



Delivering World Class Services for Stroke

A Commissioning Strategy

NHS
Birmingham East and North

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A Commissioning Strategy for Stroke

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Dorian Cox, back in his home city of York after the break up of his band The Long Blondes following his stroke in the summer, tells his story;

'The stroke had affected my left side, but while I was very ill, it was hard for the doctors to assess whether it had also affected my mind. I feel extremely lucky that, despite having had a very big stroke, at present it seems that the lasting problems are only physical. I count my blessings that my mind and speech have not been affected. In fact, I feel lucky to be alive at all.

When I left hospital I still couldn't walk and was sent to a residential rehabilitation centre specialising in patients with brain injuries. When I arrived and, for most of my time there, I was the youngest person by some way. After a few weeks, I started to take my first steps.

Naturally, at the first opportunity, I wanted to do some internet research, to see if there were any stories from other young people who have had strokes. I found some, but they were mostly gloomy.

I left the rehab unit after two months, now able to walk with a crutch, but I return every week as an outpatient. My recovery depends on the amount of physiotherapy I receive. The NHS can only provide me with two hours a week, which they have admitted is less than ideal. So I decided to supplement my NHS treatment with private physiotherapy each week. This is expensive, but I feel that for any chance of a full recovery I have to pay. And, at 27, my capacity for recovery is greater than someone of, for instance, 80.

It is awful not being able to do things one takes for granted, such as tying your shoelaces or even putting your arm around a girl. I'm not a religious person, but I pray that it won't always be like this. The worst consequence for me is that I am still unable to play guitar. Doctors and physiotherapists cannot give me a definitive answer as to whether I will be able to play again.

It has been six months since the stroke. I can now move my arm much more than I could even a few weeks ago but my hand is practically useless. It is strange - it doesn't hurt or feel numb, just restricted as if I have a bad sprain. I hate clichés, but I truly believe that staying positive and not giving up is the key to improvement. I will never give up hope that I will, in time, be able to play guitar again.'

A stroke left musician Edwyn Collins unable to walk, read or write. Three years on, he's back with his band. And it's all thanks to drawing birds;

When I draw there is no interference. Since my stroke, I am interfered with quite a lot. And this is not to my taste, although I have been very cooperative. But when I draw, I am in charge; I don't have a therapist or a wife bossing me about. I'm left to my own devices, in a world of my own. Drawing was the first skill to come back to me, so it meant the world. If I can draw, what else can I do? It gave me back my confidence in myself. And my dignity.

One carer's story, BEN PCT

In July 2007 we were at home having a family get together. Mother started to cry, everyone was shocked at this, and then lost her balance and movement. Tried to lift her up to take her to hospital but was unable to, so called an ambulance. The ambulance arrived in about 5 minutes, family were all worried, arrived in A&E and had an assessment by a doctor who diagnosed stroke. Kept mother in for a night in Intensive Care Unit and then transferred her to Ward 23. All family were aware of the condition (stroke). Leaflets were available explaining the condition. Mother did not understand the condition, could not open her eyes, one side paralysed, slowly started to recover on Ward 23. Asian nurses were able to communicate to mother when family were not present; all were very nice and helpful. Food was available in halal meat etc... She was on ward 23 for a total of three weeks. Whilst in hospital we were given information about sending her to a nursing home or to take her home. Option was given to take mother to intermediate care and nurses to visit at home, also home help was offered.

I, (daughter-in-law) found it extremely difficult and have children (one is a two week old baby). I sleep down stairs on the floor with mother and would get up and change garments, nappy and comb her hair, prepare food. Mother is able to feed herself. Sister in law would help with two older children. Mother had rehab in a day centre but nurses could only speak English.

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Executive summary

Stroke is a preventable and treatable disease .With the advent of an increased public awareness of health promotion activities and new clinical ability to address stroke rapidly and effectively when it strikes, the fatalistic approach to this devastating disease recedes, to be replaced by new urgent care and care management models. Models of care have evolved rapidly; moving from a variable level of care based in general medical wards towards active management in dedicated stroke units and use of evidence-based interventions that have been shown to improve outcomes at every stage.

But this is not the whole story. Stroke affects the whole person, every strand of their life, and that of their families, friends, and colleagues. The series of losses which occur can leave the individual depressed and fearful. If our services ignore this vital truth, we will not achieve our aims of ameliorating the devastating effect of stroke.

It is our duty, as commissioners of healthcare, to understand the health needs of our population, and to ensure that we examine and evaluate the evidence, both research and experiential from our senior clinical advisors and the experience of those around the world who are achieving best practice, and agree both our intentions and our model of care. For stroke, this commissioning strategy sets out our findings, and our intent.

This strategy describes how BEN PCT is going to invest its significant commissioning resources to ensure the development and delivery of services for stroke in line with our core purpose and goals that meets the needs of our population. The plan also sets out how the PCT is proposing to deliver improvements against a number of key local and national indicators. These indicators include Department of health vital signs, NICE guidance and the National Stroke Strategy, 2007

Background

Stroke can present with the sudden onset of any neurological disturbance, including limb weakness or numbness, speech disturbance, visual loss or disturbance of balance. Over the last two decades, a growing body of evidence has overturned the traditional perception that stroke is simply a consequence of aging which inevitably results in death or severe disability. Evidence is accumulating for more effective primary and secondary prevention strategies, better recognition of people at highest risk and thus most in need of active intervention, interventions that are effective soon after the onset of symptoms, and an understanding of the processes of care that contribute to a better outcome

Much can be done on the ground to achieve our strategic aims – for example,

- Providing cardiovascular screening and management programmes for our population aged 40-74 would assist in our aim to prevent the onset of this devastating condition.

This strategy document will emphasise the important need for seamless working between diverse or even competing NHS organisations. We recognise the significance of long-term, joined-up health and social care across the whole care pathway for people with stroke. For patients and their carers suffering the catastrophe of sudden severe disability and dependency, the differences of culture and responsibility between health and social care, or between commissioners and providers, or between needs-based and means-tested provision, are at best merely confusing and at worst detrimental to their care. This strategy represents a genuine opportunity to prioritise seamless, person-centred care above all else, and the removal of obstacles to this should be an over-arching objective of our implementation plan.

Definition

Stroke is defined by the World Health Organisation as ‘a clinical syndrome consisting of rapidly developing clinical signs of focal (or global in case of coma) disturbance of cerebral function lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.’ A transient ischemic attack (TIA) is defined as stroke symptoms and signs that resolve within 24 hours. There are limitations to these definitions. The symptoms of a TIA usually resolve within minutes or a few hours at most and anyone with continuing neurological signs when first assessed should be assumed to have had a stroke. ‘Brain Attack’ is sometimes used to describe any neurovascular event and may be a clearer and less ambiguous term to use.

Our commissioning intention

Around the world stroke has become a priority clinical area in recent years. This is partly due to the relatively recent ability to impact in stroke prevention, both in public health improvement, and through improved clinical and technological advances.

In addition, in terms of the care management of patients who have suffered a stroke, models of care have evolved rapidly; moving from a variable level of care based in general medical wards towards active management in dedicated stroke units and use of evidence-based interventions that have been shown to improve outcomes at every stage. Policy-makers increasingly recognise that stroke is a complex disease and care should be delivered across a range of clinical settings ranging from preventive care to end of life care services.

But this is not the whole story. Stroke affects the whole person, and every strand of their life, and that of their families, friends, and colleagues. The series of losses which occur can leave the individual depressed and fearful. If our services ignore this vital truth, we will not achieve our aims of ameliorating the devastating effect of stroke, whilst assuring value for money service provision.

Our vision and our commissioning intention;

We aim to prevent as many strokes as we can. We will work to help prevent life limiting disability when we are unable to prevent stroke, and support those who do suffer disability to live as full as life as possible after their stroke.

Unfortunately, a significant percentage of people who suffer a stroke will die within two months of suffering a stroke, and it is our intention to deliver the best quality end of life care to these individuals, and their families.

This document sets out the vision and the evidence which form the strong foundations for the strategic direction and plan for stroke services within Birmingham East and North, for the next five years.

This commissioning strategy resonates with BEN PCTs Commissioning Strategy for 2008 -13. It has a clearly stated core purpose of 'Working in partnership' to tackle inequalities and improve the health and well being of local people' and the PCT has four audacious goals which provide the core framework for investment and development:

- To be so responsive to the population we serve that no one waits for the high quality care they need

- That the health and well being of the population will have improved so much that people will enjoy ten more years of healthy life
- That people regard us as the first choice organisation to work with and for
- Our communities will have the most involved, informed and empowered partnerships in the country

All BEN PCT's commissioning is governed by its core purpose and big goals. In these terms, this stroke commissioning strategy will be undertaken at a variety of levels which range from Practice Based Commissioning, PCT Commissioning, Specialised Commissioning and Joint Commissioning with the Local Authority. For all services the PCT commissions whether individually or with partners its commissioning vision is to: -

- Improve health outcomes and reduce inequalities and social exclusion through partner based commissioning
- Secure access to a comprehensive range of services
- Improve the safety, quality, effectiveness and efficiency of services
- Increase choice for patients and ensure a better experience of care through greater responsiveness to people's needs; and
- Achieve best value with taxpayer's resources.

This stroke strategy is aiming to improve stroke services in seven ways:

- Preventing strokes in the first place, through health promotion initiatives. In addition , identifying high risk communities and individuals by delivering vascular screening and management programmes and also increase public awareness around the risk of stroke and potential symptoms;
- Co ordinating care for high risk patients and stroke patients at an organisational and individual basis.
- Improving the clinical safety of the pathway through the implementation of agreed clinical pathways
- building upon existing services and creating new ones where needed, to provide high-quality hyper-acute specialist stroke centres, stroke units and TIA services which are in easy reach of all our registered population
- Improving functional ability and health outcomes after stroke.
- Improving community re integration
- Improving end of life care for stroke

The National Picture

Stroke is a major health problem in the UK. Most people survive a first stroke, but often have significant morbidity. Each year in England, approximately 110,000 people have a first or recurrent stroke and a further 20,000 people have a TIA. More than 900,000 people in England are living with the effects of stroke, with half of these being dependent on other people for help with everyday activities

In England, stroke is estimated to cost the economy around £7 billion per year. This comprises direct costs to the NHS of £2.8 billion, costs of informal care of £2.4 billion and costs because of lost productivity and disability of £1.8 billion.

In December 2007 the Department of Health published the National Stroke Strategy, this emphasised the major impact strokes have on individual lives and on the nation's health and economy. The strategy was developed by six expert project groups, comprised of representatives from the wide range of professionals who support people with stroke, people who have had a stroke, carers and voluntary associations. It was further informed and refined through a formal consultation exercise. It sets a framework of quality markers for raising the quality of stroke prevention, treatment, care and support over the next decade (Schedule 1)

The 20 Quality Markers are intended to cover the complete Stroke Pathway, beginning with *Raising Awareness* and *Managing Risk* through to *Participation in the Community* and *Return to Work*. Our benchmark against these markers is set out in Appendix 1 A further series of Quality Markers emphasise the need for individuals and organisations to work together in delivering the Pathway; these Markers cover areas such as the need to have Networks in place for populations of between .5 and 2 million through to the need for all trusts to participate in research and audit and to make evidence of practice available. The Strategy also very clearly sets out the range of support users may need after a stroke.

The National Strategy is supported by work developed carried out by the Royal College of Physician and the Intercollegiate Stroke Working Party to support the National Clinical Guidelines for Stroke (2nd Edition) , which provides comprehensive clinical advice. The Department of Health in 2006 published advice for PCT's on commissioning stroke services. The NHS Institute for Innovation and Improvement has produced a very helpful report based around a study of best practice in the UK on Acute Stroke Care. Further work has been carried out by the Stroke Association nationally with the Royal College of Physicians and others, especially around the support of users and carers.

