NHS Oxfordshire

Integrated Stroke Pathway Oxfordshire

May 2009

Version 3.0

Content

Purpose

This paper presents the initial work of the Project Team, and its working parties whose membership compositions covered all aspects of the stoke pathway delivery, to address the need to integrate the whole stroke pathway. In addition, it incorporates the initial consultation with the public, patients and carers to help guide service improvement.

Background

The performance of the Oxford Radcliffe Hospitals Trust in the recent National Stroke Sentinel Audit reflected the lack of routinely coordinated service provision across the county, from acute care provider to social care. While there are pockets of excellence and evidence of national leadership in stroke care, there is a need to ensure that there is equality of timely access for all patients to specialist service provision. In recognition of this, Oxfordshire PCT instigated a Project Team in late 2008 to develop its response to the National Stroke Strategy and the wide-ranging guidance that has emerged from the Department of Health in the last year.

The first phase: This recommends fundamental structural change to specialist stroke services in the setting of existing service provision, both in the response to non-disabling (TIA and minor stroke services), and disabling events (acute stroke intervention (thrombolysis) and stroke rehabilitation and recovery). There is recognition of the need to move away from a hospital centric model of care to one that places the patient at the heart of the pathway. This paper has been developed with the following in mind; access to specialist stroke services at the right time maximises the chances of a good outcome for the patient.

For example, specialist stroke rehabilitation has a strong evidence base showing a clear improvement in long-term outcomes (higher rates of survival and discharge home, lower rates of dependency and institutionalisation). This point is crucial when considering the long-term cost implications of a stroke service. Poorly provided rehabilitation services maximise the chances that stroke patients will not recover thereby requiring increased levels of care, both health and social, in the long-term. Financial savings achieved through high quality stroke care are realised downstream: collaboration with social care colleagues is vital. The implications of this have been demonstrated using predictive modelling facilitated by the Decision Support Team at the PCT, the first time it has been utilised to guide the commissioning of services.

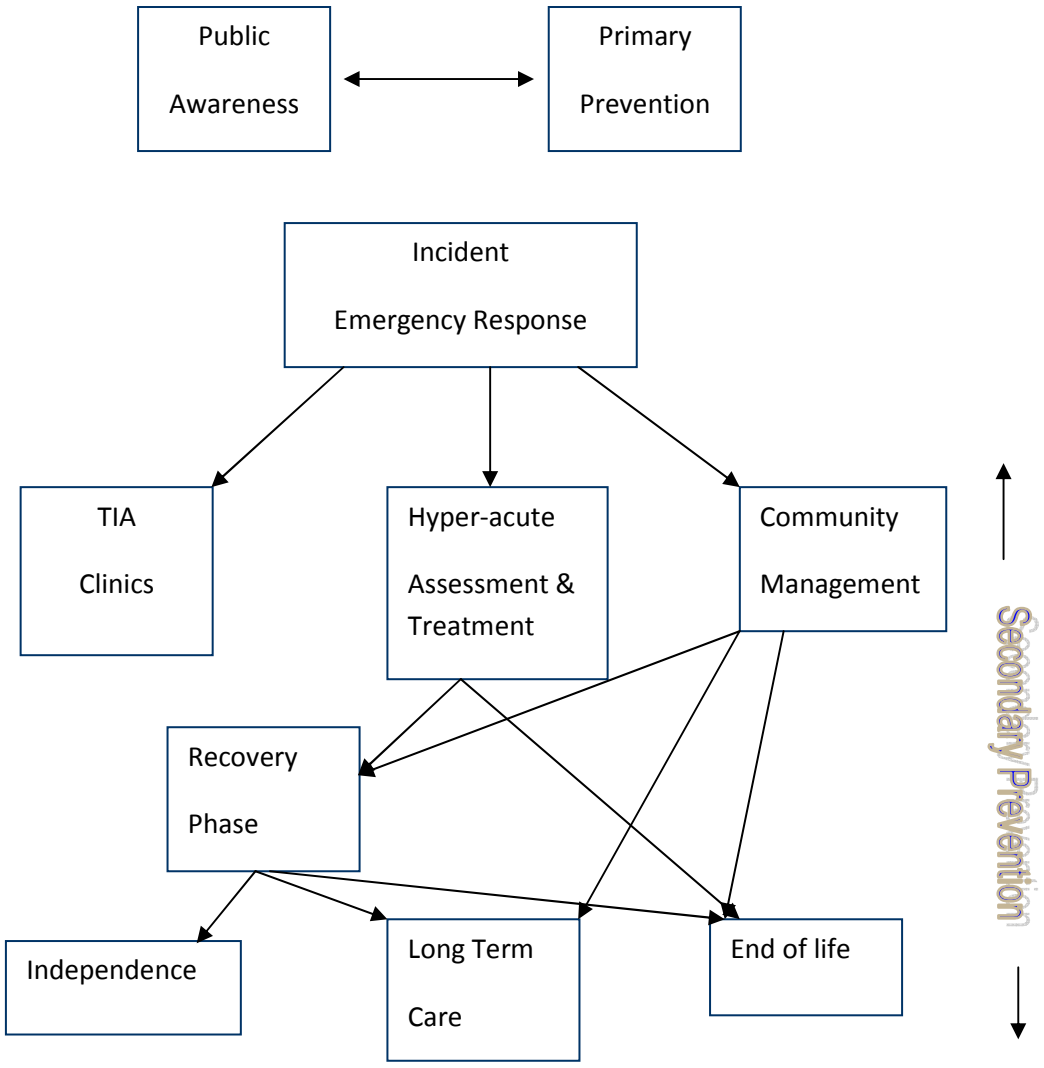
The first phase is now completed

The second phase: will involve the continued work to integrate stroke services across the county; all providers have committed to the establishment of Stroke Implementation and Development Group supported by project management from the PCT. This will be enhanced with further public-patient involvement to help to identify how the service can be improved. An education programme will be developed for the public and for all health professionals to clearly define what services are available where, and how to access them.

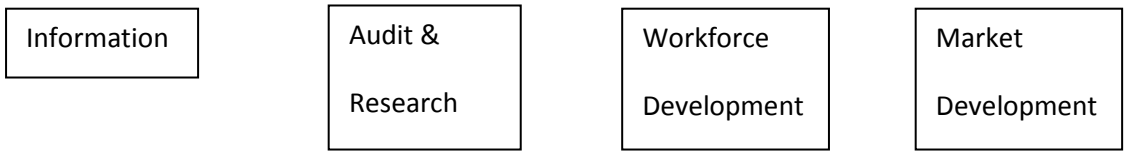
The Project Team recommends this report as providing the best opportunity to realise the following objectives:

1. To reduce the incidence of stroke in Oxfordshire
2. To reduce avoidable deaths following a stroke
3. To reduce the level of disability following a stroke

