

Path to Excellence: An Independent Integrated Equality, Health and Health Inequalities Impact Assessment.

Proposals to change and improve Acute Stroke Services in South Tyneside and Sunderland

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Executive Summary

The Path to Excellence is a five-year transformation of healthcare provision across South Tyneside and Sunderland that has been set up to secure the future of local NHS services.

This report presents a desktop integrated impact assessment (IIA) of the three Options that are being considered as part of permanent proposals to reconfigure of stroke services:

- Option 1: reconfigure stroke services across South Tyneside District Hospital (STDH) and Sunderland Royal Hospital (SRH) by consolidating all inpatient stroke care on Ward E58 at the Sunderland Royal Hospital Site.
- Option 2: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.
- Option 3: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 72 hours

This assessment was undertaken in parallel with reviews of travel and transport and the ambulance service and can be considered alongside the results of those reviews and the detailed clinical service reviews and business cases.

This IIA entailed a process that systematically considered the proposed changes to stroke services with the aim of identifying potentially positive or negative impacts on equality, health and health inequalities. It drew on relevant research and statistics to evaluate the impact which the two proposed models for acute obstetric and gynaecology services could have with reference to 24 service specific attributes across four domains of health (Healthcare Outcomes; Access to High Quality Health Care; Environment; Economy).

The results of this IIA suggested that the changes could have a greater effect on communities in South Tyneside and on certain vulnerable groups, most notably:

- BME communities
- Disability groups
- Socioeconomically deprived communities
- Older people

These groups might be at higher risk of stroke and therefore more likely to benefit from improvements to service quality. However, they may also be vulnerable to some of the drawbacks associated with the changes such as continuity of care; travel costs (personal, economic and social); barriers to access; traffic commuting between South Tyneside and Sunderland.

The IIA impact scores gave a crude indication of the relative scale and direction of possible impacts. The total (net) IIA impact scores were overwhelmingly positive for Option 1 but negative for Options 2 and 3.

Total HIIA Impact scores		
Option 1	Option2	Option 3
185	-13	-11

Options 2 and 3 scored negatively because they could not deliver the levels of specialist staff required for effective, high quality stroke services.

Option 1 was assessed as having some minor drawbacks relating to the impact of more traffic commuting between South Tyneside. The travel and transport review might shed light on the level of risks associated with this Option.

This report includes some suggestions regarding actions that could mitigate against the identified drawbacks associated with Option 1. These suggestions could enable stakeholders to identify how they can contribute to the reconfiguration and further maximise the potential benefits. The suggestions relate to patient transport, organisational development, quality improvement, education and training, monitoring and evaluation

Overall, the IIA provided quantitative and qualitative evidence that the proposed changes relating to Option 1 could have major benefits for the resident populations including vulnerable groups. The key benefits relate to the ability of the changes to achieve:

- Improved and sustainable levels of specialist medical staff
- Improved and sustainable levels of specialist stroke allied health professionals
- Improved and sustainable quality of stroke care 24/7

These improvements can deliver multiple benefits for stroke sufferers and their carers, family and friends

- Reduced mortality
- Reduced morbidity
- Less disability and / or sensory impairment
- Improved quality of life and emotional wellbeing
- Less social dependency
- Improved stroke prevention

All of these improved outcomes could have an enduring and sustainable benefit to population health and health inequalities across South Tyneside and Sunderland.

The information in this report will enable stakeholders to contribute to the consultation process with due regard to the public sector duties around equality

and health inequalities. All stakeholders are invited to identify any further impacts or mitigating actions which have not been highlighted in the report.

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1 Introduction

1.1 Path to Excellence: Stroke Services

The Path to Excellence is a five-year transformation of healthcare provision across South Tyneside and Sunderland.

The transformation has been set up to secure the future of local NHS services and to identify new and innovative ways of delivering high quality, joined up, sustainable care that will benefit the population of Sunderland and South Tyneside both now and in the future.

One of the first developments is a Clinical Services Review of Stroke Services across South Tyneside and City Hospitals Sunderland NHS Foundation Trusts. This review considers new service models for the provision of Stroke Services.

In order to identify and plan for possible impacts on equality, health and health inequality, the Path to Excellence team commissioned an independent desk based Integrated Impact Assessment (IIA) of the proposed solutions.