Following the publication of the National Stroke Strategy (2007) the DoH implemented the National Vascular Checks policy in April 2009. This policy

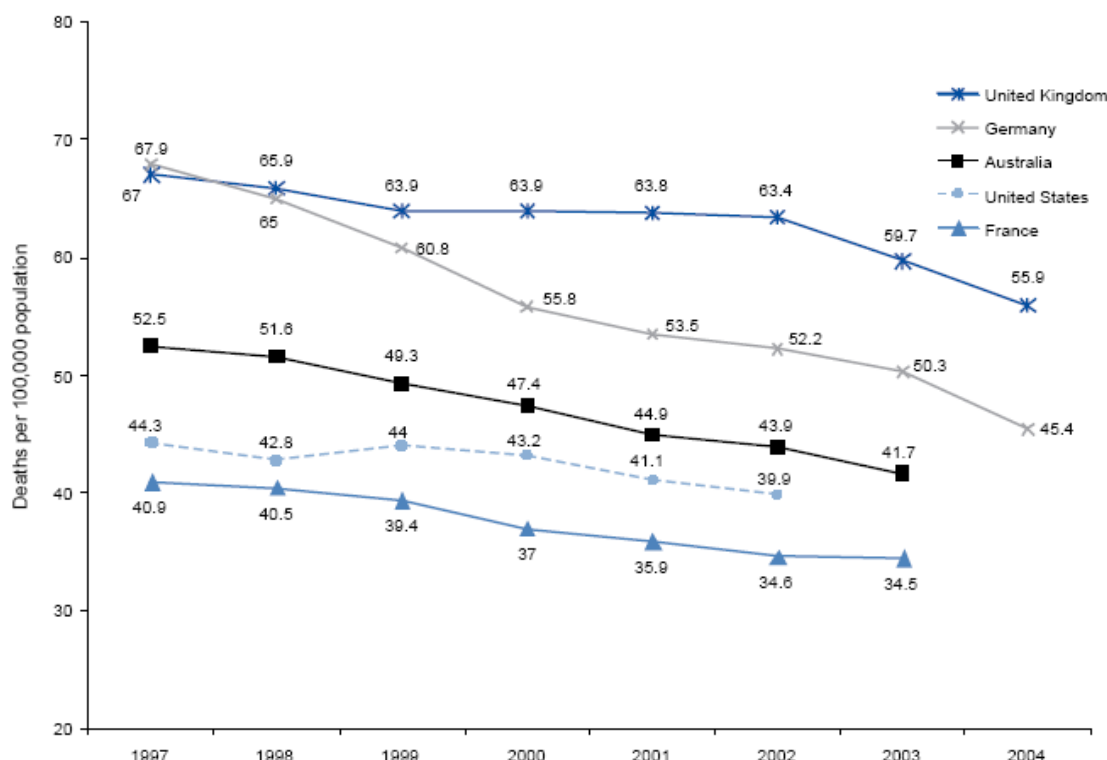
requires all PCT's to develop a systematic cardiovascular screening and management programme for its population aged 40-74 by 2012/13. National modeling suggests that this programme could prevent at least 9,500 heart attacks and strokes a year of which 2,000 would be fatal.

There is no shortage of good advice and policy both nationally and internationally in support of the development of good practice in stroke care. It is necessary to harness that knowledge in support of the core elements within this strategy which will advise the development of detailed service specifications.

Comparator of National and international situation

Although internationally, mortality rates from CVD have been falling steadily (and the UK is no exception) the UK still has a high mortality rate relative to comparator countries as illustrated below:

Mortality from cerebrovascular disease, international comparison, 1997-2004



Notwithstanding this the UK saw a 16 per cent fall in mortality rates between 1997 and 2004 and the degree to which stroke mortality rates need to improve is reflected in the priority that stroke is currently receiving

Policy Drivers**National Service Framework for Older People**

The *National Service Framework for Older People*, published in 2001, included a standard that aimed to reduce the incidence of stroke in the population and ensure that those who have had a stroke have prompt access to integrated stroke care services. This has driven forward improvements in stroke care. For example, most trusts that care for people who have had a stroke now have a stroke unit – a rarity just ten years ago. However, there remain issues about capacity and responsiveness, and this is one of the drivers in the development of a stroke strategy.

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4003066

National Service Framework for Long-term Conditions

The *National Service Framework for Long-term Conditions*, published in 2005, aims to promote quality of life and independence for people with long-term neurological conditions by ensuring they receive co-ordinated care and support that is planned around their needs and choices. The National Service Framework does not address individual neurological conditions separately as there are so many elements of service provision that are common to different conditions. It will clearly be important for commissioners to take into account the quality requirements of the National Service Framework when planning services for those affected by stroke who have long-term support and care needs. References to the *National Service Framework for Long-term Conditions* are made throughout this strategy, highlighting where its quality requirements are relevant.

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4105361

National Clinical Guidelines

The *National Clinical Guidelines* were developed by the Intercollegiate Stroke Working Party, co-ordinated by the Clinical Effectiveness and Evaluation Unit (CEEU) of the Royal College of Physicians (2002). The aims of the guidelines are to provide explicit recommendations for practising clinicians, managers, patients and carers about the management of stroke and Transient Ischaemic Attack (TIA), covering the whole care pathway from acute event to longer-term management in the community, based on best available evidence. The second edition was published in September 2004, a supplement on Early Recognition was produced in 2006, and a third edition of the full guidelines was published in 2008.

www.rcplondon.ac.uk/pubs/books/stroke/

Royal College of Physicians Sentinel Audit

The CEEU conducted the first round of the National Sentinel Stroke Audit in 1998 and five further rounds in 1999–2002, 2004, 2006 and 2008. The objective of the Sentinel Audit is to assess the quality of care for people who have had a stroke and to help trusts use audit as a means of quality improvement. The audit is based on evidence-based standards for the organisation of services and process of care, agreed by the representatives of the colleges and professional organisations of the disciplines involved in the management of stroke. This has been an important driver for improvement, as services are able to judge their standards against their own performance and that of others.

www.rcplondon.ac.uk/college/ceeu/ceeu_stroke_home.htm

Reducing Brain Damage: Faster access to better stroke care

The National Audit Office published *Reducing Brain Damage: Faster access to better stroke care* in November 2005, recommending further improvements in preventing strokes in the first place, and treating and managing people with stroke. The National Audit Office will review their findings within the lifetime of the current Parliament.

www.nao.org.uk/pn/05-06/0506452.htm

Mending Hearts and Brains

The National Director for Heart Disease and Stroke, Professor Roger Boyle, in his report *Mending Hearts and Brains*, published in December 2006, made the clinical case for reconfiguration in terms of delivering better urgent care for heart attack and 'brain attack'. This stressed the need for heart attack and stroke services to be delivered by personnel with an appropriate level of experience and training, in settings with sophisticated diagnostic and monitoring facilities, on a 24 hours a day, 7 days a week immediate access basis.

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063282

Vascular Checks Policy

This national policy introduced in April 2009 acknowledges the enormity of England's Cardiovascular Disease (CVD) burden. CVD currently affects the lives of over 4 million people in England, causes 36% of deaths and is responsible for a fifth of all hospital admissions. This policy highlights that CVD conditions, namely Coronary Heart Disease (CHD), stroke/TIA, diabetes and Chronic Kidney Disease (CKD), share a number of common risk factors. Obesity, sedentary lifestyle, smoking, hypertension, dyslipidaemia and impaired glucose regulation all increase an individual's risk of developing CVD. Current evidence demonstrates that it is possible to identify CVD risk factors and also act to change them. Early intervention to reduce risk will prevent, delay, and in some circumstances, reverse the onset of vascular

disease. It is for this reason that all PCTs in England will be expected to offer systematic vascular screening and risk factor management to its population aged 40-74 by 2012/13.

Health Needs Assessment

BEN PCT serves a population of 438,000 people.

The diseases which are responsible for the majority of deaths of our residents are Circulatory Disease including stroke (38%), Cancer (26%) and Respiratory Disease (14%). Our population has low male life expectancy when compared to the national average.

When looking at morbidity and mortality rates, a number of stark health inequalities are apparent. Residents living in certain Wards of the PCT (e.g. Washwood Heath, Stockland Green, Kingstanding, Shard End) have significantly higher standardised mortality rates than others (e.g. the four Sutton Wards). Within the PCT, a number of ‘hotspots’ have been identified which have especially high excess mortality rates. There is also evidence that coronary heart disease is under-diagnosed in certain parts of the PCT –this has implications for cerebral vascular disease.

The greatest number of potential years of life lost (PYLL) occurs as a result of heart disease, lung cancer, strokes and liver disease.

Years of life lost due to mortality from stroke (ICD10 I60-I69):

	Males	Females	Total
Barking and Dagenham PCT	339.0	691.5	1030.5
Nottingham City PCT	745.5	537.5	1283.0
Leicester City PCT	800.5	604.5	1405.0
Wolverhampton City PCT	980.0	639.0	1619.0
South Birmingham PCT	1183.5	853.0	2036.5
Sandwell PCT	1219.5	823.5	2043.0
Birmingham East and North PCT	1277.5	1360.5	2638.0
Manchester PCT	1937.0	1508.0	3445.0

<http://nwww.nchod.nhs.uk/>

Fig 1

The Quality and Outcomes Framework for General Practice has revealed that the most frequently recorded conditions in all of our PCT localities are hypertension, diabetes and coronary heart disease, which are all risk factors for stroke. Alcohol, in particular binge drinking has been demonstrated as an independent risk factor for stroke. Binge drinking prevalence estimates are worryingly high in some of our Wards. Estimated levels of smoking, obesity, binge drinking and insufficient intake of fruit & vegetables are all highest in our most deprived Wards. Smoking and alcohol consumption are therefore areas, which require strong preventative healthcare interventions, together with exercise and healthy eating programmes.

There are marked disparities between deprivation scores (both IMD and Child Poverty) in our Wards, which range from 8 in the least deprived Wards to over 64 in the worst. This has serious implications for incapacity and life expectancy for our residents who are living in the most deprived areas.

Geographically, the PCT covers seventeen wards along the eastern half of Birmingham City Council, Britain’s second city and the single largest metropolitan authority in Europe. The registered population is diverse, with significant differences in profile at ward level; Washwood Heath is 70% black and ethnic minority (mainly of Pakistani or Bangladeshi Muslim origin) with less than 15% over 60s and some 30% under 16 year olds; in contrast, Sutton Four Oaks has only 5% ethnic minority (mainly Indian) and 25% over 60s, with only some 15% under 16s.

The diversity of demography is reflected in significant disparities in socio-economic status across the PCT area. Not surprisingly, this disparity is again reflected in significant inequalities in health status and mortality with an over 6 year difference in average life expectancy between some wards. Whilst this illustrates the most extreme differences, each local area has distinct characteristics, within a majority deprived area.

Our standardised mortality ratio for stroke is set out in Fig 2., and we can see we have a higher than national average mortality from stroke for males and females. There is not a great differential between male and female here, although in terms of lost years of life, there is bigger gap for women due to the greater life expectancy.

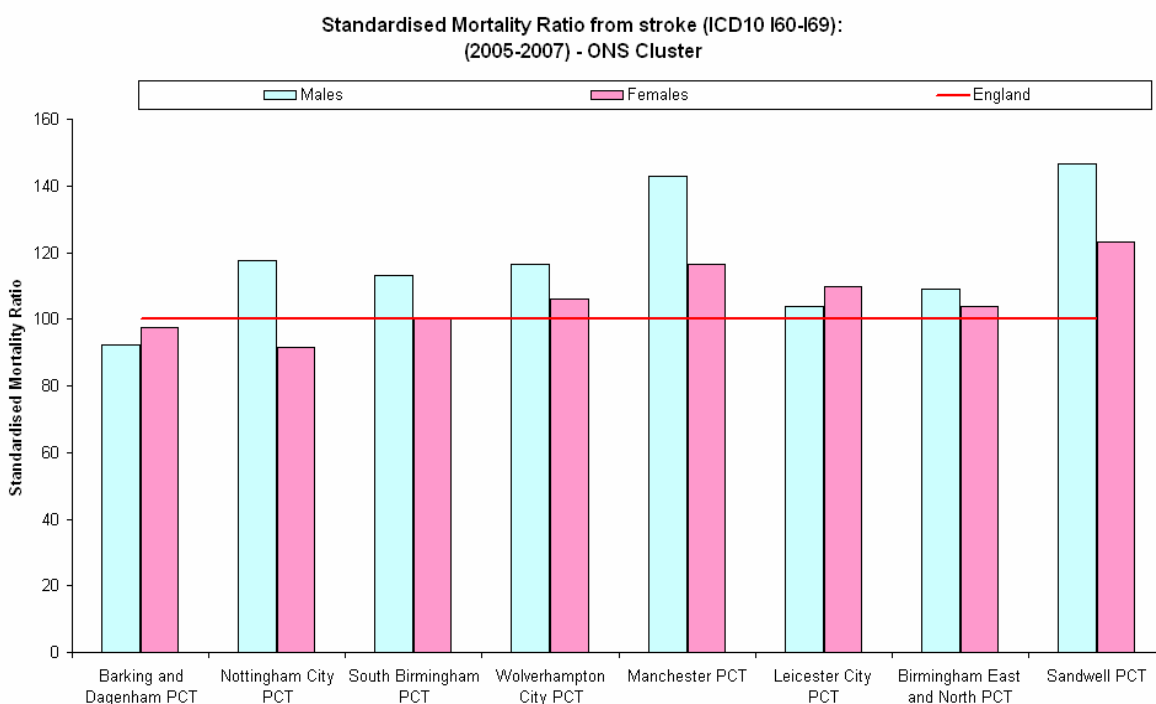


Fig. 2

An average of 800 strokes a year occur within our registered population .