Stroke Integrated Pathway – Component parts



Supporting work streams

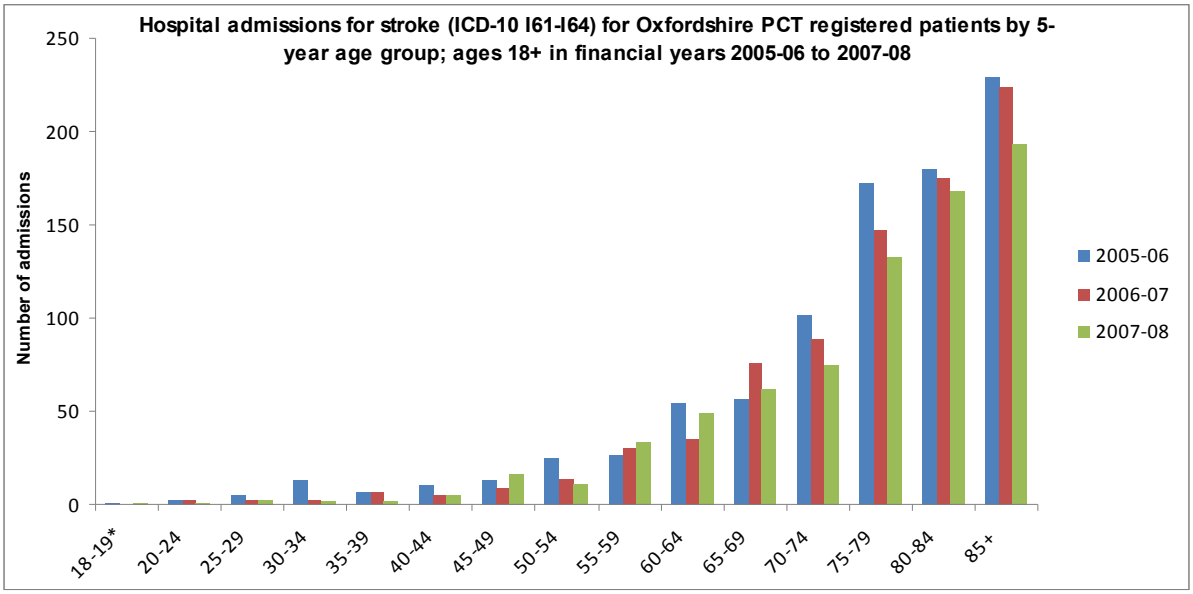


Health Impact for Stroke in Oxfordshire

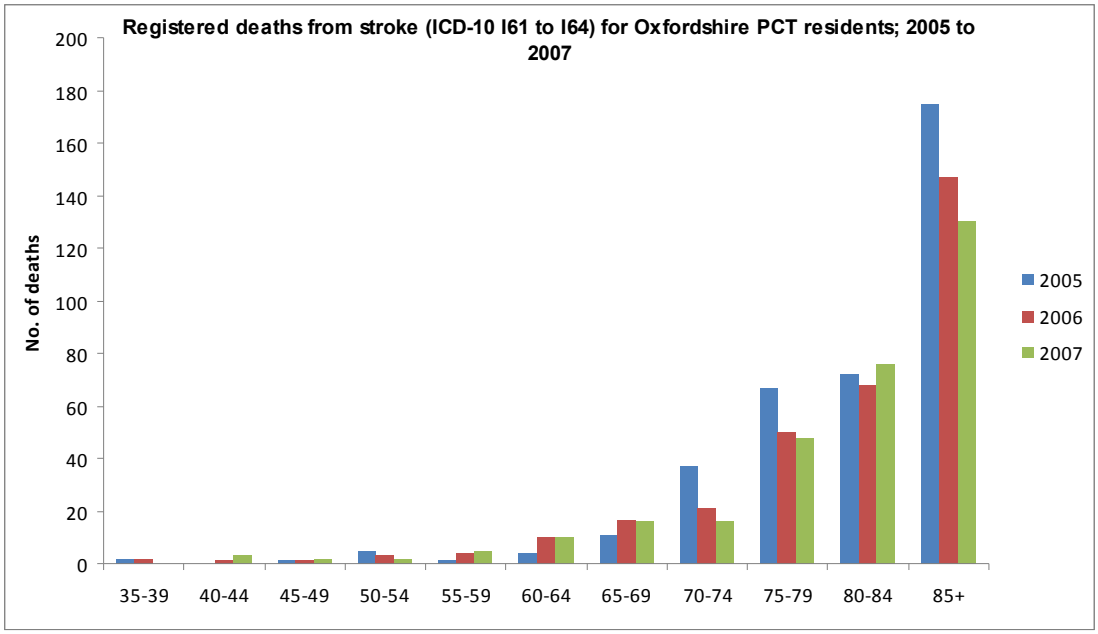
Through the 21st century the rate of registered deaths from stroke across England has been falling year on year, as it has across the developed world. This is due, in part, to improved health due to declining numbers of people smoking, better knowledge of dietary risk and improvements to treatment for conditions such as high blood pressure and cholesterol levels.

Oxfordshire has a healthier population than the English average, and this is reflected in the fact that the Oxfordshire average for both admission to acute care and death rate for stroke being lower both to the England and the South Central rates. However, the levels and rate of stroke in England and the rate of fall lags behind those of Western Europe.

It is estimated that 20-30% of people who suffer a stroke are likely to die within 4 weeks. Of those who survive, 40% require rehabilitation and of those 85% need ongoing support after hospital discharge. It is this last group that drive the cost burden to the NHS. On average, the calculated individual cost of a stroke to the NHS over 5 years is £15,000 and informal cost over the same period is £14,000.



Oxon PCT Admissions to Acute Hospitals with a diagnosis of Stroke	2005/06	2006/07	2007/08
ORH	771	643	605
RBFT	60	53	49
Swindon	6	5	4
Buckinghamshire	5	5	1
Others	9	12	10



Equal Access

Age

Although the majority of strokes occur in later life, a significant number happen to adults of working age, and all services need to offer appropriate care and support for all ages. In 2007/08 there were 124 (of 755 total) people in Oxfordshire PCT under 65 who were admitted to acute care with a stroke, this is 16.5% of total of people who suffer a stroke. The distribution of stroke incidence across the county has no major variation if population numbers and age variation are taken into account. In October 2007 there were 5.2% of the 65+ population living with the effects of a stroke in the county, and another 5.2% having experience a TIA (Transient Ischaemic Attack).

Gender

Strokes are more likely to occur in men than in women, but the latter are more likely to die from a stroke (National Stroke Strategy, 2007)

Deprivation and Social-economic groups

Area deprivation is associated with a higher incidence of stroke, a younger age at first stroke and an increased rate of reoccurrence, (Aslanyan et al, 2003). There is a higher reported incidence of morbidity and mortality from stroke in lower socio-economic groups, (Cox et al, 2006 and Wong et al, 2006). Within Oxfordshire there are two areas of significant deprivation, one within Oxford city and the other in Banbury, this should be remembered when planning for stroke services.

Ethnicity

There is a greater risk of vascular disease in some sectors of the population, and these populations should be targeted with health promotion. Stroke occurs at a higher rate in Black people, and those with Pakistani, Bangladeshi and White Irish male backgrounds, (Health Survey England). By contrast Atrial Fibrillation is a greater risk factor for stroke amongst white people than any other group, (Hajat et al, 2006). Stroke services should also

be tailored to ethnic requirements, the issue within Oxfordshire is that the numbers of the BME population that suffer a stroke are very small.

Location of services

Research shows that specialist units for assessment and treatment have better outcomes in survival rates and levels of disability. Therefore acute care due to its nature needs to be located in large centres with access to appropriate diagnostics. The recovery phase also benefits from specialist care, and the location and access to these needs to be based on both the economic model and the population distribution.

References:

Aslanyan S, Weir CJ, Lees, KR et al. (2003) Effect of area-based deprivation on the severity, subtype and outcome of ischemic stroke. *Stroke 34: 2523-2629*

Cox AM, McKevitt C, Rudd AG, Wolfe CD (2006) Socio-economic status and stroke. *Lancet Neurology. 5: 181-188;*

Department of Health (2007) National stroke strategy

Hajat C, Tilling K, Stewart JA et al. (2004) ethnic differences in risk factors for ischemic stroke: A European case study. *Stroke 35: 1562-1567*

Health Survey for England 2004. Volume 1: Minority ethnic groups.

Wong KYK, Wong SYS, Fraser HW, et al. (2006) Effects of social deprivation on mortality and the duration of hospital stay after a stroke. *Cerebro-vascular Disease 22: 251-257*

Awareness and Engagement

National Stroke Strategy Quality Marker

- Members of the public and health and social care staff are able to recognise and identify the main symptoms of stroke and know it needs to be treated as an emergency.

- People who have had a stroke and their carers are meaningfully involved in the planning, development, delivery and monitoring of services. People are regularly informed about how their views have influenced services.

Introduction

The purpose of this initial engagement work was to reach out to stroke patients and stroke carers across Oxfordshire to understand their experiences during both acute care and with longer term rehabilitation and support.

This engagement sought to find out views on a number of issues in order to inform the Oxfordshire Stroke Pathway of Care Project.

Engagement activity was undertaken with 39 patients and carers between February 25th 2009 and April 21st 2009. Meetings were held with the following groups:

- Family and Carers Support Unit
- Communication Support Services
- Stroke Clubs (Abingdon, Banbury, Henley, Wallingford, Witney)

A conscious decision was made to undertake more in depth and intensive interviews with fewer patients as opposed to seeking larger numbers. This was based on a concern that wider dissemination and less control would results in more superficial answers with less emphasis placed on anecdotal responses from stroke victims, many of whom have communications issues.

In addition, members of the Public and Patient Involvement team observed activities in each of the stroke clubs (with the exception of Wallingford, where postal surveys were issued due to a lack of convenient dates).

The activity undertaken should very much be seen as a 'snapshot of a rolling wave.' Further engagement will be required, and the links forged in this initial exercise will help fulfil this.

Awareness Raising

As the engagement project commenced a number of communication activities took place related to the national campaigns, this activity included:

- 15 minute BBC Radio Oxford interview on the Daytime show on the importance of early detection of stroke symptoms. This included a patient interview. This was organised by the communications team and undertaken Fenella Trevillion, Head of Joint Commissioning at the Oxfordshire Primary Care Trust (February 17th).

- A double-page feature for Oxford Mail and Oxford Times (February 23rd), covering the FAST campaign and interviews with patients.
- A FAST awareness poster campaign on buses across Oxfordshire (both internal posters and rear panels).

As the Pathway develops so will the linking in with external events and drivers

Initial Findings

Respondents at stroke meetings were given the opportunity to raise issues beyond the parameters of the questionnaire - where possible anecdotal evidence was recorded. The key messages are set out below:

Information

Approximately half of respondents felt that their care options were fully explained to them, mirroring the levels of dissatisfaction / satisfaction over whether care plans were meeting needs.

The majority of respondents felt that leaving hospital was similar to ***'stepping off a cliff'*** in terms of ongoing support.

