MS	Mid Staffordshire NHS Foundation Trust
RWHT	The Royal Wolverhampton Hospitals NHS Trust
S&TH - PRH	Shrewsbury & Telford Hospital NHS Trust – Princess Royal Hospital
S&TH - RSH	Shrewsbury & Telford Hospital NHS Trust - Royal Shrewsbury Hospital
S&WB - CITY	Sandwell & West Birmingham Hospitals NHS Trust – City Hospital
S&WB - SWELL	Sandwell & West Birmingham Hospitals NHS Trust – Sandwell Hospital
SW	South Warwickshire NHS Foundation Trust
UHCW	University Hospitals Coventry & Warwickshire NHS Trust
UHNS	University Hospital of North Staffordshire NHS Trust
WAL	Walsall Hospitals NHS Trust
WORCS - AH	Worcestershire Acute Hospitals NHS Trust – Alexandra Hospital
WORCS - WRH	Worcestershire Acute Hospitals NHS Trust – Worcestershire Royal Hospital

## APPENDIX 1

## COMPLIANCE WITH QUALITY STANDARDS

### PRIMARY CARE

Ref		Total Yes	Total No	Total applicable	% met
CA-101	TIA clinic information	12	6	18	67
CA-501	Guidelines – primary care management of stroke	12	6	18	67
CA-502	Guidelines – primary care management of TIA	12	6	18	67

### ACUTE TRUST

Ref		Total Yes	Total No	Total applicable	% met
CC-201	Lead consultant and lead nurse	18	1	19	95
CE-501	Guidelines – Emergency Department	10	9	19	53
CN-101	Patient information - stroke	18	1	19	95
CN-102	Support service information	18	1	19	95
CN-103	Patient information – stroke service	15	4	19	79
CN-105	Discharge communication	16	3	19	84
CN-199	Patient and carer involvement	14	5	19	74
CN-201	Availability of healthcare professional with specialist expertise in stroke diagnosis and thrombolysis	10	6	16	63
CN-202 or 203	Consultant stroke specialist availability	3	16	19	16
CN-204	Acute stroke unit – nurse & HCA staffing	5	14	19	26
CN-205	Swallow screening available at all times	10	9	19	53
CN-206	Nurse trained in management of acutely ill and deteriorating patients	10	9	19	53
CN-207	Stroke coordinator	10	9	19	53
CN-208	Training and development plan	12	7	19	63
CN-301	CT scanning	16	3	19	84
CN-302	Daily physiotherapy, OT and S&LT	1	18	19	5
CN-303	Dietetics, psychological and social work support	8	11	19	42
CN-304	Level 3 critical care unit	19	0	19	100
CN-501	Guidelines – management of stroke	13	6	19	68
CN-502	Thrombolysis protocol	14	2	16	88
CN-503	Guidelines (1)	11	8	19	58
CN-504	Guidelines (2)	12	7	19	63
CN-505	Guidelines (3)	13	6	19	68
CN-506	Discharge planning	13	6	19	68
CN-598	Driving advice protocol	11	8	19	58
CN-599	End of life care guidelines	18	1	19	95
CN-601	Stroke alert system	18	1	19	95
CN-602	Operational policy	4	15	19	21
CN-603	Daily ward round	3	16	19	16
CN-604	Stroke MDT meeting	16	3	19	84
CN-605	Neuro-radiology MDT meeting	9	10	19	47
CN-609	Multi-disciplinary discussion with vascular services	8	11	19	42
CN-701	Patient pathway monitoring	13	6	19	68

Ref		Total Yes	Total No	Total applicable	% met
CN-702	Data collection	11	8	19	58
CN-703	Audit of clinical guideline implementation	8	11	19	42
CN-704	Review and learning	13	6	19	68
CN-705	Annual Report – stroke service <sup>15</sup>	2	0	2	100
CN-706	Active member of Research Network	14	5	19	74
CN-707	Educational session for primary care	16	3	19	84
CN-708	Educational session for referring services	1	1	2	50
CN-709	Attendance at education session for referring services	2	1	3	67
CN-799	Document control	14	5	19	74

### NEURO-VASCULAR ASSESSMENT SERVICE

Ref		Total Yes	Total No	Total applicable	% met
CP-101	Patient information – TIA	13	6	19	68
CP-102	Management plan	14	5	19	74
CP-103	Interpreter services	19	0	19	100
CP-199	Patient and carer involvement	4	15	19	21
CP-201	TIA assessment available daily (7/7)	1	18	19	5
CP-301	Imaging services	4	15	19	21
CP-302	Lifestyle management services	18	1	19	95
CP-501	Guidelines – TIA assessment	8	11	19	42
CP-598	Driving advice protocol	12	7	19	63
CP-609	Multi-disciplinary discussion with vascular services	8	11	19	42
CP-701	Educational session for primary care	17	2	19	89
CP-702	Data collection	9	10	19	47
CP-703	Audit of clinical guideline implementation	5	14	19	26
CP-704	Review and learning	10	9	19	53
CP-705	Annual Report – TIA service	3	0	3	100
CP-799	Document control	15	4	19	79

### COMMISSIONING

Ref		Total Yes	Total No	Total applicable	% met
CZ-101	Public information – stroke & TIA	16	1	17	94
CZ-102	TIA clinic information	8	9	17	47
CZ-501	Guidelines – primary care management of stroke	14	3	17	82
CZ-502	Guidelines – primary care management of TIA	11	6	17	65
CZ-601	Agreed configuration of services	10	7	17	59
CZ-701	Stroke Service Annual Report Action Plan	1	0	1	100
CZ-702	TIA Service Annual Report Action Plan	1	0	1	100
CZ-703	Educational sessions for primary care	15	2	17	88

<sup>15</sup> Annual report-related Qs were not applicable in 2010/11. Where services already met the QS compliance was 'yes'.