In addition, an average of 400 people (Asset database) a year within our population present with the precursor to stroke, the Transient Ischemic Attack (TIA). It is increasingly understood that TIAs are under recognised, under-reported and under-treated. After a first TIA, 10% to 20% of patients are likely to have a stroke within the next 90 days; in 50% of these patients, the stroke occurs within the first two days after a TIA. Up to 25% of patients will die within a year of having a TIA.

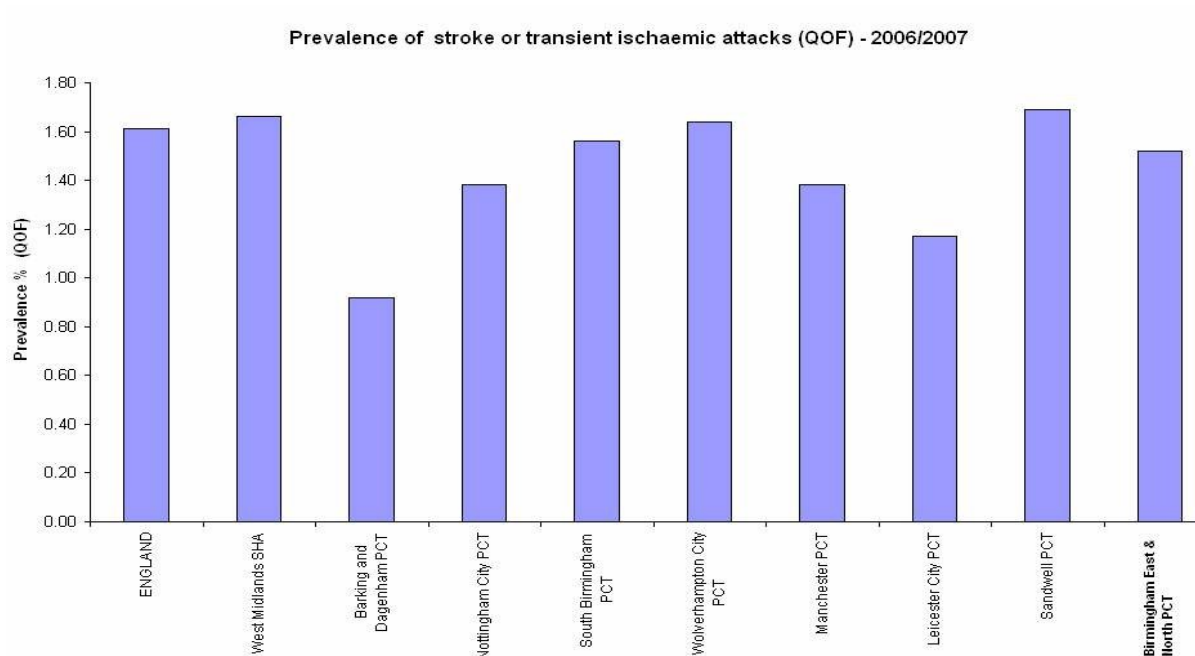


Fig 3

It is suggested that a maximum of 10% of the total cohort will be eligible for thrombolysis in view a core variable:-

- The onset of symptoms exceeds optimum treatment time of three hours (unless ISIS III site)

Identifying Health Inequalities

The Programme for Relationships and Intelligence Metrics and Equality (PRIME) has been developed to understand the needs of BEN PCTs population and how they differ between communities in order to identify, target and tackle health inequalities. It is a bespoke segmentation model for health inequalities within BEN that can be used as a foundation for public health planning and marketing interventions in the long term. Figure one shows our populations age distribution, with figure 2 showing our ethnic population distribution.

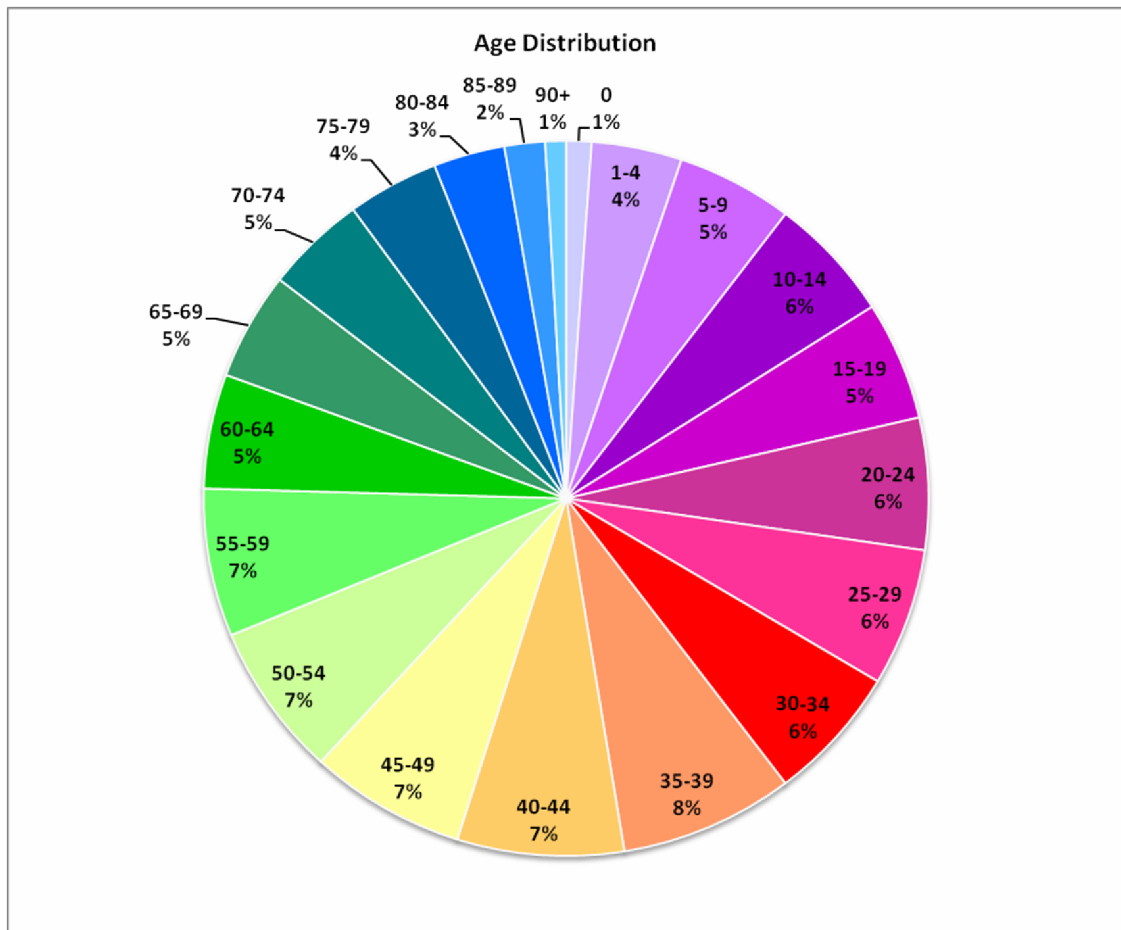


Fig 1

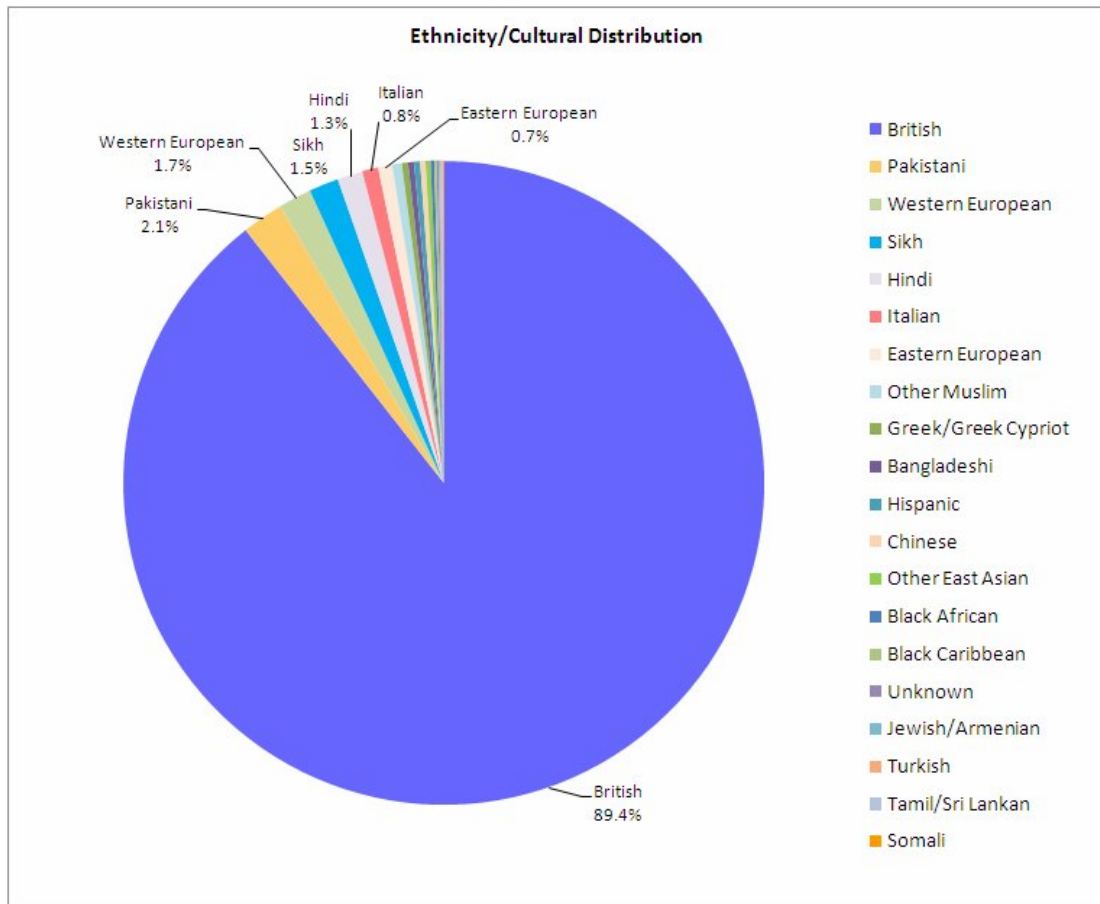


Fig 2

The table below shows the percentage of output areas in each typology that were greater than the 75th percentile for each indicator across all BEN output areas. The typologies with the greatest proportion of output areas above the 75th percentile were deemed to have high rates of that specific indicator and are highlighted below.