There was a lack of awareness of the preventative actions that could have been taken to prevent stroke.

Treatments

Some respondents were unaware of the full implications of their conditions, for example, expressing surprise that there may be psychological implications, such as depression. As such they were unprepared to deal with this… ***'Is it normal for people to feel like this?'***

There was a perceived lack of information and coordination of planning for long term care … '***no anticipation of my needs'*** … '***no package of services to meet my needs'***

Psychological and speech & language therapies scored highest in terms of dissatisfaction. Occupational and physiotherapy scored highest in terms of satisfaction.

There was a perception that treatments (both acute and transitional) were more positive out of county, for example, in Gloucestershire and Warwickshire.

'I had support in Warwickshire but it's not been so good when we moved to Oxford'

Stroke Groups

Many patients and families only found out about stroke clubs by chance or not soon enough. … '***Would have been beneficial if there had been more publicity or some referral' … 'We would have liked to have known about it sooner'***

There is a lack of coordination between stroke clubs and the Communications Support Service, with patients with apparent communication needs aware of the former but not latter.

There was almost universal respect and value placed on clubs and the volunteers that run them, particularly as a socialising activity … '***Clubs treat patients as humans' … 'Stops me feeling sorry for myself'***

Carers were generally unaware of the carer's assessment

Observational notes

In undertaking the surveys, PCT staff also observed the stroke groups and recorded the following points:

The quality of activities varied greatly between the clubs, from being purely social (tea and biscuits) to activity-led group word games. There was a concern that although respondents enjoyed the clubs social activities, medical and rehabilitative measures were not so prevalent.

There is a need for many of the clubs to be 'energised', with new activities and new approaches. Stroke clubs are run by volunteers, who work very hard. However if they are aiming or to be identified as part of the process for meeting the rehabilitative needs of their client group there needs to be further professionalisation of this service. Currently only one or two effectively meet this need. Most are meeting social needs rather than health needs of individuals and are highly rated by the users for this work.

Demographics of stroke clubs and support groups were exclusively white and elderly. In conducting these surveys we observed a complete lack of younger stroke patients were and a complete lack of racial ethnicity.

Next Steps

The findings of the report will be used to inform the continuing work on developing a stroke pathway for Oxfordshire. PCT Commissioners and the Stroke Pathway of Care Project Group will take them into account in implementing the service specification, quality standards and the overall delivery of the Pathway.

As the Pathway develops it will be important to form a service users group in order build greater knowledge of service users experiences and to test assumptions and initiatives.

Where possible and appropriate further engagement work should be undertaken within acute care

As an immediate step it would seem necessary (ahead of the implementation of a new pathway) to review the information provided to patients so that they and their families are aware of the support networks in existence.

Economic and Predictive Modelling

None of the health or social care organisations in Oxfordshire has collected comprehensive data in the past that could fully inform the proposed service integration. This is for a variety of reasons, such as newly defined standards of care (e.g. TIA services based on risk stratification) or collection based on patient need rather than diagnosis. Linkage of existing data across organisations is also difficult.

The Department of Health's ASSET tool, which was developed to inform commissioners on how to develop stroke services, was felt to provide some useful information, but crucially, it did not take account of the existing patterns of delivery of health and social care in Oxfordshire.

Recognising this, the Project Team has worked with the Decision Support team at the PCT to utilise a new predictive modelling tool, scenario generator, for the first time to help target investment in service development.

At the Clinical Executive Workshop, the following will be presented showing the implications to patient outcomes and PCT costs:

- Base case scenario
- Creation of a comprehensive stroke unit at the Horton Hospital
- Opening of the Community Stroke Unit at Witney and creation of the Pilot Early Support Discharge Service in Oxford City
- Opening of a further Community Stroke Unit
- Coordination with Social Care
- TIA services

Known facts

Fast access to TIA diagnosis and treatment reduces the risk of going on to a full stroke

Levels of long term dependency are reduced by targeted specialist rehabilitation

Levels of death following a stroke are reduced by care on an acute stroke unit

Access to thromboylsis for appropriate individuals will reduce the long term effects of the stroke

Unknown facts

The effect of changing lifestyle e.g. smoking and obesity rates will have on the incidents and age of strokes

Long term capacity

Prediction on the capacity required for stroke care over the next ten years has found that the balance of decreasing incidents and the increase of the population over 65 of age, means that the incident number in true value will remain unchanged from the level in 2008/09. Therefore the capacity developed now should be future proofed for the next ten years, on the evidence available to us on trends.

Development of TIA Clinics

The development of daily high risk TIA clinics - the research indicates that assessment and treatment within 24 hours for individuals assessed at high risk TIA reduces the on-going incidents of full stroke. These clinics have a higher cost; however the modelling of costs indicates that this increased cost in Oxfordshire should be offset by the reduction of 3.7% annually of full strokes and the stopping of admission of patients to acute inpatient beds to access diagnosis and treatment.

Unbundling of Acute Stroke Tariff

HRG4 supports early discharge and transfer of patients into specialist community rehabilitation. There are three phases of care:

- Acute care – "early discharge" at seven days
- Early post acute care – the next five days for "rehabilitation" requiring 24 hour support
- Later post acute care – for all patients whose condition is such that they are not candidates for early discharge with / without rehabilitation

NHS Oxfordshire is investing £360k p.a. for the specialist community rehabilitation needed to support early discharge at seven days respectively during the early post acute care phase. Early discharge frees-up beds and other resources in Secondary Care. Unbundling the tariff releases spend on Secondary Care to provide specialist rehabilitation in Community Hospitals and at home.

Next steps

- Negotiation for both areas above is just starting with Oxford Radcliffe Hospital Trust
- Further development of the model is ongoing

Pathway Section 1

Stroke Prevention

National Stroke Strategy Quality Markers

- Those at risk of stroke and those who have had a stroke are assessed for and given information about risk factors and lifestyle management issues (exercise, smoking, diet, weight and alcohol), and are advised and supported in possible strategies to modify their lifestyle and risk factors.

- Risk factors, including hypertension, obesity, high cholesterol, atrial fibrillation and diabetes, are managed according to clinical guidelines, and appropriate action is taken to reduce overall vascular risk.

Preventing ill health can be divided into three main categories,

1. Preventing ill health (primary prevention),
2. Preventing deterioration once illness is evident (secondary prevention)
3. Specialist prevention to ensure effective recovery (tertiary prevention).

When considering preventative care for those at risk of and who have suffered from strokes, all three aspects of prevention must be present to ensure an effective pathway.

Primary prevention is available to everyone and includes

- Smoking Cessation
- Weight Management
- Increasing physical activity
- Blood Pressure monitoring

Services which are currently under development include
- Vascular checks for those aged between 40 – 74

DOH (2009) Putting Prevention First

- Specialised weight management services for those with higher BMI's

- Brief intervention for alcohol abuse

Ideally, every contact with health care professionals should lend itself to brief advice and signposting to lifestyle intervention services.

Secondary prevention takes place once a person begins to show symptoms of either vascular disease or has suffered a mini stroke (TIA), so early signs of disease.