This report describes the approach to, and the results and recommendations of, an independent Integrated Impact Assessment of the possible models considered as part of the proposed reconfiguration of acute stroke services.

2 Integrated Impact Assessment (IIA)

2.1 Context

The NHS is committed to promoting equality and reducing health inequalities. These principles are embedded in the NHS constitution¹:

- *a comprehensive service, available to all irrespective of gender, race, disability, age, sexual orientation, religion, belief, gender reassignment, pregnancy and maternity or marital or civil partnership status.*
- *to promote equality through the services it provides and to pay particular attention to groups or sections of society where improvements in health and life expectancy are not keeping pace with the rest of the population.*

In order to ensure these goals are met, all changes to NHS services are subject to a rigorous assurance process².

¹ The NHS constitution for England Department of Health 2015

² NHS (2015) Planning, assuring and delivering service change for patients: a good practice guide for commissioners on the NHSE assurance process for major service changes and reconfigurations.

This assurance process comprises two major aims:

1. Eliminating discrimination, harassment and victimisation, to advance equality of opportunity, and to foster good relations between people who share a relevant protected characteristic (as cited under the Equality Act 2010) and those who do not share it;
2. Identifying and reducing any inequalities in access to, and outcomes from, health care services and ensuring service are provided in an integrated way where this might reduce health inequalities³.

Integrated impact assessments can provide information to inform this assurance process.

2.2 Approaches to Integrated Impact Assessment

Integrated Impact Assessment (IIA) is a method of estimating the possible implications, intended and unintended, of policies, plans, strategies, projects or initiatives. An IIA examines how any proposal could affect the communities served and how these effects may be distributed amongst different groups within the community. The aim of IIA is to make recommendations to enhance potential positive outcomes and minimise negative impacts of a proposal.

There is no one single definition of, or approach to, IIA. Integrated assessments can consider a wide range of topics but will consider them simultaneously where previously they would have been considered separately.

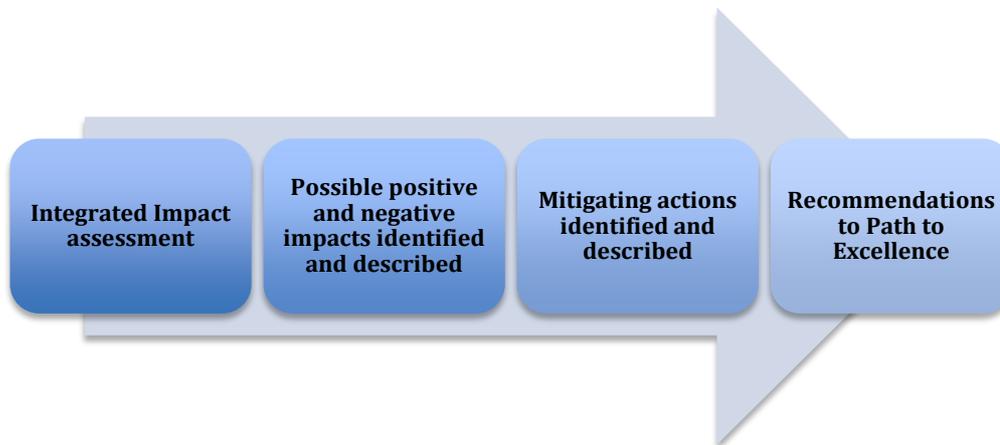
2.3 Commissioned Remit

The remit was to undertake an integrated impact assessment that would consider the positive and negative impact that each possible service model could have on

- equality groups
- population health outcomes,
- population health inequalities

If the assessment identified any potentially negative consequences, there was a remit to make recommendations regarding how these could be mitigated.

³ NHS England (2015) Equality and Health Inequalities legal duties: Guidance for NHS Commissioners on Equality and Health Inequalities legal duties



The commissioned aims were:

a) To explore the overall health impact (+ve, neutral, or -ve) and the impact on health inequalities (+ve, neutral, or -ve) in relation to:

- Service outcomes;
- Service activities;
- The safety of the service;
- The quality of the service;
- Sustainability and resilience of the service (including its ability to respond to projected demographic changes);
- Access to the service;
- Choice for patients, their families and carers;
- The mental, social and emotional wellbeing of patients, their families and carers.