Health Typologies - 75th Percentile Data										
Typology	Stream 1 - Green				Stream 2 - Red			Stream 3 - Blue		
	1	2	3	4	1	2	3	1	2	3
Community Diabetes	19.8%	17.0%	12.0%	7.5%	25.5%	29.9%	19.6%	33.6%	35.2%	48.6%
Yr 6 Malnutrition	34.4%	22.0%	31.2%	12.4%	30.5%	36.4%	46.4%	29.0%	9.1%	19.6%
Reception Malnutrition	43.8%	4.0%	32.0%	2.5%	36.0%	43.0%	32.1%	29.8%	4.0%	40.2%
Yr 6 Obesity	27.1%	43.0%	35.2%	24.8%	23.5%	28.0%	26.8%	25.2%	6.3%	24.3%
Reception Obesity	18.8%	28.0%	34.4%	17.4%	29.5%	26.2%	16.1%	35.9%	5.7%	42.1%
MMR Uptake	29.2%	31.0%	25.6%	23.0%	29.5%	26.2%	23.2%	22.1%	12.5%	33.6%
Teenage Pregnancy	19.8%	14.0%	12.0%	6.8%	27.0%	32.7%	35.7%	22.1%	13.6%	29.0%
Terminations	21.9%	10.0%	13.6%	19.9%	36.0%	28.0%	37.5%	35.1%	18.2%	31.8%
Infant Mortality	5.2%	4.0%	6.4%	5.6%	11.5%	9.3%	12.5%	10.7%	15.9%	16.8%
Mental Health Contacts	15.6%	6.0%	13.6%	14.9%	26.0%	33.6%	23.2%	29.8%	15.3%	21.5%
A & E Attendances	16.7%	5.0%	10.4%	8.7%	24.0%	43.9%	39.3%	22.1%	22.2%	17.8%
Emergency Admissions	12.5%	7.0%	6.4%	5.6%	24.5%	72.0%	25.0%	38.2%	31.8%	30.8%
Paediatric Emergency Admissions	14.6%	19.0%	16.0%	15.5%	28.5%	38.3%	28.6%	36.6%	23.3%	31.8%
Excess bed days	25.0%	14.0%	26.4%	29.2%	19.5%	52.3%	33.9%	22.1%	18.8%	19.6%
Elective Procedures	25.0%	35.0%	46.4%	28.6%	13.5%	57.9%	14.3%	21.4%	3.4%	19.6%
Outpatient DNAs	12.5%	4.0%	3.2%	2.5%	34.5%	21.5%	39.3%	32.1%	52.8%	39.3%
Readmissions	17.7%	5.0%	8.0%	9.9%	22.5%	70.1%	25.0%	33.6%	29.0%	35.5%
High Impact Users	11.5%	7.0%	16.0%	8.7%	23.0%	60.7%	23.2%	32.1%	33.5%	35.5%
CCPD Admissions	22.9%	14.0%	10.4%	17.4%	25.0%	49.5%	41.1%	22.9%	30.1%	27.1%
CHD Admissions	28.1%	14.0%	13.6%	23.0%	24.5%	41.1%	12.5%	38.9%	25.6%	22.4%
Cancer Admissions	25.0%	38.0%	44.0%	19.3%	13.0%	52.3%	23.2%	26.0%	10.2%	18.7%
Diabetes Admissions	33.3%	14.0%	18.4%	23.6%	23.0%	25.2%	30.4%	11.5%	10.8%	19.6%
Stroke Admissions	47.9%	8.0%	20.0%	23.6%	23.5%	48.6%	14.3%	26.7%	17.6%	23.4%
Complications of Pregnancy Admissions	22.9%	15.0%	10.4%	6.2%	35.5%	29.0%	50.0%	46.6%	7.4%	47.7%
Polyhydramnios Admissions	13.5%	19.0%	17.6%	8.1%	31.5%	21.5%	73.2%	52.7%	2.3%	44.9%
Complications of birth	17.7%	20.0%	13.6%	13.0%	32.5%	25.2%	44.6%	44.3%	7.4%	48.6%
Alcohol related liver disease admissions	6.3%	3.0%	4.8%	1.2%	8.0%	12.1%	5.4%	1.5%	3.4%	5.6%
Lung cancer Admissions	13.5%	8.0%	10.4%	10.6%	11.5%	22.4%	7.1%	9.9%	1.1%	8.4%
Respiratory Admissions	32.3%	16.0%	19.2%	21.1%	23.0%	62.6%	16.1%	38.2%	6.8%	24.3%
Mental Health Admissions	27.1%	17.0%	9.6%	19.9%	32.5%	58.9%	14.3%	22.1%	25.0%	17.8%
Obesity related Admissions	26.0%	21.0%	9.6%	23.0%	27.0%	41.1%	42.9%	22.1%	25.0%	23.4%
Mortality Rate	21.9%	18.0%	5.6%	8.7%	31.5%	41.1%	42.9%	30.5%	27.8%	32.7%
Cancer Mortality Rate	19.8%	21.0%	12.0%	16.1%	38.0%	33.6%	35.7%	26.0%	23.9%	24.3%
Respiratory Mortality Rate	21.9%	16.0%	12.8%	10.6%	31.0%	40.2%	37.5%	23.7%	31.3%	30.8%
Children	10.4%	6.0%	4.0%	1.9%	14.0%	3.7%	55.4%	40.5%	68.2%	51.4%
Young Adults	26.0%	26.0%	7.2%	16.8%	38.5%	5.6%	23.2%	26.7%	39.8%	25.2%
Middle Age	25.0%	46.0%	55.2%	44.1%	24.5%	15.0%	12.5%	16.8%	2.3%	6.5%
Retirement	31.3%	31.0%	36.8%	44.1%	15.0%	66.4%	3.6%	13.7%	4.0%	8.4%
Elderly	29.2%	28.0%	26.4%	38.5%	20.0%	73.8%	14.3%	9.9%	7.4%	10.3%
African	13.5%	14.0%	8.8%	16.1%	24.5%	12.1%	19.6%	22.1%	34.1%	25.2%
Bangladeshi	10.4%	9.0%	7.2%	10.6%	25.5%	13.1%	19.6%	23.7%	65.9%	43.9%
Caribbean	17.7%	10.0%	4.8%	5.0%	40.5%	11.2%	42.9%	32.8%	37.5%	44.9%
Chinese	12.5%	19.0%	14.4%	16.1%	21.5%	12.1%	16.1%	13.7%	9.7%	15.0%
Indian	16.7%	22.0%	16.0%	28.0%	29.0%	16.8%	26.8%	21.4%	39.8%	21.5%
Other Asian	13.5%	15.0%	7.2%	13.0%	16.5%	12.1%	8.9%	36.6%	61.9%	46.7%
Other Black	13.5%	5.0%	6.4%	15.5%	36.5%	26.2%	53.6%	28.2%	34.1%	33.6%
Other Ethnic Group	14.6%	19.0%	5.6%	11.8%	23.5%	8.4%	19.6%	22.9%	34.1%	33.6%
Other Mixed	17.7%	20.0%	16.8%	14.9%	28.5%	21.5%	41.1%	35.1%	26.7%	34.6%
Other White	16.7%	39.0%	27.2%	36.6%	31.0%	18.7%	17.9%	19.8%	18.2%	16.8%
Pakistani	10.4%	3.0%	2.4%	1.9%	17.5%	12.1%	19.6%	40.5%	69.3%	57.9%
White Asian	20.8%	11.0%	6.4%	25.5%	33.5%	25.2%	19.6%	22.1%	34.1%	39.3%
White Black African	6.3%	4.0%	1.6%	7.5%	8.5%	6.5%	0.0%	2.3%	3.4%	5.6%
White Black Caribbean	22.9%	14.0%	7.2%	12.4%	35.5%	28.0%	42.9%	32.8%	27.8%	31.8%
White British	32.3%	44.0%	55.2%	47.8%	15.5%	32.7%	10.7%	9.2%	1.1%	7.5%
White Irish	15.6%	21.0%	17.6%	20.5%	34.0%	32.7%	25.0%	22.1%	30.7%	22.4%
Family	24.0%	10.0%	11.2%	5.0%	22.0%	11.2%	73.2%	52.7%	79.0%	63.6%
Deprivation Quintile	4	2	2	3	5	5	5	5	5	5

Green 1's and Red 2's are at higher risk of stroke incidence -

Green 1 Demographics

- Predominately White British with low proportions of Bangladeshi, Caribbean, Indian, White Black Caribbean, other mixed and other white minorities
- Mostly belong to the quintile with **below average deprivation**

Red 2 Demographics

- Small proportion of children and young adults
- High proportion of retired and elderly people
- Predominately White British with White Irish minorities
- Low proportions of African, Bangladeshi, Chinese, White Black African and other Asians and ethnic minorities
- Mainly belong to the **most deprived quintile**

The Current Service Position

The development of the stroke strategy and pathway is a key objective of the Stroke Service Implementation Group (SSIG) for BEN PCT. Subgroups have been created reflecting the key areas for action outlined in the National strategy. Each sub group has its own terms of reference which reports to the SSIG. The subgroup and the implementation group are multi agency including 3rd sector, and service users.

In addition a multi agency away day in April 08 identified key principles required of a strategy and implementation plan:

1. Equity of access into a service which is evidence based, efficient, timely and in the right place for the service user
2. The service is delivered by appropriately skilled culturally sensitive practitioners across all disciplines and agencies.
3. Information is accessible to the individual, carers and agencies involved to ensure effective patient centred care.
4. The service meets the individuals personal needs and expectations

In our health economy, the current stroke pathway does not allow us to define or assure a systematic pathway. **Less than half of all stroke patients spend 90% of their time on a specialist stroke unit in the acute phase, or spend most of their rehabilitation time within such a unit.** At the time of drafting , a significant number of the most vulnerable, dependant stroke patients are triaged straight onto general medical wards, where the risk of hospital acquired injury to their affected side is high. This often leaves patients with life long pain and further disability. We also acknowledge that there is a difference in performance between different units within the same Acute Trust.

We currently have two separate community teams, of historic acquisition from the two separate entities of North and East PCTs, and operate different systems of service . An early supported discharge team operates from the Heartlands site, but again, only operates for 6 weeks. None of these services fully meets the quality standards set out in the National Strategy. Although there is individual best clinical practice occurring, it is not consistent or assured.

We are not delivering appropriate stroke prevention services, or able to offer 24 /7 thrombolysis in our acute Trust provision. More detail is provided in Appendix 1

With a few exceptions, current models for stroke health care delivery in BEN do not optimise the system as a whole. Each sector functions based on its own goals and interests, but few players act in accordance with system-wide goals. Often, patients are often left to coordinate care and processes, compensating for the fragmented nature of today's system.

The development of a strategy and defined, auditable pathway is a key requirement of the SIGG, and this document is the commissioning response to the overall findings.

The Pan Birmingham picture is shown in Fig 6, including length of stay

(Per annum)	Good Hope	Heart of England	SWBH
Estimated stroke emergency admissions	364	621	765
ALOS of those who die in hospital	18.56	19.04	17.88
ALOS of those discharged to usual place of residence	31.79	22.7	28.67
ALOS of those discharged to other hospital/ care home	46.63	50.73	42.7
Deaths due to stroke	116	189	243

UPR = Usual place of residence

** ALOS = Average length of stay

We can see from Figure 6 that the average lengths of stay in acute beds are considerable, and as only half of our stroke patients are on a stroke unit for 90 % of their time, we can deduce they are not receiving the best possible care, so we are not achieving value for money for our tariff investment.

We currently commission voluntary sector support from the Stroke Association which is commissioned within BEN PCT to provide a Family Support Service and a Dysphasia Support Service.

Family Support is a visiting service that provides information, advice and emotional support for families of new stroke patients and for stroke patients who live alone. The aim is to help prepare families for the changes they will have to make as a result of the stroke to ensure they are able to cope. Family support aims to achieve the best possible quality of life for families and patients.

The service is delivered by a Family Support Organiser who visits stroke patients while in hospital and then at home, and also provide support to families and carers of stroke patients who are not admitted to hospital.

The service also provides important stroke prevention education work. The Family Support Organiser discusses with the patient and family the risk factors for stroke, encouraging them to make appropriate changes in their lifestyle, thereby reducing the risk of further strokes.

Dysphasia Support aims to help dysphasic stroke patients attain maximum possible recovery and become as independent as possible. It aims to help improve their quality of life by building confidence and improving morale and giving support to their families.

The Dysphasia Support Service helps people to take that first step to a new way of living. It intends to:

- Encourage self-advocacy – each patient needs and wishes are recognised when devising the work programme.
- Develop Rehab Services – via motivation and stimulation by helping to improve quality of life – not only for the individuals but also equally for carers.
- Develop Support for Carers – by supporting families of individuals with long standing disabilities following stroke.

These valuable services augment our currently inequitable healthcare provision in community.

Public Involvement

Birmingham East and North Primary Care Trust have entered into a three year partnership with Dr Foster Intelligence to design and deliver a Programme for Relationships and Intelligence Metrics and Equality (PRIME). The programme will develop new relationships to tackle health inequalities with public, patients and partners, based on the creative use of healthcare intelligence generated by a range of innovative approaches. Most importantly for us at BEN, the Programme will build on our established commitment to Patient and Public Involvement (PPI) and together with Dr Foster's strong record in public health innovation will provide an exciting platform for us to reach out and engage with our community. PRIME will support and take forward our ambition to tackle health inequalities through World Class Commissioning and particularly allow us to progress our goal of 'most informed and empowered community' and 'ten more years of healthy life'.