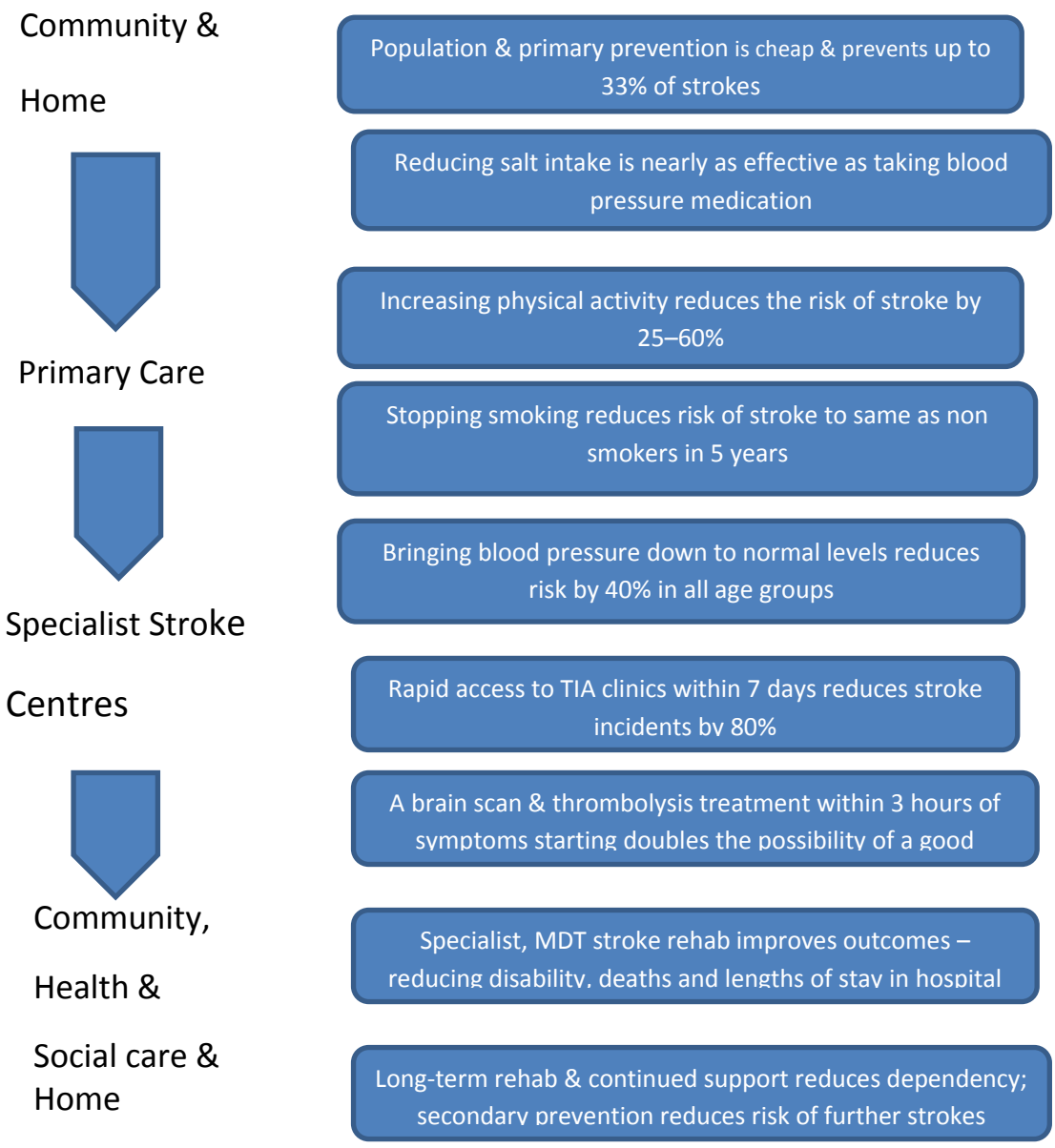
Early identification and education about the risk of stroke is of paramount importance. All the above services still continue to be relevant. TIA clinics will include signposting and brief intervention advice to lifestyle change services. Nurses specially trained in brief interventions will provide care for these patients ensuring they have the information they require to make adequate adaptations to improve their health. Primary care professionals will continue to provide health advice as part of the long term condition treatment management.

Specialist or Tertiary prevention is linked with treatment, ensuring effective rehabilitation to prevent deterioration and ensure functionality continues during early phases of care right

through to continuing care. Patients can contribute to better outcomes by ensuring weight is managed (making movement easier), smoking is reduced (better circulatory flows) and drug treatments are adhered too.

Prevention should be seen as part of the continuum of care which should be readily available along the whole stroke pathway.

The Benefits of Prevention (Source London Health Observatory)



Pathway Section 2

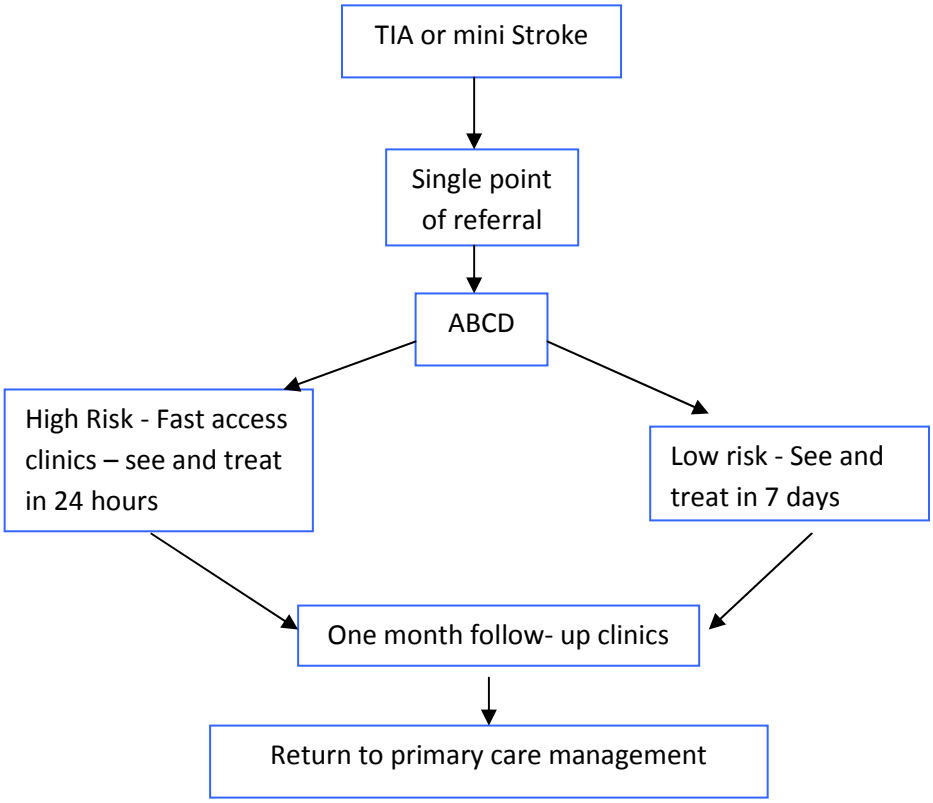
Transient Ischemic Attack (TIA) and Minor Strokes

National Stroke Strategy – Quality Markers

- Immediate referral for appropriately urgent specialist assessment and investigation is considered in all patients presenting with a recent TIA or minor stroke.
- A system which identifies as urgent those with early risk of potentially preventable full stroke – to be assessed within 24 hours in high-risk cases; all other cases are assessed within seven days.
- Provision to enable brain imaging within 24 hours and carotid intervention, echocardiography and ECG within 48 hours where clinically indicated.
- All patients with TIA or minor stroke are followed up one month after the event, either in primary or secondary care.

"Centralisation of services due to access to diagnosis"

Intended TIA pathway - Oxford Radcliffe Hospital Trust



TIA and minor strokes are common and are managed in consultant lead out-patient clinics. The risk of a stroke following a TIA is approximately 5% at one week and 10-15% at three months. Scoring known as ABCD has recently been developed to identify those at high risk, and research has shown that quick access to treatment can prevent potentially disabling

strokes by up to 80% at three months, (Rothwell et al, 2007 and Johnson et al, 2007). This means that high risk cases accessing swift treatment will decrease the annual number of individuals having a full stroke by 3.7%. In Oxfordshire this would equate to a reduction of 24 acute admissions.

Activity

It has been calculate from research and national data that there should be 1,500 referrals annually or 30 per week in Oxfordshire, of these 55% are high risk and 45% low risk.

Recent development

The Oxford Radcliffe Hospital Trust agreed in early 2009 to the organisations improvement plan to deliver a single point for referrals for suspected TIA and mini stokes and a re-organisation of out-patients clinics to give capacity to offer 365 day cover in the county.

The PCT has invested in the post of a nurse in the TIA follow up clinics to offer tailored health promotion and stroke prevention packages to all attendees

Change from current to future state

Current state	**Future state**
Scatter gun referral into Gerayology or Neurology clinics	Single referral point
No TIA specific activity data collection	All activity collected through single point of referral
No weekend or bank holiday rapid access arrangements	All high risk cases seen and treated in 24 hours
Admissions for TIA and mini-strokes	All TIA and mini-strokes can be seen and access diagnostics as out-patients
Paramedics taking TIA and mini-strokes to A&E	Paramedics having referral rights to rapid access TIA clinics
Secondary prevention information dependent on clinic	Tailored and targeted secondary prevention through nurse in follow up clinics

References:

Johnson C et al (2007) *Lancet 2007*:369:p283-292

Rothwell P.M. et al (2007) *Lancet 2007*:370: p1432-42

Pathway Section 3

Emergency Response

National Stroke Strategy Quality Marker

- All patients with suspected acute stroke are immediately transferred by ambulance to a receiving hospital providing hyper-acute stroke services (where a stroke triage system, expert clinical assessment, timely imaging and the ability to deliver intravenous thrombolysis are available throughout the 24-hour period).

999 Responses

A stroke is coded as a Category B emergency response by the South Central Ambulance Service (SCAS) – to ensure that a patient emergency vehicle is dispatched to the call.

All paramedics are trained to use the FAST assessment tool.

All patients with suspected stroke could be triaged into three groups by paramedics:

- Those in whom acute stroke intervention (e.g. thrombolysis) may be indicated;
- Those for whom hospital admission is required;
- Those for whom hospital admission may not be appropriate and could be dealt with using alternative pathways e.g. TIA/ minor stroke pathway.

Discussions are ongoing with SCAS about how to respond in these three instances to ensure equality of service provision across Oxfordshire given that there are three different Acute Care Providers (John Radcliffe Hospital, Horton Hospital, and Royal Berkshire Hospital (+?Swindon Hospital).