AND

b) To explore the equalities impact (+ve, neutral, or -ve) in relation to:

- Age
- Disability
- Gender reassignment
- Marriage and Civil Partnership
- Pregnancy and maternity
- Race
- Religion or belief
- Sex
- Sexual orientation
- Deprivation or social economic status.

3 The Integrated Impact Assessment (IIA) Methods

3.1 Overall Approach

The approach combined three different methodologies and associated NHS guidance:

- Equality Impact Assessment (EqIA)⁴;
- Health Inequalities Impact Assessment (HIIA);
- Health Impact Assessment (HIA)⁵

These methods were combined to develop assessment tools which were used in combination to generate a single integrated assessment of each proposed service model as indicated by

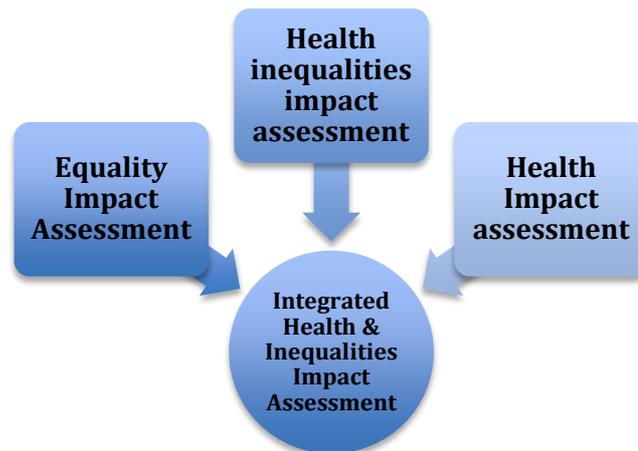


Figure 1: Overview of the methods used in the Integrated Impact Assessment

3.2 Concepts and definitions underpinning the IIA

The assessment tools were developed with relevance to key concepts and definitions summarised in Box 1.

Health - Health is a complex, multidimensional concept. The most commonly adopted definition is that formulated by the World Health Organisation in 1948 :
“a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”⁶

In 1986, in response to modern ideas around molecular, individual and societal influences on health, the European Regional Office of the WHO redefined health as *“a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities”⁷*.

Both definitions are frequently criticized as being idealistic or unattainable and alternative definitions continue to be debated⁸.

⁴ The NHS Centre for Equality and Human Rights. A toolkit for carrying out Equality Impact Assessment

⁵ DH (2010) Health Impact Assessment Tools. Simple tools for recording the results of the Health Impact Assessment.

⁶ World Health Organization. (2006). Constitution of the World Health Organization – Basic Documents, Forty-fifth edition, Supplement, October 2006.

⁷ WHO (1986) First International Conference on Health Promotion, Ottawa,

⁸ Huber M. How should we define health? *BMJ* 2011;343

Health impact -A health impact can be positive or negative. A positive health impact is an effect which contributes to good health or to improving health. A negative health impact has the opposite effect, causing or contributing to ill health⁹.

Health Inequalities - Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups¹⁰. Health inequities are *avoidable* inequalities in health between groups of people. These inequities arise from inequalities within and between groups in society. Social and economic conditions and their effects on people's lives determine their risk of illness and the actions taken to prevent them becoming ill or treat illness when it occurs¹¹.

Equality - Equality is about ensuring that every individual has an equal opportunity to make the most of their lives and talents, and believing that no one should have poorer life chances because of where, what or whom they were born, what they believe, or whether they have a disability.

Equality recognises that historically, certain groups of people with particular characteristics e.g. race, disability, sex and sexuality, have experienced discrimination.

The Equality Act 2010 brings together for the first time all the legal requirements for the private, public and voluntary sectors, making existing equality laws simpler, more effective and easier to understand.

To meet the needs of disabled people, the Equality Act 2010 states that reasonable adjustments can be made for disabled people, and that it is not unlawful discrimination to treat disabled people more favourably than non-disabled people because of their disability¹².

Equity - Equity in health can be defined as the absence of systematic disparities in health (or in the major social determinants of health) between social groups who have different levels of underlying social advantage/disadvantage¹³.

Health impact assessment is usually underpinned by a focus on social justice in which equity plays a major role⁹.

Equitable access has been defined as “care that does not vary in quality because of personal characteristics, such as gender, ethnicity, geographical location and socio-economic status”¹⁴.