BEN PCT is keen to ensure that this Commissioning Strategy resonates with the views and expectations of all interested stakeholders to ensure that the strategy reflects real population needs and preferences.

User involvement on a substantive basis is in development, supported on a Stroke Network wide basis. We intend to increase the focus on appropriate and real dialogue with our communities and to embed ongoing consultation and dialogue at different levels in commissioning from specific services to whole community initiatives managed and delivered across a range of public, private and voluntary sector partnerships. Therefore, as set out in the overarching BEN PCT commissioning strategy, we are committed to the following principles around the commissioning and monitoring of stroke services: -

- Patients, through greater choice, will drive improvements in many services
- Clear notice to all interested parties through its strategy and future planning rounds on the potential proposed changes it is considering in relation to the commissioning of health services
- A commitment to enter into a dialogue with relevant individuals, organisations and other stakeholders prior to decisions being made on any potential changes
- The publishing of a clear process whereby meaningful advance dialogue and consultation can occur
- An open approach to requests for information to help patients and the public take part in discussions and debate about the commissioning of future health services
- A proactive stance on communication on key health issues which affect the PCT's population. The views of patients,

carers, families, local interest groups and their communities will be sought through a range of mechanisms so that they can influence service provision and improve the patient experience

- The commissioning and locality teams will work closely with the PPI team to ensure that patient and public feedback has a direct impact on commissioning and service redesign
- This impact will be documented and reported back to patients, the public and local communities. An ongoing systematic approach to engagement with communities which exploits the use of the technology to understand individual needs.

The Pace setter's representatives for Heart of England NHS Trust and BEN PCT (our main acute provider for stroke and TIA) has been working with patients and undertaking patient surveys. Part of this work has been the collation of patient and carer stories. One of the stories is described on page 4 of this strategy

The Pacesetters programme is a partnership between local communities who experience health inequalities, the NHS and the Department of Health (DH). The Equality and Human Right Group (EHRG) of DH is working on the programme with Strategic Health Authorities (SHAs) across the UK.

The aim of the programme is to reduce health inequalities for patients and service users, as well as creating working environments that are fair and free of discrimination.

This is the second wave of Pacesetters and it is hoped that this programme will build on the success of Wave 1, by reducing inequalities arising from discrimination on account of age, disability, ethnicity, gender, relation, and sexual orientation and gender identity.

Community participation is central to the programme. NHS West Midlands and BEN PCT will work in partnership with local populations, patients and service users to test innovative new ways of working. Wave 2 sites, such as BEN PCT, will receive support from trusts that participated in Wave 1 and will benefit from their experiences and insights.

The Pacesetters programme enables Strategic Health Authorities to link together and share knowledge gained from identifying, addressing and embedding equality issues and applying them to local situations. The programme aims to spread learning across the NHS.

People are at greater risk of stroke from South Asian communities e.g. Pakistani, Indian, and Bangladeshi. They have a higher incidence of high BP and they have a greater chance of dying from a stroke than the general population in the UK.

As part of the new Stroke Strategy, BEN PCT are setting up a process to track patients through the stroke pathway to better understand areas how patients access services and how this can be improved through hospital stay, discharge, rehabilitation, and home. This project, whilst developing on a PCT wide basis will identify 15 Pakistani stroke patients and map their journey. Selected interventions will be set up to understand and support service users with getting gold standard care and access to services.

The expected outcomes from this project are:

- Establish tracking system for stroke patients.
- Track 15 Pakistani and record patient experience using qualitative methods.
- Better use of interpreting services for this group of patients monitored using BILCS reporting.
- Understand interventions required for specific group.
- Increase patients accessing appropriate services.
- Work with commissioners to meet needs of the group

Joint strategic needs assessment with the Local Authority

The PCT has a well-established and close working relationship with Birmingham City Council. The Chief Executive Officer (CEO) has developed and led the Birmingham Health and Wellbeing Executive for the last three years and is a core member of both the Birmingham Summit and Executive. The PCT manages a range of integrated Intermediate Care services on behalf of the Directorate of Adults and Communities (Birmingham City Council) and have a joint estate development programme for the future delivery of this rehabilitation focused programme

The Birmingham Strategic Partnership (*Be Birmingham*) approached the creation of a JSNA in a spirit of recognition of the substantial amount of local needs assessment work already in place for the population. In effect, it recognised that the framework of a JSNA had been pursued for some years, with cross cutting partnerships, shared use of information and widespread engagement of interested stakeholders underpinning the existing strategies. This work dictated the shape and approach to the JSNA development in line with Department of Health guidance. The key factors were:

- The JSNA initiative would build upon current work, looking to integrate existing information, support current work, integrate existing processes, and empower all stakeholders to access all information and to create a voice for all parties
- Work would begin by pulling together all the existing needs assessment work and would look to identify ways in which this work could be better utilised to improve the health & well being of the population.

This approach was informed by the initial engagement work in establishing a JSNA. Stakeholders felt that much of this work was already in place, and was based on extensive consultation and engagement. The issue that interested stakeholders most was, why existing information were currently not better utilised

The Local authority will be supporting BEN PCT with collaborative efforts in stroke prevention, intermediate care, home care, and all appropriate packages of support. In addition, We intend to involve the Local authority in our co ordination and tracking efforts along the stroke pathway, so that we risk stratify and identify patients and carers with the greatest risk at the same time , using the same method.

How Will Our Pathway Look To Our Population?

The following sets out the high level patient information pathway for BEN PCT;

Stroke Pathway stage 1

Although stroke can affect a broad spectrum of people, there are certain factors associated with a higher risk of stroke occurring. These are:

- High blood pressure
- Diabetes
- High cholesterol in the blood
- Smoking
- Being overweight
- Excessive alcohol intake
- A diet high in salt and saturated fats
- An irregular heart beat
- Previous stroke or TIA; coronary heart disease

Stopping smoking, improvements in diet, increases in physical activity and moderation of alcohol intake will all lead to significant reductions in the risk of suffering a stroke. Health trainers, through Birmingham Own Health will be available to support people to make the changes to lifestyle that are required.

Primary Care teams can offer health improvement support locally, and will be able to offer information on local health improvement services. Information is also available on our website www.benpct.nhs.uk, through our Birmingham Own Health programme. This programme is designed as a step by step guide helping improve health and well being through easy to follow modules and links to other resources, with the support of a health trainer.

BEN PCT will promote a national patient and public marketing and educational campaign relating to FAST which enables the recognition of stroke symptoms of individuals at the earliest point. FAST highlights the three most common symptoms of a stroke which are **F**acial weakness, **A**rm weakness and **S**peech problems and by **T**esting all three, strokes can be identified immediately..

Stroke Pathway stage 2 – when a stroke has happened

The stroke care journey

When you first have a stroke you will most likely be admitted to hospital through the emergency department. At first the doctors will order some tests to make sure you have had a stroke, and to work out what sort of stroke you have had. This will help them to work out the best treatment for you.

What happens next depends on how the stroke has affected you. You will probably be admitted to an appropriate unit for a few days at least. Some hospitals will have a stroke unit with a team who specialise in treating people after stroke. The team will examine you to work out what difficulties you may be having. As soon as you are ready, they will start working with you on a rehabilitation programme.

In the early days, the team will meet with you and your family to talk about how the stroke has affected you, and to start helping you make plans for your future. This will include decisions about any treatment you need, and where you can get this. You might need to continue with rehabilitation to achieve the best possible recovery. Some stroke survivors who need a lot of help with everyday tasks may need to continue their care in a residential care facility.

If you go straight home after hospital, the healthcare team will arrange any services that you will need. They will also give you information about services in the community that can provide support. This should include information about stroke support groups and other support networks near your home. In some cases, a team member might visit your home to see how you will manage there. Some changes may need to be made to your home to make it easier and safer for you to get around and do your everyday tasks.

When you leave hospital, information about your stroke and your recovery will be passed to your local doctor and to any services that you will be using. After the first hospital, your journey will continue. What happens next depends on how much care and/or rehabilitation you need.

If you need rehabilitation after your stroke, you may get it in a number of ways:

1
You are moved to a specialised rehabilitation ward, or to a rehabilitation centre where you stay as an inpatient. You might stay here for a number of days to make the best possible recovery

2
You go home from hospital but you keep having rehabilitation. You might get this by going to a centre on a number of days in the week OR you might have people from the rehabilitation team come to your home ("rehabilitation in the home").

Rehabilitation aims to help you get back your independence. Wherever you go for your rehabilitation, the team will work with you and your family and carers. They will help you work out what you want to get from your rehabilitation programme and the best way to make this happen.

As your journey continues you will learn more about life after stroke. You and your family and carers will be able to talk about your future plans with the healthcare team. If you have been having your rehabilitation in hospital, the team will work with you to get you ready to go home. This might include trying a night at home before you leave the hospital. This will help you to develop confidence about how you will get on at home. If you have rehabilitation as a patient in a hospital you might need more rehabilitation when you go home. You might get this as an out patient in the hospital or the community (see 2 above). If you need help in your home, a team member will organise this for you.

3
You go home and are helped by any community supports or services that you need. Your needs are regularly reviewed by your local doctor and case manager. You will be given more support or therapy if and when you need it.

4

Model -Harvard Medical School, health care systems design

If you require a high level of care to meet your personal needs, this may only be available in a residential care setting:

4

You go to a residential care facility. The team at the nursing home will work with you and your family/carers to work out what you might need. Therapy may be organised. Your needs are regularly reviewed by your doctor or members of the team.

5

Sometimes, a place in a residential care facility may not be ready immediately or you may need a bit more recovery time before the level of care you need becomes clear. In this case, you may go to a care centre for a short, pre arranged length of time.. Your needs will be reviewed regularly, and therapy will be provided where it is required

When you have finished rehabilitation, you should be reviewed on a regular basis by your case manager . This may be through telephone call, or a visit to your home, or from a visit that you make to a care centre.. No matter what happens, you can always ask your doctor or health professional to organise a review of your needs to make sure that you have the best possible recovery.

You might have questions about this booklet and how it relates to your own 'stroke journey'. If you do, talk to one of the health professionals (doctor, nurse or allied health) who are travelling on the journey with you. Another stroke survivor might also be able to answer some of your questions.

Making it happen –the work plan

There is much work to do to create the stroke care delivery system which will give us the outcomes which are possible and aspired to. The implementation plan for this strategy (Appendix 2) sets out the separate work strands. We need to tie these elements, and the diverse providers together with an auditable system.

In addition to the managed care pathway organisational framework, which sets out these ties, there are 8 core elements to an effective managed care pathway, and we will describe them and core standards for TIA and stroke to be met below;

1. Health Promotion and Primary Prevention
2. Diagnostics and Emergency Care
3. Acute Care / Treatment
4. Rehabilitation
5. Secondary Prevention
6. Community Re-engagement / Re-integration
7. Care co ordination
8. End of life care

1. Health Promotion and Primary Prevention

A high proportion of strokes are preventable. When tackling stroke, we must look to prevent or at least delay the onset of symptomatic disease (primary prevention) and manage those with existing disease so as to reduce their risk of suffering further acute events (secondary prevention).

In Birmingham East and North PCT, the incidence of stroke is 780 per 430,000 for the year 2007/8. Like so much ill-health, stroke afflicts the socially disadvantaged - those experiencing relatively poor life circumstances - to a much greater extent than they do the more affluent. At a local level, partnerships must work jointly to bring about improvements in key areas like housing, employment, education, welfare benefits, childcare, community care, crime and the environment.

Stroke becomes more prevalent in older people and there is a higher incidence in some Black and Minority Ethnic Groups due to an increased occurrence of some of the risk factors listed below. Therefore, the incidence of stroke in is likely to rise in proportion to the increasing age of the population.

The needs of people with stroke span the entire health and social care economy, from prevention treatments and advice, to acute medical emergency, complex rehabilitation needs and long term disability. Although

stroke can affect a broad spectrum of people, there are certain factors associated with a higher risk of stroke incidence. These are:

- High blood pressure
- Diabetes
- High cholesterol in the blood
- Smoking
- Being overweight
- Excessive alcohol intake
- A diet high in salt and saturated fats
- Atrial fibrillation
- Previous stroke or TIA; coronary heart disease

Stopping smoking, improvements in diet, increases in physical activity and moderation of alcohol intake will all lead to significant reductions in the number of strokes. The prevention messages should be incorporated into existing lifestyle services especially smoking cessation and obesity.