Minor Injury Units, GP practices and Out of Hours

All staff that may be the first point of contact for a patient with a suspected stroke working within minor injury units and GP surgeries should be fully trained in the use of the FAST assessment tool.

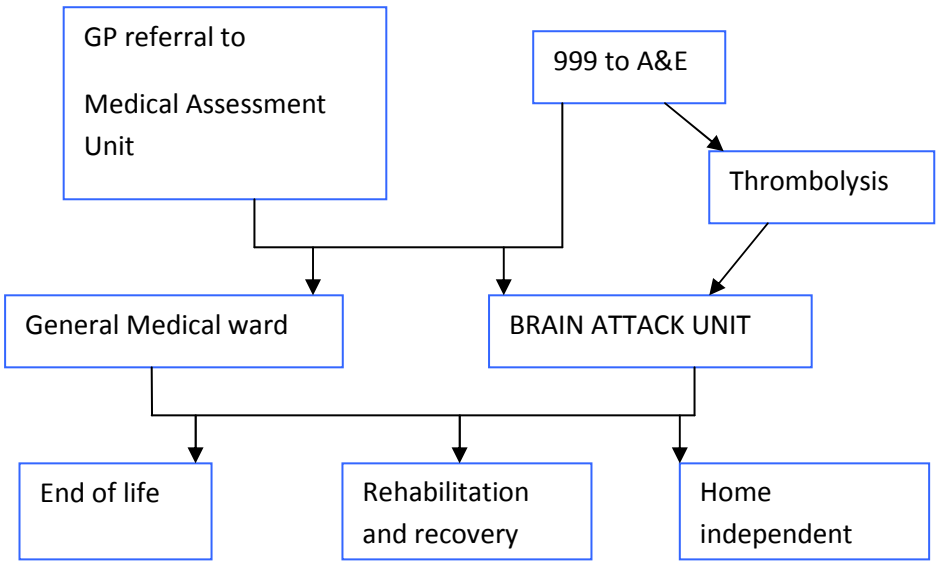
999 services should be accessed as indicated above.

Pathway Section 4

Hyper-acute Stroke Assessment and Treatment

National Stroke Strategy Quality Markers

- Patients with suspected acute stroke receive an immediate structured clinical assessment from the right people
- Patients requiring urgent brain imaging are scanned in the next scan slot within usual working hours, and within 60 minutes of request out-of-hours with skilled radiological and clinical interpretation being available 24 hours a day.
- Patients diagnosed with stroke receive early multidisciplinary assessment – to include swallow screening (within 24 hours) and identification of cognitive and perceptive problems.
- All stroke patients have prompt access to an acute stroke unit and spend the majority of their time at hospital in a stroke unit with high-quality stroke specialist care.
- Hyper-acute stroke services provide, as a minimum, 24-hour access to brain imaging, expert interpretation and the opinion of a consultant stroke specialist, and thrombolysis is given to those who can benefit.
- Specialist neuro-intensivist care including interventional neuroradiology/neurosurgery expertise is rapidly available.
- Specialist nursing is available for monitoring of patients.
- Appropriately qualified clinicians are available to address respiratory, swallowing, dietary and communication issues.



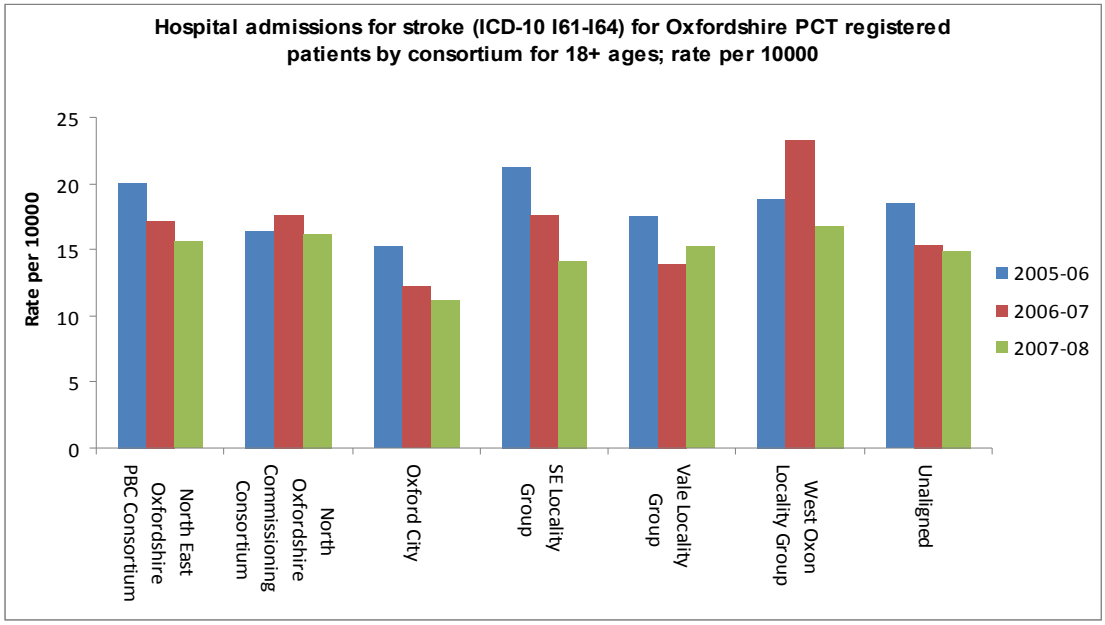
Activity

Hospital admissions for stroke 2005-06 to 2007-08

Oxfordshire PCT registered patients by consortium; all ages including community Hospitals & OCE

Consortium	Financial Year			Grand Total
	2005-06	2006-07	2007-08	
North East Oxfordshire PBC Consortium	117	101	92	**310**
North Oxfordshire Commissioning Consortium	127	137	147	**411**
Oxford City	224	177	167	**568**
SE Locality Group	111	92	74	**277**
Vale Locality Group	125	100	110	**335**
West Oxon Locality Group	105	132	98	**335**
Unaligned	91	75	60	**226**
n/a	1	6	8	**15**
Grand Total	**901**	**820**	**756**	**2477**

Source: SUS (U_DS 07/01/09)



Key Principles

All clinical staff in the Emergency Department should be competent in the assessment for stroke

There will be 24 hour, 365 day access for all patients in Oxfordshire to specialist stroke clinical services to provide assessment for suitability for acute stroke intervention including thrombolysis, where indicated.

All patients diagnosed with suspected stroke will undergo a brain scan within 24 hours of admission, unless they are being considered for acute stroke intervention in which case they should be scanned in the next available slot.

Standards of care on the acute stroke units will follow the Royal College of Physician Guidelines, 2008, and will offer:

- High dependency care
- Physiological and neurological monitoring
- Early rehabilitation
- Palliative care
- Will meet the needs of all ethnic groups and all adult age groups

The capacity of the Brain Attack units will allow 90% of patients with a stroke accommodated on this unit.

All patients diagnosed with a stroke will undergo swallowing assessment within 24 hours of admission.

All patients will undergo assessment by the MDT according to the standards set out in the National Stroke Sentinel Audit. The standards are currently: Physio assessment within 72 hrs; Assessment of communication problems by S&L therapist within 7 days of admission; OT assessment within 4 working days; and, Social work assessment within 7 days of referral.

Rehabilitation of patients will commence as soon as an MDT assessment and care plan has been complied, it will offer high quality, flexible and patient centred rehabilitation

A patient when they do not need medical supervision or intervention overnight (regular unplanned medical review)to be transferred from acute care for on-going rehabilitation, support and care in the community.

All patients who require palliative care will be cared for within the Oxfordshire End of Life pathway of care

If a patient is being transferred home then their GP should be informed of this prior to them leaving hospital

There should be strong relationships between the Brain Attack unit and social and community services to allow for seamless transfer of care across organisation and locations