Box 1: Concepts and definitions supporting the IIA

⁹ WHO (accessed February 2017) Health Impact Assessment: glossary of terms used

¹⁰ WHO (accessed February 2017) Health Impact Assessment: glossary of terms used

¹¹ WHO (accessed February 2017) Social determinants of health – key concepts)

¹² Equality and human rights commission

<https://www.equalityhumanrights.com> last accessed February 2017

¹³ Braveman P, Gruskin S Defining equity in health Journal of Epidemiology & Community Health 2003;57:254-258.

¹⁴ Millman M, ed. *Access to health care in America*. Washington, DC: National Academy Press, 1993.

3.3 The Service Models addressed by the IIA.

The proposed reconfiguration of acute stroke services aims to overcome the current challenges in service provision. These relate to:

- consistently achieving the critical annual minimum number (600) of stroke patients recommended nationally (most marked in South Tyneside)
- overcoming identified shortfalls in availability of specialist stroke consultants and therapists
- reducing hospital length of stay.

The proposed reconfiguration will enable service quality improvements for acute stroke patients and promote concordance with recognised best practice in stroke services^{15, 16, 17}.

An acute stroke service reconfiguration across London resulted in a 17% reduction in 30- day mortality and a 7% reduction in patient length of stay.

The clinical service review considered three possible models:

Option 1: reconfigure stroke services across South Tyneside District Hospital (STDH) and Sunderland Royal Hospital (SRH) by consolidating all inpatient stroke care on Ward E58 at the Sunderland Royal Hospital Site.

Option 2: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.

Option 3: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 72 hours

Option 1 was considered by the service review team in greater detail. Further changes concerned with this model entail:

- Suspected strokes within the South Tyneside area will automatically be re-routed to SRH via a NEAS bypass
- Acute stroke patients self presenting to South Tyneside District Hospital (STDH) will be redirected to Sunderland Royal Hospital (SRH) via ambulance after appropriate initial treatment
- For inpatients at STDH who suffer a suspected stroke, a telephone call will be made to the on call stroke physician at SRH to discuss transfer and review within 24 hours
- Closure of the 20 bedded stroke ward at STDH

¹⁵ Royal College of Physicians (2012) National clinical guideline for stroke 4th edition

¹⁶ NICE (2008) Clinical guideline (CG68) Stroke and Transient ischaemic attack in over 16s: diagnosis and initial management.

¹⁷ NICE (2015) Quality Standard for Stroke (QS2).

- Consolidation of all inpatient stroke care at Sunderland Royal Hospital
- Stroke mimics with a predicted long length of stay (over 7 days) will be repatriated to South Tyneside District Hospital
- TIA clinics running from both existing hospital sites
- Patients from both Sunderland and South Tyneside will have their acute and rehabilitation phases at SRH before being discharged to their respective community stroke teams.

Full details of the business case for the Options and the detailed clinical service reviews are provided in the Path to Excellence suite of documents.

3.4 Key Interdependencies

As part of the Path to Excellence planning process, more detailed consideration and modelling is underway regarding implications for travel, transport and ambulance services. These assessments will provide vital information but the results were not yet available to inform this IIA .

3.5 The local context

South Tyneside and Sunderland are both recognised to face significant health challenges relating to socioeconomic deprivation, health inequalities, long term unemployment and poor health outcomes^{18, 19,20,21}.

South Tyneside has slightly worse deprivation scores than Sunderland, with a higher proportion of the population living in the most deprived neighbourhoods in England. Long term unemployment rates are also higher in South Tyneside than Sunderland.

The life expectancy gap for females in South Tyneside is slightly higher than Sunderland (8 years compared with 7.6 years). The life expectancy gap for males is higher than that for women in both areas and is higher in Sunderland (9.9 years) than in South Tyneside (8.6 years).

The South Tyneside population is slightly older than Sunderland - with 19.4% of the population in South Tyneside aged over 65 compared with 18.4% in Sunderland.

Early and late mortality rates for stroke are similar for both areas, but much higher for those over 75 years. In 2014/15, there were 277 admissions for stroke in South Tyneside and 521 in Sunderland.