Opportunities for Health Promotion

All staff, unqualified and qualified, in primary, secondary care, adult social care and the voluntary sector can be key providers of generic healthy living information related to stroke prevention. Furthermore, PCT staff, both from primary and secondary care should be able to discuss the lifestyle risk factors which can increase stroke with a patient. Staff should be aware that modifying lifestyle and treating medical conditions (non-modifiable risks) may reduce the risk of stroke. Therefore, every opportunity to discuss the overall health benefits of changes in modifiable lifestyle risk should be discussed and encouraged by all staff. The aim should therefore be a consistency in the information and advice that staff give to the public. This can only be achieved by including stroke awareness in staff training.

Non compliance/concordance of with medication is a problem in primary prevention where side effects of drugs may outweigh the asymptomatic severity of the problem in the patients view. Also a reluctance of risk scoring due to implications on patient insurance policy inhibits some health care professionals

Systematic reviews have shown that one-time advice from health care workers during routine interactions can have an appreciable impact. For example, 2 % of smokers stopped smoking for at least one year after a single recommendation from their GP because the excess stroke risk disappears within five years of smoking cessation, it is important to emphasise that it is never too late to quit smoking.¹³ Therefore, continued population strategies for tackling obesity, inactivity and smoking must continue to be supported locally through various initiatives.

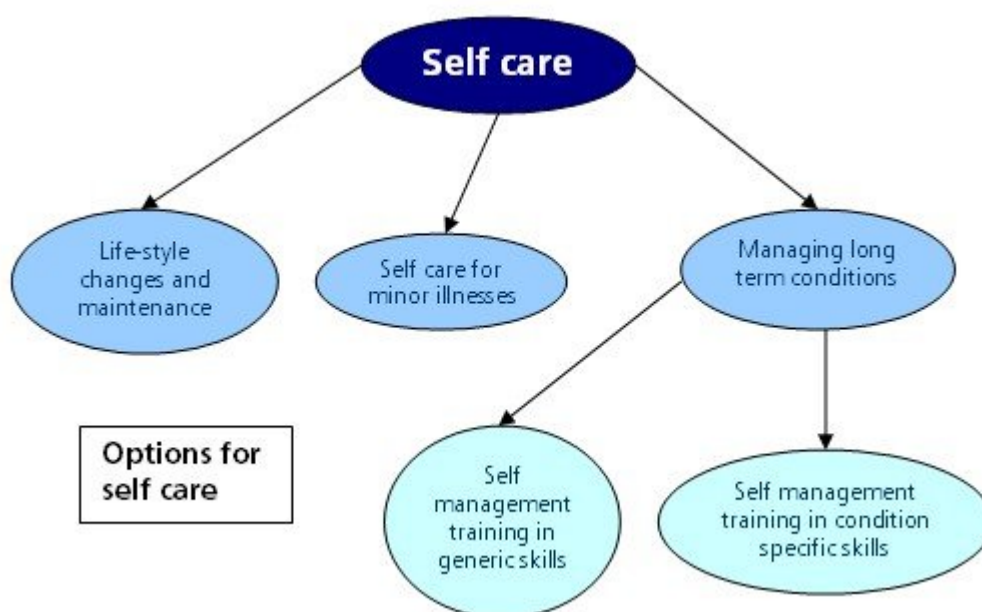
National Stroke Awareness Campaign

In addition, BEN PCT will be working extremely hard to raise awareness of stroke like symptoms to people across the area therefore improving their chances of recovery if they recognise the onset of a stroke at the earliest point. For example the BEN PCT will promote a national patient and public marketing and educational campaign relating to FAST which enables the recognition of stroke symptoms of individuals at the earliest point. FAST highlights the three most common symptoms of a stroke which are **F**acial weakness, **A**rm weakness and **S**peech problems and by **T**esting all three, strokes can be identified immediately.

By acting quickly where a patient is displaying the symptoms of FAST, clinical Outcomes are significantly improved.

Self-Care/Patient/Carer Education

Self care through self management education must become central to the patient involvement agenda and relates directly to QM3 of the National Stroke Strategy. Self management education programmes have the potential to improve self care and alter the way that stroke is managed. What is wanted is for people to own and control their condition in order for them to determine how they want to live their life rather than the condition dictating how their life is led. Self care uses a range of methods and aids to enable people to manage their own health which include: self monitoring, self help and support groups, self management education programmes such as the Expert Patient Programme, patient access to personal medical information, easy access to high quality information on conditions and services and patient-centred telecare. The diagram below shows some of the options for self care:



Different types of self care support

Support for self care involves increasing the capacity, confidence and efficacy of the individual for self care by providing a range of options including:

- Appropriate, timely and accessible advice and information
- individual care plans
- self-diagnostic tools, self-monitoring devices and self care equipment
- self care skills training, for example through Expert Patients Programme
- multi-media multi-lingual self care facilities and information materials
- campaigns and training on lifestyle issues to change behaviours, to promote good health and prevent ill health; such as by lay self care trainers; or health trainers
- utilising networks of peers with experience and memory of healthy living and caring for a minor, acute or long-term condition incidence of stroke
- building social capital and self care support capacity in the community
- participation of the public in design and implementation of local programmes
- education to change attitudes and behaviours of practitioners and public towards self care
- training of practitioners in when and how to use approaches to support self care
- initiatives to develop partnerships between professionals and the public.

We know that given the necessary skills and support, people can moderate the impact of their disease and improve the quality of their lives. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4130725

When people self care they can:

- experience better health and wellbeing
- reduce the perceived severity of their symptoms, including pain
- improve medicines adherence
- prevent the need for emergency health and social services
- prevent unnecessary hospital admissions
- have better planned and co-ordinated care
- remain in their own home
- have greater confidence and sense of control
- have better mental health and less depression

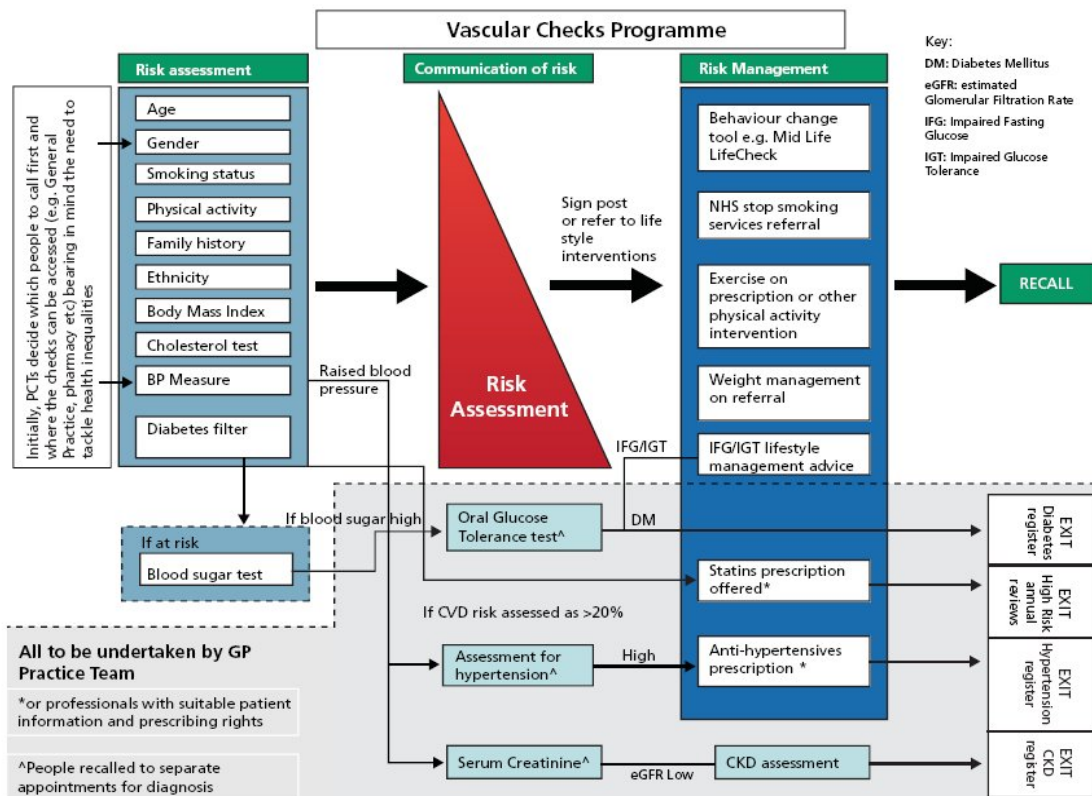
BEN PCT Vascular Checks Programme

As already alluded to, the DoH has instructed all PCTs across England to implement a vascular screening and management programme for its population aged 40-74. The aims and justifications for this programme were detailed in the 'Economic Modelling for Vascular Checks' consultation paper

published in July 2008. It is anticipated that the vascular checks programme could on average prevent 9,500 myocardial infarctions and strokes nationally each year. The programme could also prevent 4,000 people a year from developing diabetes and detect at least 20,000 cases of diabetes or kidney disease earlier, allowing individuals to be better managed and improve their quality of life.

In view of the National Stroke Strategy (2008) and the NSF for CHD Chapter Eight Arrhythmias and Sudden Cardiac Death (2006), the PCT have additionally opted to include pulse checks to the Vascular Checks programme. It is anticipated that this intervention will highlight those individuals with undiagnosed Atrial Fibrillation. In turn, this measure will assist in ensuring that associated stroke risk is assessed and the appropriate thromboprophylaxis treatment is initiated.

The Vascular Checks programme is fundamental to ensuring that BEN PCTs stroke strategy is accomplished. It is therefore imperative that both the stroke strategy and vascular checks strategy work in parallel to create a holistic cardiovascular disease agenda.



- Health promotion efforts that contribute to the primary prevention of stroke in all communities (integrated with existing chronic disease prevention initiatives)

- Stroke prevention offered by primary care providers
- Public awareness initiatives focusing on the signs and symptoms of stroke
- Enhanced Public education on the warning signs of stroke and the appropriate.
- Definition, dissemination, and implementation of best practices
- Ongoing monitoring and evaluation

Appendix 3 shows a draft copy of Stroke Network specification for management of TIA.

2. Diagnostics and emergency care

The Network Specification for Hyper Acute Stroke Care(draft copy) is attached (see Appendix 4;

We require;

- Best practices for emergency stroke care, physicians and nurses implemented
- Heightened emergency response with appropriate protocols
- Definition, dissemination, and implementation of best practices

Imaging

All patients with suspected stroke should have brain imaging and in the majority of cases this needs to be conducted rapidly - within 24 hours after admission. For the majority CT scanning is sufficient however some stroke patients will require MR imaging and this needs to be readily available. Patients with TIA who need brain imaging should wherever possible have MR rather than CT. For high risk patients (ABCD2 score of 4 or more) this should be performed along with carotid imaging within 24 hours of the onset of symptoms. All hospitals managing stroke and TIA patients need to ensure they comply with the recommendations in the NICE guidelines for Acute Stroke and TIA and the recent Department of Health document on Imaging patients with stroke (Implementing the National Stroke Strategy – an imaging guide DH 2008)

Ongoing monitoring and evaluation of this service provision is vital.

3. Acute Care / Treatment

We require;

- Organized stroke care. (stroke units with critical mass of trained staff, multidisciplinary team)
- Initial assessment performed by clinicians experienced in stroke.
- Timely access to diagnostic services (neuro-imaging)

- Timely access to thrombolytic therapy (t- PA) and other reperfusion strategies
- Definition, dissemination, and implementation of best practices
- Ongoing monitoring and evaluation

Quality standard (Sentinel audit 2008)

1. All patients with acute stroke should be admitted directly to an acute stroke unit equipped and staffed to be able to deliver high quality care
2. Thrombolysis should only be provided when all the other components of acute stroke care are of high quality
3. Definitions for high quality acute stroke care should be agreed and regularly audited
4. All patients receiving thrombolysis should be prospectively audited to monitor the quality of the process of care and outcomes.
5. Paramedic services should be seen as an integral part of the acute stroke service and should be involved in the design and delivery.