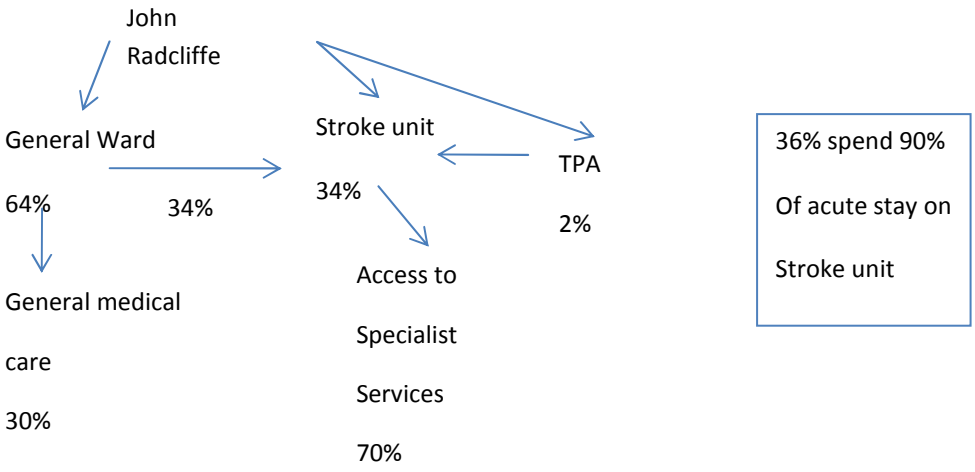
Oxford Radcliffe Hospital Trust

Two Brain Attack Units

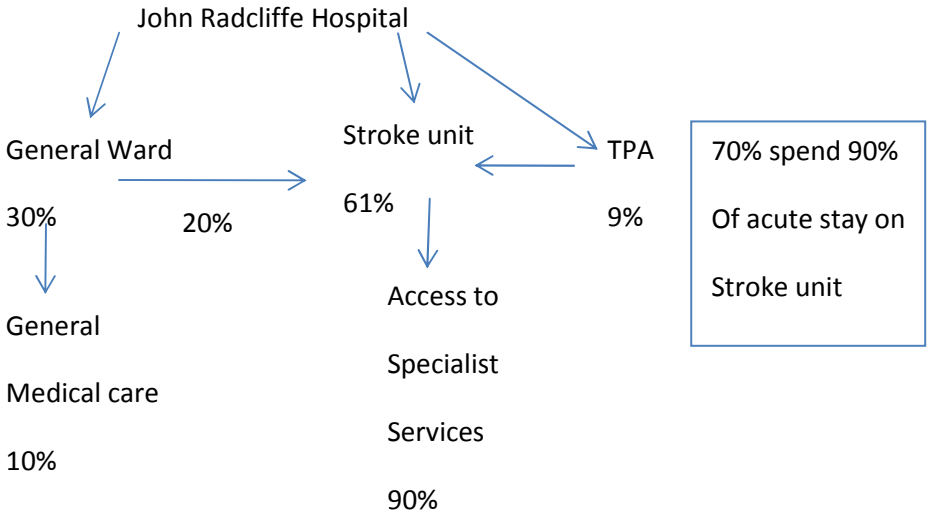
1. John Radcliffe Hospital – Acute Brain Attack Unit of 18+1 bed
2. Horton Hospital – Acute Brain Attack and early Rehabilitation Unit 8 beds

Current state

2009



Future state



Recent Developments

Oxford Radcliffe Hospital Trust Board agreed to developments and funding in Acute Stroke Assessment and treatment:

- Agreed need for additional full time Consultant to ensure sustainability of thrombolysis rota
- Development of a comprehensive stroke data set
- Additional therapy posts at Horton Hospital Stroke unit

Change from current to future state for ORHT

Current	Future
Long & inappropriate length of stay (LOS) in acute care	Normal maximum LOS = 12 days
36% spend 90% of stay on Brain Attack unit	70% spend 90% of stay on Brain Attack Unit
2% of strokes Thromboylysed	9% of strokes Thomboylysed
ORHT in bottom quartile of sentinel audit of improving quality of care	ORHT in top quartile of sentinel audit
Several medical teams managing stroke care	Few defined teams managing stroke care giving consistency of care
No clear pathway of care in acute services	Clear pathway and consistency on transfer between services internally and externally

Pathway Section 5

Recovery Phase

National Stroke Strategy Quality Marker

- People who have had strokes access high-quality rehabilitation and, with their carer, receive support from stroke-skilled services as soon as possible after they have a stroke, available in hospital, immediately after transfer from hospital and for as long as they need it.

- A workable, clear discharge plan that has fully involved the individual (and their family where appropriate) and responded to the individual's particular circumstances and aspirations is developed by health and social care services, together with other service such as transport and housing.

Rehabilitation

This is the period when individuals undertake a comprehensive programme to reduce or overcome the deficits following the stroke. It is to assist the individual to gain the optimal mental and physical ability which the damage of the stroke to the brain allows.

Rehabilitation is carried out in a number of settings (see criteria below) and is defined by the individuals medical and social requirements, rehabilitation starts as soon after the stroke the individual can tolerate it.

Specialist stroke rehabilitation has a strong evidence base and has been shown to improve long term outcomes. This releases financial savings downstream, and cost shifting and collaborative pathway development are vital.

Activity

Currently there is poor data on the numbers of patients with a stroke in rehabilitation services due to poor coding – or services working on needs basis not diagnostic basis. It will be important for at least two years to monitor the activity through the recovery services to allow accurate long term commissioning. Therefore activity data below is taken from limited known data and extrapolation of national data.

It has been estimated that nationally 40% of individuals require rehabilitation and of those 85% are discharged with some level of dependency that requires long term care. Therefore in Oxfordshire this means that:

268 in 2007/08 Required rehabilitation

227 in 2007/08 required some form of long term care annually

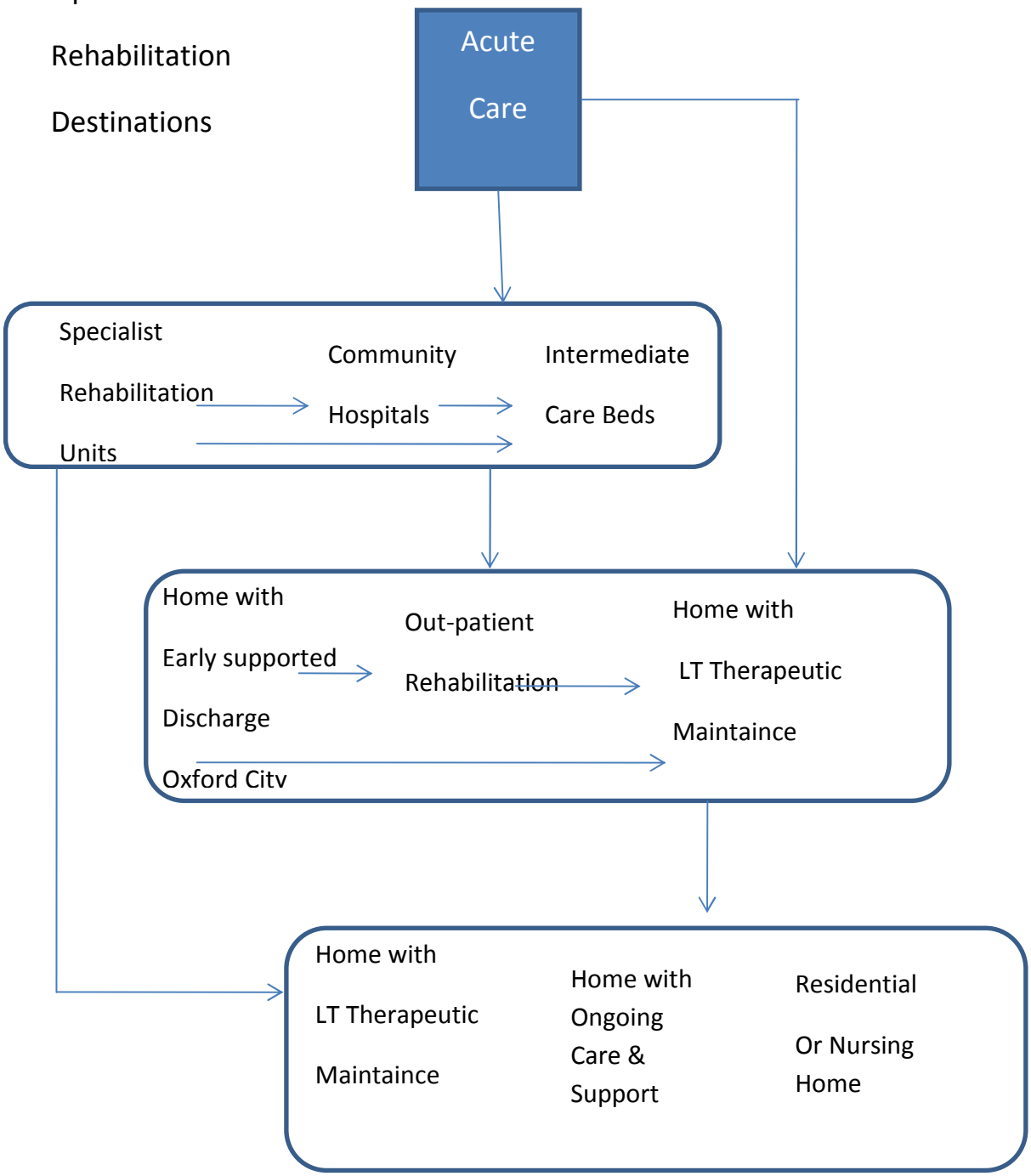
End of Life Care

For this area of care refer to the Oxfordshire End of Life Strategy

Carers Support

For this area of work refer to the Oxfordshire Carers Strategy

Options for Rehabilitation Destinations



New services in the pathway for 2009/10

Specialist rehabilitation unit at Witney Hospital

- No increase in capacity – improvement in care and outcomes

This is the up-grading of 10 existing consultant led beds in Witney Hospital to have the medical input and staffing levels to deliver specialist stroke rehabilitation, allowing discharge from the Acute Units at John Radcliffe and Horton Hospital from day seven following a stroke

Additional investment in therapy and nursing - £220k

Early supported Discharge team in Oxford City

- Increased capacity of 48-55 additional individuals treated in the community

A new pilot service for the registered patients within Oxford City and Kidlington GP practices to trial the concept of Early Supported Discharge for Oxfordshire as laid out in the National Strategy. The trial will start in July 2009 and run for 2 years with full evaluation taking place for October 2010, to meet the commissioning cycle of the operational investments if it proves to be a successful way of delivering rehabilitation.