¹⁸ Sunderland Council: Annual report of the Director of Public Health 2015

¹⁹ South Tyneside Council : Annual report of the Director of Public Health 2015

²⁰ South Tyneside Council : Joint Strategic Needs Assessment 2013-2014

²¹ Sunderland Council: JSNA suite of documents

3.6 Assessment tools

3.6.1 Equality Impact Assessment

The EqIA was conducted with reference to the following groups:

- Sex /Gender
- Sexual orientation
- Gender reassignment
- Race
- Marriage / civil partnership
- Pregnancy and maternity
- Religion or belief
- Disability
- Emotional wellbeing
- Socio-economic deprivation
- Age

3.6.2 Health and Inequalities Impact Assessments

These assessments examined health and health inequalities impacts relating to four domains of health and wellbeing:

- Health care outcomes
- Access to high quality Health Care;
- Environmental determinants of health;
- Economic determinants of health.

Specific health attributes were identified for each of these domains. To meet the contract brief, there was a greater emphasis on health and wellbeing outcomes and access to health care.

These stroke service specific outcomes developed for the assessment were:

1. Death / Premature Death
2. Disease
3. Disability – physical, mental, learning
4. Emotional wellbeing
5. Sensory Impairment
6. Cognitive impairment and disability
7. Social dependency
8. Quality of life
9. Biological risks to future health e.g. atrial fibrillation
10. Health related lifestyles e.g. smoking, exercise,
11. (health inequalities)

The outcomes relating to each of the four domains are listed below. Impacts on health inequalities and access to equitable health care were considered throughout the HIIA rather than as separate entities.

Health & Wellbeing	Access to high quality health care	Environment	Economy
1. Death / Premature Death	1. Effective health care	1. Transport	1. Education, skills, learning
2. Disease	2. Safe health care	2. Natural and built environment	2. Employment
3. Disability – physical, mental, learning	3. Cost - Efficient health care	3. Pollution	3. Business development and investment
4. Emotional wellbeing	4. Health care relevant to population need	4. Housing	4. Financial inclusion
5. Sensory Impairment	5. Acceptable health care (patient experience)		
6. Cognitive impairment and disability	6. (Equitable health care)		
7. Social dependency			
8. Quality of life			
9. Biological risks to future health eg atrial fibrillation			
10. Health related lifestyles eg smoking, exercise,			
11. (health inequalities)			

Box 2: Health & wellbeing outcomes relating to each of the four domains

3.6.3 The population for assessment

This assessment explored the impacts on the current and future population resident or working in South Tyneside and Sunderland Local Authority areas with respect to changes to acute stroke services in those localities.

Within these populations, specific attention was given to those groups most affected by the proposed reconfiguration:

- People suffering or recovering from an acute stroke, suspected stroke or transient ischaemic attack and their relatives, friends and carers
- Staff currently working in TIA, stroke and ambulance services in South Tyneside and Sunderland
- The communities resident in South Tyneside and Sunderland.

3.6.4 Evidence and indicator reviews

Each assessment was preceded by a review of the evidence and indicators relating to relevant equality, inequality and care quality issues both nationally

and locally. The reviews highlight relevant priorities and concerns and details of the communities affected by the reconfiguration. Full details of the evidence sources and a summary of the findings, are provided in Appendix 3.

The findings of these reviews were used during the assessment to

- develop appropriate healthcare outcomes relating to the services being reconfigured
- identify possible impacts on the equality, health and inequalities of the communities affected by the service reconfiguration
- make judgements of impact severity and scale and assign appropriate scores

The main data sources were Office of National Statistics (ONS) Neighbourhood Statistics for Local Authority Areas and Public Health England (PHE) profiles. Evidence was generated by published medical research, professional audits, international reviews, and best practice guidelines.

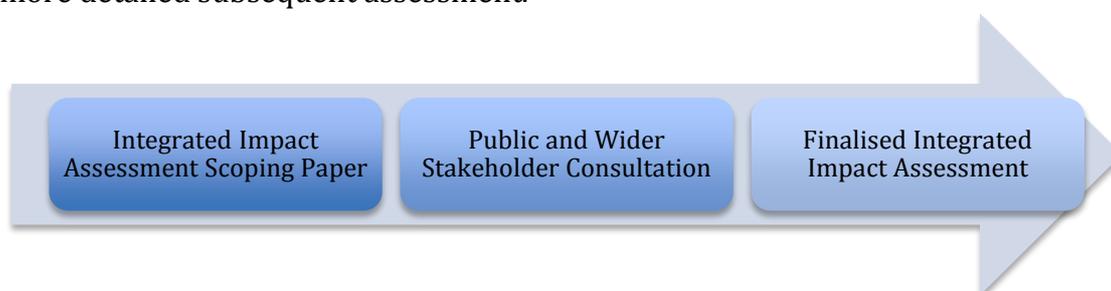
3.6.5 Impact scores

The scoring systems reflected those recommended in the NHS recommended toolkits, and were a product of the level of available evidence and an assessment of the scale of the impact in terms of severity and numbers affected. Full details are available in Appendix 1 and Appendix 2.