Stroke Network specification in development

4. Stroke Rehabilitation

We require;

- Organized stroke care (sub-acute stroke rehabilitation units)
- Initial assessment performed by clinicians experienced in stroke
- Timely access to specialized, interdisciplinary stroke rehabilitation
- Timely access to appropriate levels of rehabilitation intensity for stroke survivors
- Stroke rehabilitation support provided to caregivers
- Long term rehabilitation services widely available in nursing and continuing care facilities, and in outpatient and community programs
- Optimization of strategies to prevent the recurrence of stroke
- Outcome data for stroke rehabilitation required
- Definition, dissemination, and implementation of best practices
- Ongoing monitoring and evaluation

Quality standard (Sentinel audit 2008)

1. All stroke patients (except those requiring higher level care such as ITU) should be managed on a stroke unit.
2. Hospitals should rapidly rectify the situation that there are patients

without stroke occupying beds on the stroke unit while stroke patients are managed off the unit

3. Stroke services should urgently review policies that exclude certain groups from admission to the stroke unit. The most prevalent reason stated was 'no rehabilitation potential'. There is no evidence to support such a policy and patients perhaps most likely to benefit from stroke unit care and most likely to be harmed by inexperienced care are being denied appropriate assessment and treatment
4. Stroke services should be regularly monitoring the quality of care they are providing against the standards identified in National Clinical Guidelines and the National Stroke Strategy
5. Development of seven day rehabilitation services should be made a priority
- 6 . All stroke teams should have sufficient access to clinical psychology, orthoptics, orthotics, dietetics and podiatry to meet the needs of their patients. The audit suggests that there is a considerable investment needed for these specialties
7. Social worker involvement as an integral part of the stroke team is essential and should be mandatory for every stroke service

Community Stroke Care

The transition of care between hospital and the community is an aspect of stroke care organisation that is at risk of being neglected while acute stroke care is being developed.

Quality standard (Sentinel audit 2008)

- 1) It is however vital not just to meet the needs of the patient being discharged home but also to ensure that the in-patient facilities are available for those people that need them most during the acute phase of the illness.
- 2) Early supported discharge services should be made available for all patients
- 3) There should be adequate services staffed by professionals experienced in the management of stroke to provide longer term care for patients with stroke in the community

They say ' Many of us do not see ourselves as carers straight away: we are mums and dads, husbands, wives, partners, brothers, sisters, friends and neighbours. We are simply doing what anyone would, caring unpaid for a loved one or friend, helping them through when they are unable to do things for themselves. The fact is that you are also a carer, and there are things that

you need to know. No one likes to be labelled, but recognising yourself as a carer can be the gateway to getting a range of help and support.'

Carers often suffer from poor health and stress as a result of their caring role, so make sure your GP practice knows you are a carer,. The practice can put you on their Carers' register and discuss with you how they can support you (e.g. flexible appointments, on line prescriptions, Carer Support Information).

BEN PCT has a Carers Support Service that offers support to informal carers who care for friends, relatives or neighbours with a long term condition, disability or frailty. As long as the patient or family carer are registered with a BEN PCT GP, this service can support you as carer with advice, information, signposting and a home visit were there are complex needs . The Carers Support service will work with the Stroke Association, Adults and Communities (formerly Social Services) and other agencies to get you the help you need

A single point of access helpline ensures a speedy response to the referral.

Expert patients and carers are more likely to be more satisfied with their care and be able to access the appropriate services. For many carers looking after someone with stroke is extremely stressful and levels of physical and psychological morbidity are much higher than in age matched populations.

- 1) It is therefore important that information and training are provided to all patients and carers throughout the course of the illness.
- 2) All trusts should have active user involvement in developing, running and monitoring their stroke services
- 3) Particular care should be given to providing information to patients and carers in an appropriate format

5. Secondary Stroke Prevention

Quality standard (Sentinel audit 2008)

1. Stroke Prevention Clinics in place to improve secondary stroke prevention (effective, consistent prevention with early recognition of risk factors and timely, targeted interventions)
2. .Stroke prevention offered by primary care providers
3. .Optimization of strategies to prevent the recurrence of stroke
4. .Definition, dissemination, and implementation of best practices

Ongoing monitoring and evaluation

Following a TIA there is a high risk of a completed stroke within the first month, with the highest risk being in the early days. It is therefore important that appropriate secondary prevention is started as soon as possible

Quality standard (Sentinel audit 2008)

All services managing patients with TIA should have systems in place that are able to see and implement management plans in line with the recommendations in the National Stroke Strategy and the NICE guidelines for Acute Stroke and TIA. That means being able to deal with high risk patients within 24 hours and lower risk patients in a maximum of a week.

6. Community re integration

- Assistance received by stroke survivors and their families with an evolving care plan and regular follow-up assessments
- Health care professionals and caregivers in community and long term care settings have stroke care expertise
- Ongoing support in the form of community programs, respite care and educational opportunities available to support caregivers in balancing personal needs with care giving responsibilities
- Strategies Ongoing monitoring and evaluation
- to assist stroke survivors to maintain, enhance, and develop appropriate social support

Patients and carers will be supported in their end of life phase by their existing key worker, who will act as their advocate within the BEN End of life pathway service provision.

7. Co ordination of care

Every organizational activity – from the making of pots to placing man on the moon – gives rise to two fundamental and opposing requirements: the division of labour into various tasks to be performed, and the coordination of these tasks to accomplish the activity. The structure of an organization [or a system] can be defined simply as the sum total of the ways in which it divides labour into distinct tasks and then achieves coordination among them.

– Gröne and Garcia-Barbero, 2001

Something which sets aside our stroke pathway from the national stroke strategy is the emphasis on case management and co ordination of care, in an effort to create an integrated system.

Frameworks of Integrated Care for the Elderly (Margaret MacAdam, Canadian Policy Research Network Report , April 2008)) is a large scale systematic review of the literature to examine the common features which stand out in the most successful frameworks of integrated health care for older people. The analysis from this report can be applied to the redesign goals we wish to achieve with our stroke pathway.

The papers reviewed indicate that it is possible to design integrated programs that redirect care away from institutional services (use of long-term care

homes and hospital care) and achieve improved quality of life and reduced caregiver burden. The specific features of successful models may vary, but typically include the use of case management and access to a wide range of social and health supportive services. However, while client outcomes improve, cost savings are not immediate. Investments have to be made to realise the potential of integrated care.

This literature review found promising indications that some models of integrated health and social care for the elderly can result in improved outcomes, client satisfaction and/or cost savings or cost-effectiveness. A substantial and growing body of knowledge is developing about the features of projects that are successful in achieving at least one or more outcome measures. Four frameworks were located; some are more detailed than others and some, more comprehensive in their scope. Notwithstanding their differences, there is congruence across the frameworks in most of their key elements. Among the key elements of these frameworks and in the literature in general are four types of interventions that must be structured in ways that are supportive of each other (Kodner, 2006). These key elements are:

- umbrella organisational structures to guide integration of strategic, managerial and service delivery levels; encourage and support effective joint/collaborative working; ensure efficient operations; and maintain overall accountability for service, quality and cost outcomes
- multidisciplinary case management for effective evaluation and planning of patient needs, providing a single entry point into the health care system, and coordinating services
- organised provider networks joined together by standardized procedures, service agreements, joint training, shared information systems and even common ownership of resources to enhance access to services, provide seamless care and maintain quality
- Financial incentives to promote prevention, rehabilitation and the downward substitution of services, as well as to enable service integration and efficiency

No single element of integrated models of care has been shown to be effective in and of itself. However, at a minimum, all successful programmes of integrated care use multidisciplinary care/case management for older people at risk of poor outcomes supported by access to a range of health and social services. The strongest programmes also include active involvement of physicians. Decision tools, common assessment and care planning instruments and integrated data systems are commonly listed infrastructure supports in effective programmes.

We intend to support care co ordination through the Birmingham Own Health model of survivorship support, and a module is in development for Stroke.

8. End of Life Care

Substantial numbers of people suffer a stroke which is so severe, it is life limiting in the immediate time frame. These individuals may live with severe

disabilities for months before their death, or may die within a few days or weeks of their stroke. Either way, it is vital that the best supportive and end of life care is made available, and that professionals are skilled enough to understand and instigate the BEN supportive care pathway in all care locations.

Financial & Activity Profile

Our current position describes substantial existing reward for activity through Payment by Results, for TIA and Stroke.

When we have appropriate services in place closer to home, we will be able to unbundle the rehabilitation element within the tariff. The key purpose of unbundling is to put in place the correct incentives to encourage appropriate alternatives to traditional hospital “bundles of care”.

Unbundling rehabilitation

The indicative tariffs support the unbundling of non-discrete rehabilitation from the tariff. In the past, the tariff has included a component of post-acute care but the new unbundled tariff has a reduced price which only covers acute care. As a result resource can be shifted to support rehabilitation in a non-acute setting (Funding for discrete rehabilitation remains outside the scope of the tariff and is for local negotiation). The implementation of unbundled tariffs is guided by a set of principles to be followed by commissioners:

- High quality rehabilitation in an acute setting should not be disrupted.
- All rehabilitation should meet high quality standards consistent with wider national guidance.
- Indicative tariffs for the acute phase of care should apply only to patients who are moved to an alternative care setting.
- During the acute phase, patients should be adequately assessed in order to plan for management in the post-acute phase.
- Local models of post-acute care should involve specialised stroke multidisciplinary teams.
- Some stroke patients with non-complex needs may only need uni-disciplinary rehabilitation

When examining the issue of unbundling rehabilitation the clinicians who were consulted divided care into a series of phases.

Acute Care	0-7 days
Early Post-Acute Care	7-12 days
Later Post-Acute Care	12+ days

It may be more typical for commissioners to unbundle the later post-acute phase through Early Supported Discharge schemes. In this case the indicative acute phase tariff will have to be adjusted to cover the early post-acute phase.

For example, the non-elective indicative acute tariff for A22 Non-Transient Stroke or Cerebrovascular Accident (aged over 69 with complication) is £2,697. The average excess bed day tariff (uplifted from 2006/7 figures) is £136. If it is assumed that the early post-acute phase covers days 7-12 (5 days total) then the indicative tariff for A22 covering acute and early post-acute would be £3,377 [$£2,697 + (5 \times £136)$].

Many Early Supported Discharge schemes are often provided with substantial input from the acute sector. The indicative acute phase tariffs do not include this support and this may also have to be considered for local adjustment.

In order for us to fully unbundle rehabilitation back to days 7 -10, we will require the provision of specialist stroke beds in the community for a percentage of the patients.

The issue of thrombolysis was raised during the unbundling discussion.

HRG v3.5 is currently used for Payment by Results (PbR) for the financial year 2008-9. However, the latest version of HRG (v4) does not have this split between patient age-groups or complications; there is one code for all TIAs and one code for all Strokes. HRG v4 is available now for reference costs, and will be used for PbR from April 2009.

A20 Transient Ischaemic Attack >69 or w cc Non elective spell £1628

A21 Transient Ischaemic Attack <70 w/o cc Non elective spell £ 946

A22 Stroke >69 or w cc Non elective spell £4,102

A23 Stroke <70 w/o cc Non elective spell £2,680

There are a variety of ways in which to define the population who have suffered from a stroke. Each has its own merit, depending on the question being asked. In this section three different definitions are used for comparison. Firstly, those episodes with a dominant stroke HRG: A22 and A23 Non-Transient Stroke or Cerebrovascular Accident with or without complications and co-morbidities. Secondly, the Healthcare Commission designation of

stroke patients is those who have an ICD10 diagnosis code of I61, I63, I64. Lastly, when carrying out capacity planning for service design, it is also

important to consider those patients who come into hospital with a suspected stroke, but who may end up with another diagnosis such as TIA. As a

consequence we have used the final and broadest definition used as any episode of care, namely that which contains an ICD10 diagnosis code between I60 and I67 or G45-46. . In order that we can take full advantage of released costs, we must ensure that we agree to unbundle as many CVD codes as possible.

Commissioning Methodology

It is the PCT's intention to commission its stroke services as a managed pathway. Managed Care Pathways allow for a single contract to be let by the PCT for any care pathway. They require the PCT to identify the various aspects of service which are currently contracted for, bundle them up and assign them to a single provider in a contract which requires the contractor to manage the entire care pathway.

Over the coming few months the PCT will enter into extensive consultation with partners to enable it to produce a clear pathway specification, which will quality assure the commissioning of the stroke service delivery. A number of clinical service specifications have already been agreed with partners under the auspices of the Stroke Network.