Total investment over 2 years - £276,400 –split of ORH £80k, PCT £80k, SHA grant £116,400

Outline Criteria for Each Rehabilitation Step

Brain Attack Unit: 24/7 specialist medical input required

Community Specialist in-patient: 9-5, 5 days a week consultant led medical input, with 5-6 day specialist MDT input

Early Supported Discharge: Therapy led input with MDT link / supervision to acute unit, 5 days a week therapy input, care input 7 days no night cover, with medical input of general medical services

Community Hospital: 24/7 nursing cover, MDT generic therapy input 5 days per week, GP medical cover. Offering continence, cognitive, communication rehabilitation, plus behaviour support and place of safety

Intermediate care beds: limited registered nursing cover, MDT generic therapy input up to x5 per week, GP medical cover, and safe environment with night time toileting.

Intermediate care at home: care input 7 days, no night time cover, MDT generic therapy input up to 2-3 times per week, GP medical cover

Out-patients: single professional or MDT, short targeted rehabilitation session – from x3 per week to x1 per month.

Key Principles

Rehabilitation programmes are built around the individual needs with patient agreed goals, and are everyone's responsibility to carry out through a 24 hour cycle.

Rehabilitation is both physical and physiological to assist in the adaptation to a changed situation and is based on building a positive perception of 'myself' in their new situation.

The need for tailored rehabilitation should be balanced between patient and family choice of venue close to home and the provision of specialist units.

Rehabilitation units should be supported by appropriate qualified clinicians with competencies to deal with complex issues and available to address respiratory, swallowing, dietary, continence, skin health and communication issues,

Have high levels of co-ordination between health and social care that allows continuity of support and care,

Recovery can continue for many years after an individual has had a stroke, and is multi-factored e.g. functional, emotional or return to social/work life. Targeted rehabilitation is time limited and goes from highly intensive specialist input to patient and family delivered.

Discharge from care planning should start early within the pathway, involve the individual, their family with health and social care working in partnership with other agencies such as housing, so avoiding delays in discharge.

GPs will be informed of an individuals discharge home prior to this occurring with a full on-going plan and a copy of their final assessment.

Monitoring

Patient outcome tool

Oxfordshire has adopted FIM – Function Independence Measure

The FIM is undertaken early in a patients recovery phase and re-taken regularly through the recovery phase

Change in FIM scores will be reported on discharge from each service quarterly

Change from current state to future state

Current state	**Future state**
No specialist community stroke rehabilitation	Sufficient commissioned capacity for levels of rehabilitation to allow 12 day LOS in acute units
No agreed pathway and criteria for different levels of rehabilitation	Agreed criteria for different levels of rehabilitation

Insufficient levels of specific rehabilitation therapies available in the community	Sufficient commissioned capacity of different therapeutic input
No out-patient neuro-rehabilitation	Switch from day hospital model to focused neuro-rehabilitation out-patients
Limited therapy outside of intermediate care service and Occupational Therapy long-term care	Define requirements and develop community rehabilitation accordingly
Lack of key specialist therapeutic services	Clinical lead and specialist services accessible in the community
No clinical Psychologists	Clinical psychology to support recovery services though out the pathway

Pathway Section 6

Long Term Care, Review, Return to Work and Community Life

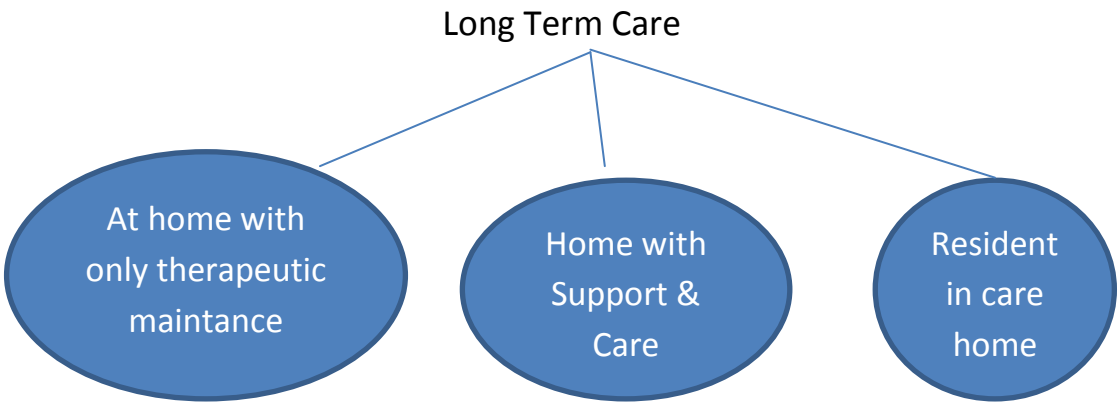
National Stroke Strategy Quality Marker

- A range of services are in place and easily accessible to support the individual long-term needs of individuals and their carers.
- People who have had strokes and their carers, either living at home or in care homes, are offered a review from primary care services of their health and social care status and secondary prevention needs, typically within six weeks of discharge home or to care home and again before six months after leaving hospital.
- This is followed by an annual health and social care check, which facilitates a clear pathway back to further specialist review, advice, information, support and rehabilitation where required.
- People, who have had a stroke, and their carers, are enabled to live a full life in the community.
- People who have had a stroke and their carers are enabled to participate in paid, supported and voluntary employment.

Stroke long term care

Defined as

Support and care on-going to maintain daily living for someone who has permanent and substantial levels of disability from a stroke



- 45% of people who suffer a stroke will recover sufficiently to be living at home independent – 301 in 2007/08 in Oxfordshire
- 27% are left with a disability that requires on going care and support - 20% will be in a care home and 80% receiving care and support at home – 45 entering care homes

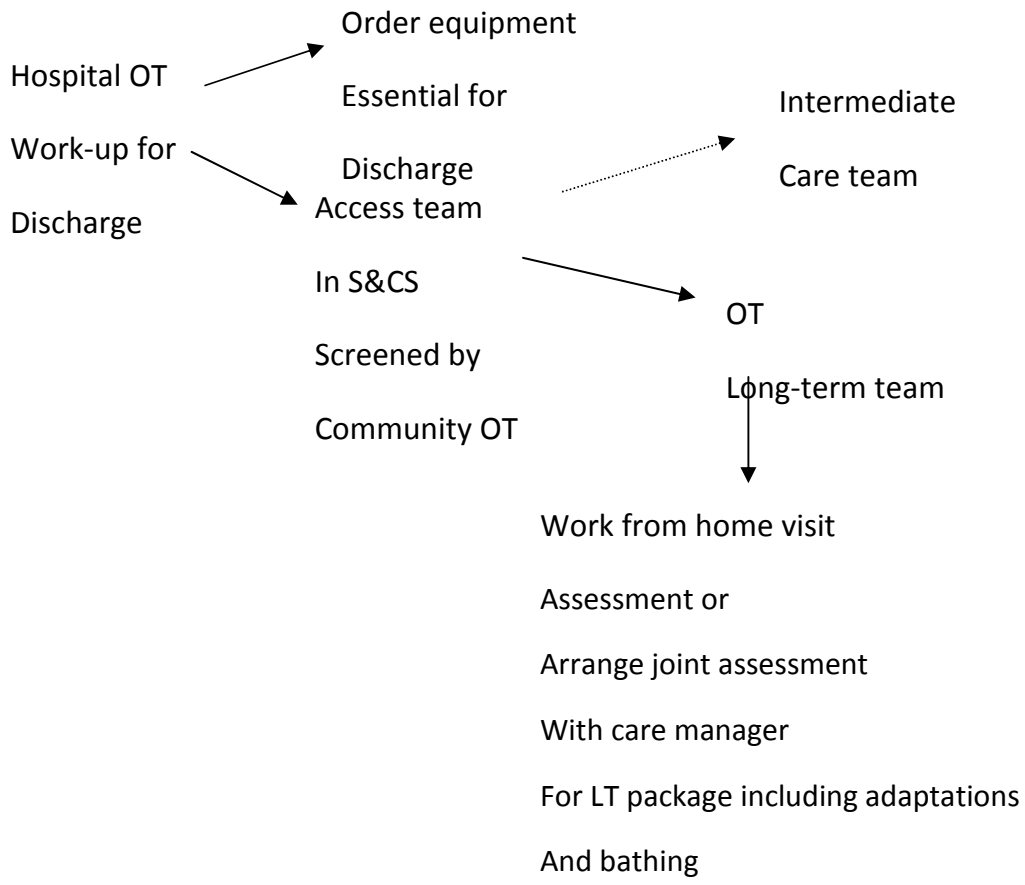
and 181 receiving support and care at home, paid or unpaid in 2007/08 in Oxfordshire

- It is nationally calculated that 25% of all Nursing Home residents have had a stroke

Areas of long term care

- On going therapy – e.g. Speech and Language Therapy
- Outpatients consultant appointments
- Stroke networks for survivors' and their carers
- Equipment to maintain maximum independence
- Adaptations to homes to remain living in them
- Return to work services
- Reviews by primary care practitioners
- Communication Support groups
- Socialising support to integrate back into their community

Long-term Occupational Therapy Pathway



Social and Community Services three year grant

This is grant money from the Department of Health to all Social Services Departments from 2008-2011, to support the development of long term care for stroke survivors and their families, in Oxfordshire the total is £333k.

Developments

- Stroke co-ordinator in post for 2 years from March 2009
- Training programme to improve the skills and competencies for carers both paid and unpaid in care homes and home settings (£150k)
- Development with the Stroke Association of a return to work service
- Grant to the Stroke Association to improve the support to the carers of stroke survivors

Additional developments

- Information campaign – awareness raising amongst staff of strokes and the 'FAST' campaign through the County Council intranet and the staff magazine

To start

- Financial and benefit advice

Oxfordshire County council web-page

"How do I stay in my own home?"

Self assessment web page www.oxfordshire.gov.uk

Community Management

On-going Assessment and Review

Individuals and their carers should have a review from a primary care service for their health and social care status and secondary prevention needs:

- 6 weeks after discharge home or entry into care home
- 6 months after discharge
- Annually after this for a health and social care check

This is a new development to have a formalised process and will require a specification and planning into a primary / community care service

Change from current state to future state

Current state	**Future state**
Lack of consistency in patients experience	Consistent standards and experience for patients

Services not joined up	Transfer of care across organisational boundaries joined up
No formalised review tool or mechanism	All stroke survivors have access to regular review of their on-going needs
Poor return to work and adults of working age services	Develop return to work and services tailored for adults of working age
Patchy on-going support and self care	Expert patient / self care support network
No care home quality markers	Quality standards within care homes

Next Steps

This is the area that has been identified as to where the most work is still required; the work has started with the appointment of a stroke co-ordinator in early 2009 in Social and Community Services. The next step is a workshop on long term care for stroke survivors at the end of May, and working on the development needs for this area and rehabilitation in tandem due to the phasing of rehabilitation into long term care in a patients recovery.

Monitoring

Vital signs to Health Care Commission

1. Patients who spend at least 90% of their time on a stroke unit
2. Transient Ischemic Attack (TIA) cases with a higher risk of stroke who are treated within 24 hours

Local indicator within Operational Framework 2009/10

1. Number people over 65 who have a stroke -

Based on a 5% reduction in strokes 2009/10 amongst the over 65s to predicted levels taking account of demographic growth

Functional Independence Measurements – individual patient outcome measure

Stroke Sentinel Audit

CQUIN data - started April 2009 with ORHT

Stroke	% of patients with high risk Transient Ischaemic Attack (TIA) and acute stroke who have had brain imaging (MRI) are scanned in the next scan slot within 60 minutes of request out-of-hours with skilled radiological and clinical interpretation within 24 hours	80% - broken down by hospital site	Provider report as per returns to National Sentinel Stroke Audit	Quarterly
Stroke	Stroke patients in whom a haemorrhagic stroke, or other contraindication, has been excluded have aspirin treatment within 48 hours of admission	100% - broken down by hospital site	Provider report as per returns to National Sentinel Stroke Audit	Quarterly
Stroke	Stroke patients have a initial swallow screen test performed within 24 hrs of admission, unless there is a documented contraindication	100% - broken down by hospital site	Provider report as per returns to National Sentinel Stroke Audit	Quarterly
Stroke	Patients presenting with Transient Ischaemic Attack (TIA) are risk assessed and high risk patients treated within 24 hours, low risk within 7 days	Achieving 50% by quarter 4, average of 42% over the year	Provider report as per returns to the National Sentinel Stroke audit split between sites	Quarterly
Stroke	Patients who spend at least 90% of their time on a stroke unit	Achieving 70% by quarter 4, average of 68% over the year	Provider report as per returns to the National Sentinel Stroke audit split between sites	Quarterly
Stroke	% of patients admitted directly to specialist stroke unit from A&E	Threshold to be developed in year	Provider report as per returns to the National Sentinel Stroke audit split between sites	Quarterly

Key Data on activity and quality will support individual Service Specifications, and will utilise data sets that are already required and not burden clinicians with additional collection.

Development Plan

The National Strategy for Stroke is a ten year development plan (2007-2017) to improve the quality of care for those who experience TIA's or full strokes. In December 2008 a project team was established in Oxfordshire to scope current services and capacity etc. and to outline the Oxfordshire Integrated Stroke Pathway to be the vehicle to implement the National Stroke Strategy Locally.

To establish a high quality and cost effective integrated pathway, there are a series of developments areas to address by the PCT and Social and Community Services commissioners, working with current providers or developing new providers through tendering services.

Listed below are the areas identified for development, to oversee this work and to ensure the governance arrangements it is proposed that there is:

- A Stroke Development and Implementation Group established in Oxfordshire, consisting of commissioners, clinical leads, users, voluntary Groups and main contracted providers from the PCT and Social and Community Services to take the work of the project team forward. This group would be accountable to the Joint Older Peoples Commissioning Board.
- A Stroke Development Manager 0.5wte on a two year fixed term contract to project manage the developments.
- When the PCT Medical Director is appointed they will have responsibility for the stroke pathway work in their portfolio.
- Oxfordshire is part of the South Central Stroke Network and a member of the Steering Group, the Oxfordshire Stroke Group and development manager would work closely with the network, especially in pan South Central developments.

Development Areas

Awareness

Rolling programme on FAST training across all front line health and social care practitioners and with care agencies

Patent and Carers Involvement

Establish a patient and carers group to input into all the developments of stroke care in the county

Emergency response

To have an agreed protocol with South Central Ambulance Service

TIA assessment and treatment

To ensure the implementation of the new pathway and clinic arrangements

To establish referral rights of paramedics to TIA clinics

To agree tariff arrangements and service specification

Hyper-acute assessment and treatment

To ensure the implementation of the new pathway

To complete negotiations of unbundling the stroke tariffs

Increase level of patient involvement in the development of services

Develop neuro-psychology input

To agree service specification

Increase Speech and Language Therapy communication input

Criteria and consistency in neuro-surgery referral agreed

Recovery

Consultant Therapist to clinically lead & co-ordinate community services

Speech and Language Therapist in intermediate care teams

Access for all individuals who require it to video fluoroscopy

Speech clubs across the county

Full Specialist stroke team in the community

Clinical Psychologist – 2.0wte

Therapy after 6 weeks intermediate care – apart from limited capacity in physical disability team

Outpatient neuro-rehabilitation

Return to work rehabilitation

Services targeted on younger adults

Specialist disability counselling

Long Term Care

Psychological support

Analysis of numbers in the community

Review current standards of care

Develop quality markers for care homes and domiciliary care

Ongoing assessment and review

Return to work support & services

Long term social inclusion and expert patients / self care

Information

National Stroke Strategy Quality Marker

- People who have had a stroke, and their relatives and carers, have access to practical advice, emotional support, advocacy and information throughout the care pathway and lifelong.

Audit

To agree audit and monitoring of the pathway with all providers

National Stroke Strategy Quality Marker

- All trusts participate in quality research and audit, and make evidence for practice available

Market development

The PCT and Social and Community Services, to work together to stimulate and develop the market in recovery and long term care, identifying new providers of support and care.

Workforce development and education

A consultation education strategy for health and social care staff involved in stroke care was published by the department of Health in April 2009

National Strategy Quality Marker

- All people with stroke, and at risk of stroke, receive care from staff with the skills, competence and experience appropriate to meet their needs

Contributors

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Working Groups		
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	Occupational Therapist	S&CS
	Occupational Therapist	S&CS
Attendees of Stroke Rehabilitation Workshop		
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Mrs Denis	Carer	
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Nikki Proffitt	Physiotherapist	OCE

Abbreviations

CHO	Community Health Oxfordshire
DOH	Department Of Health
ESD	Early Supportive Discharge
FIM	Functional Independence Measure
MDT	Multi-Disciplinary Team
OCE	Oxford Centre of Enablement
ORH	Oxford Radcliffe Hospital
PBC	Practice Based Consortium
RBFT	Royal Berkshire Hospital Trust
SALT	Speech And Language Therapy
SHA	Strategic Health Authority
TIA	Transient Ischemic Attack
TPI	Thromboylsis