Managed Pathways fit with all of the aspirations contained within World Class Commissioning. Currently, stroke services for the population of Birmingham East and North are managed through a diverse provider model, with little incentive for collaborative working. The outcome is a service delivery which is not co ordinated and almost random in terms of access to service and quality of care.

It takes time to build trust and promote pathway thinking, especially when the pathway has a relatively large number of partners who are starting in different places. Currently pathway management is a constant balancing act between responding to the competing demands for consensus, engaging commitment, long-term gains and resolving immediate problems. As systems thinking develops within the commissioning team .

At the heart of the managed pathway there are three concepts that are fundamental for success:

- The first is assembling the component parts of the pathway, from the many organisations involved, in a way that is seamless from a patient perspective.
- The second is to deliver the pathway in the real world, with attention to evidence, co ordination of care, competence of practitioners and the place / environment of delivery.

- The third is to design a system to identify where the pathway is not working optimally and build a system to learn from, and then improve the identified areas.

The development of an effective programme to roll out the early pathways will require the PCT to set up the structure for managing the pathway before tendering; this will allow the areas identified in section 2 to be addressed including the development of the market. A staged process for implementing the managed pathway through to procurement would follow the timescale below:

October 2008 – April 2009

- Review outline Strategy for the Stroke Pathway confirm procurement process and timescale.
- Confirm Timetable for Stroke Pathway with local providers and agree early commissioning of key aspects of Business case either by competitive tender or with current providers through increased investment
- Agree process and timescale for bringing together all elements of the Stroke Pathway under single management of the Project Manager
- Confirm the overall project Management structure for Stroke Pathway implementation.

April – September 2009

- Complete Service Specification for the Stroke Pathway tender including 5 year financial projections. (March 2009)
- Begin internal shadow management of the full Stroke Pathway based on the Service Specification.
- Complete draft Contract Stroke Pathway (September 2009)

October 2009 – January 2010

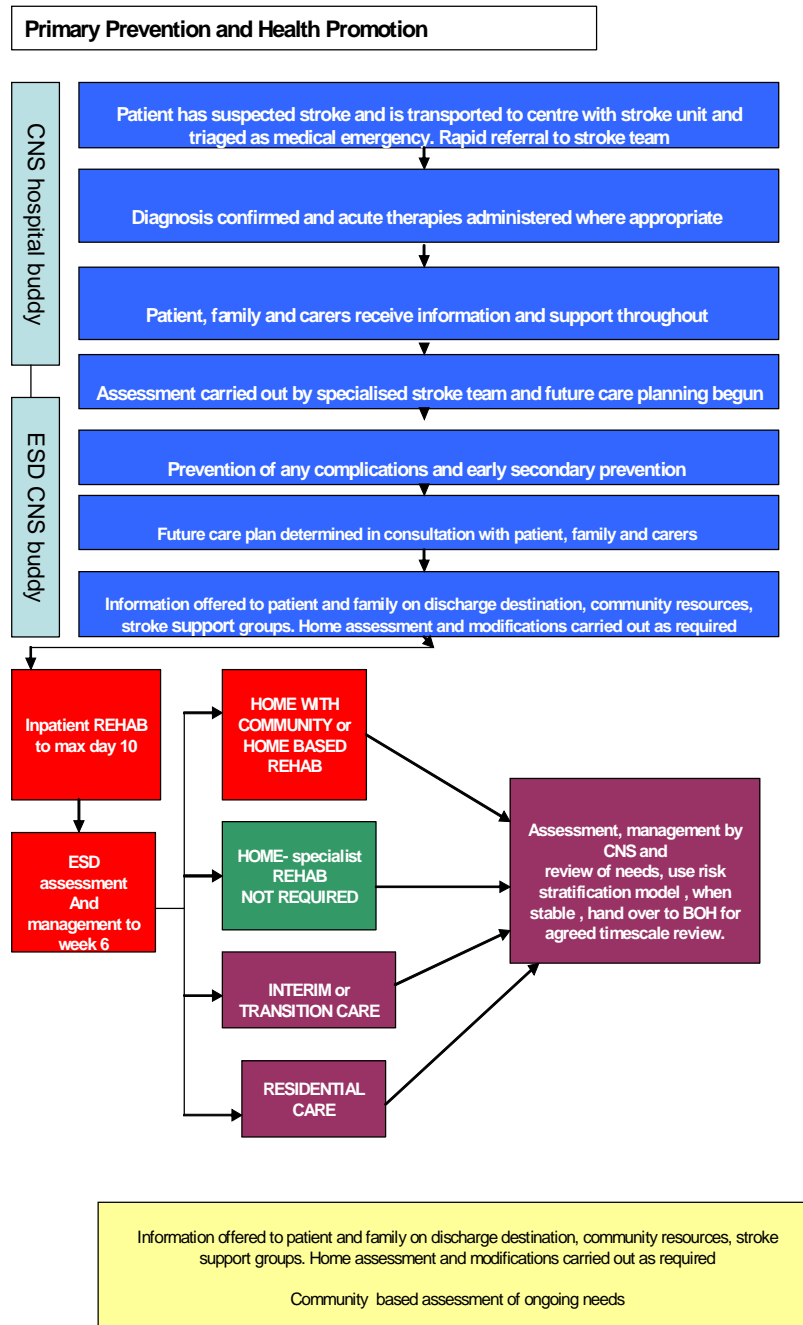
- Formal Procurement Stroke Pathway (January 2010)

The pathway development will also link with the PCT key role in the development of the Department of Health initiative *Mapping Health*.

The Implementation model

Following the benchmarking against the Quality Markers, (Appendix 1) Discussions were conducted with the extended clinical and management team at our main Acute Provider, our rehabilitation provider, neuro specialists, including Sandwell and West Birmingham Team (16% of our stroke activity occurs here) and our Local Health economy partners, Solihull Care Trust. to discuss implications, and support the design of the new pathway.

We explored national and international models, and settled on the Harvard Medical School model for stroke, designed in 2008, as this allowed us to clearly map out the psychosocial and housing options as well as follow an evidenced clinical model.



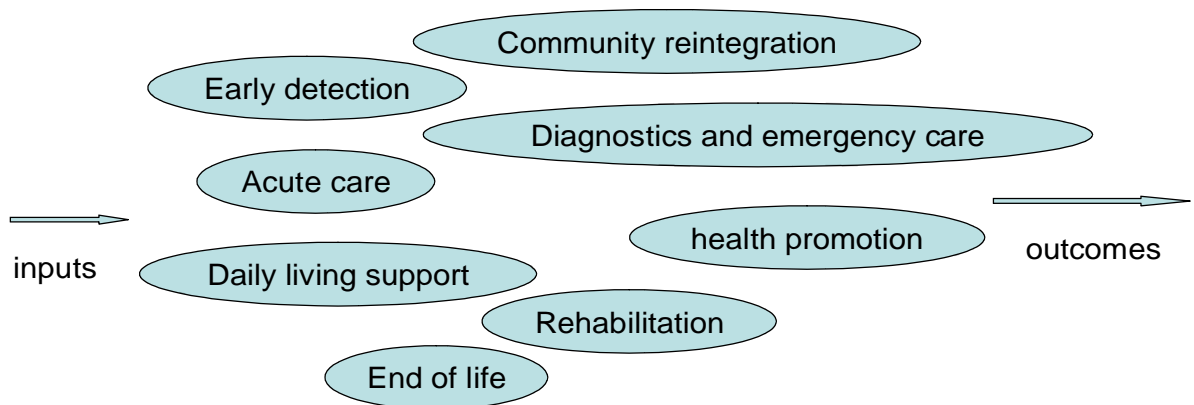
The evidence from the Canadian systematic review of integrated care set our direction in terms of individual case management, which would use the model of key worker advocate, each patient having case management support of some level, as set out in the model above.

Service specifications for each key element of the pathway are in development, and will sit as appendices for this strategy, reviewed annually

In terms of organisational management, a jointly funded Health and social care Stroke Co ordinator will manage and oversee the whole pathway delivery. This high level post will require management and administrative support, and will be responsible for the systems which will track and co ordinate the individual patient pathways.

However much we wish for simplicity, in reality no care pathway is linear, rather, in real life, acts as a random collection of activity reacting to input, and delivering an outcome -fig 7. Once we understand this, we can design the necessary 'constant' for the patient ,be that patient information , a web site, a telephone based navigator (Birmingham Own Health) or a key worker , to help them to respond appropriately to their own need , hence we build individuality into a population based system . We can see that in the first instance, population based health information on our plans is paramount to achieving a seamless pathway of care for each patient.

Fig 7.



Workforce Planning and Development

Many of the intentions outlined within this strategy are based on assumptions about having available people with the right skills and experiences to undertake the delivery of healthcare to BEN PCT's population. The introduction of new services alongside developments in technology and clinical practice suggests the need for a workforce across health and social care, which is increasingly integrated with more generic roles, which cut across professional boundaries. We can see from the model above that information and navigation is the key to individualised healthcare response.

Commissioners have a responsibility to set out clearly the specification for the service but also need to facilitate with providers the introduction of new roles, which enable the new types of service to be introduced. This approach creates challenges to many professionals and the PCT is committed to working with providers on this approach.

The PCT is also committed to ensuring its workforce planning based on this strategy is robust and that it is, with providers, forward planning workforce requirements over the next three to five years. This will be achieved through the development of enhanced roles in non-medical practitioners and increased competence in relation to specialist interest of GPs and other clinicians. Continuing professional development is vital for all staff working with stroke patients. It is a field where there is a rapid expansion in evidence both in the area of service organisation and for individual treatments. Continuing education is also important for the retention and recruitment of high quality staff.

Unfortunately, stroke research lags behind many diseases despite its importance in terms of impact on the population and its use of resources. The Stroke Research Network has now been operational for two years and has raised the profile of stroke research considerably. Not only is it important to increase the evidence base for stroke treatment but there is much evidence to show that research active sites deliver higher quality clinical care than those who do not participate.

BEN PCT are participating in the Birmingham University Stroke and TIA Collaboration for leadership in applied health research and care (CLAHRC), funded by the National Institute of Health Research (NIHR)

Market Development

The PCT is committed to supporting an increasing plurality of provision in appropriate circumstances this includes working with the third sector. All providers will be expected to set out their credentials to demonstrate they have the appropriate track record and skills to provide the relevant services. Commissioners are aware however that the development of a range of providers will require commissioners to provide support to providers who may not yet have the infrastructure to compete on an equal footing in the NHS market place but yet have the skills to deliver the requirements of commissioners. It is with this in mind that commissioners will not only use the market testing route for finding appropriate providers but will in advance of any development invite potential providers to enter dialogue with the PCT on what that provider could offer. The PCT will also encourage providers to come together in confederations to put forward proposals, which covers the whole pathway of the service. It is the intention of the PCT to create a vibrant provider market, which increases commissioner options and enables new providers including the third sector to enter the provider healthcare market. This will build on early market development in diagnostics through the independent sector, Learning Disabilities, Mental Health and the voluntary sector. Key to this approach will be the development of a supplier strategy for the appropriate procurement of services in line with the principles and rules for co-operation and competition.

The Metrics

We will use three types of quality assurance monitoring ;

1. The Vital signs for stroke -

- 70% of stroke patients spend 90% of their time on a stroke unit
- All high risk TIAs are scanned and treated within 24 hours of identification.

2. We have used the **OSCAR** framework to identify the type of quality measure, **OSCAR** stands for:

Organisation
Satisfaction
Clinical
Activity
Resources

3. We aim to use the benchmarking tool -Appendix 3 , to monitor our progress, baseline is set out in this Appendix, and the following outcome measures;

OSCAR	Performance indicator	Target	Baseline position
O	Increased reporting of TIA	Increase from baseline figure year on year	400 per annum (asset database)
O	Reduction of inequalities across the BEN Population in terms of mortality and life limiting disability	Reduce incidence and mortality from these typologies by 5% year on year from baseline figures	Typology G1(47.9%) and Red 2(48.6%) have the highest stroke admissions in the PCT population
C	Reduce life limiting disability from stroke	Establish baseline position	No data available
S	Increased achievement of looking to the future plans, with co responding increase in employment for stroke survivors	Establish baseline position	No data available
S	Reduced incidence of depression amongst stroke survivors and their informal carers.	Establish baseline position	No data available

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Recommendations for the Establishment of Stroke Systems of Care

Recommendations From the American Stroke Association's Task Force on the Development of Stroke Systems

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