Following the assessment, scores were graded as falling into three categories of impact: Major – Moderate - Minor. These categories were colour coded to give an ‘at a glance’ overview of the impacts on the different health issues and equality groups.

3.7 Assumptions and Limitations

Stakeholder engagement is recognised as fundamental to high quality impact assessments. This review was commissioned as a desktop exercise to identify and outline key issues that would enable wider stakeholder consultation and more detailed subsequent assessment.



The assessment was undertaken in parallel with a review of the travel and transport implications of the proposed reconfiguration and modelling of the impact on North East Ambulance Services. The results of those reviews were not available to inform this assessment.

The assessments use a population based methodology to consider scale and severity of impact with respect to groups of people who share similar characteristics.

3.8 Language

Wherever possible, this report has avoided specialist medical and healthcare language and terminology in order to widen accessibility and promote engagement.

4 Integrated Impact Assessment Findings

This section describes the results of the equality impact assessment and the health & inequalities impact assessment.

Further details of the Equality Impact Assessment (EqIA) findings are presented in Tables 1 and 2 and the positive, negative and total impact scores are presented in Table 3.

The findings from the Integrated Health and Health Inequalities Impact Assessment (HIIA) are fully described in Tables 4 and 5 and the scores are summarised in Table 6.

All of the findings were developed with reference to the data, indicators and evidence presented in Appendix 3 and the scoring systems described in Appendices 1 and 2.

Throughout this Section, the labels Option 1, Option 2 and Option 3 are used to denote the following possible solutions arising from the Path to Excellence reconfiguration for acute stroke services.

- Option 1: reconfigure stroke services across South Tyneside District Hospital (STDH) and Sunderland Royal Hospital (SRH) by consolidating all inpatient stroke care on Ward E58 at the Sunderland Royal Hospital Site.
- Option 2: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 7 days.
- Option 3: All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 72 hours

4.1 Integrated Impact Scores

The absolute numeric scores should be considered with caution as the scoring system is blunt. The figures should be considered as crude indicators of the direction of impact rather than accurate measures.

4.1.1 Positive EqIA and HIIA Impact Scores

Positive equality impact scores

The positive EqIA impact scores for each option and equality group are summarised in the Box below:

Equality group	Positive Equality impact score		
	Option 1	Option2	Option3
Sex/ gender	9	9	9
Sexual orientation	9	9	9
Gender reassignment	9	9	9
Race	9	9	9
Marriage and civil partnership	9	9	9
Pregnancy / maternity	9	9	9
Religion or belief	9	9	9
Disability	9	9	9
Socioeconomic deprivation	9	9	9
Age	9	9	9

Box 3: Positive EqIA scores for each equality group

These results show that all three Options provide equal opportunities for all equality groups to benefit from any of the service improvements associated with proposals.

Positive health and inequalities impact scores

The positive HIIA impact scores for each Option and across the four domains and the related 23 attributes of health status are summarised in the Box below:

Health Outcome Domains	Health and Health care outcomes	Total POSITIVE integrated health and health inequality impact score		
		Option 1	Option 2	Option 2
Impacts relating to outcomes of high quality health care	Death / premature death	18	12	12
	Disease	18	12	12

Health Outcome Domains	Health and Health care outcomes	Total POSITIVE integrated health and health inequality impact score		
		Option 1	Option 2	Option 2
	Disability - physical, mental, learning	18	12	12
	Emotional wellbeing	18	6	6
	Sensory impairment	18	12	12
	Cognitive impairment / disability	18	12	12
	Social dependency	18	12	12
	Health related quality of life	18	12	12
	Stroke risk factors (biological eg BP)	18	12	12
	Stroke risk factors (Lifestyle eg smoking)	18	12	12
Impacts relating to access to high quality health care	Effective health care	18	6	6
	Safe health care	18	3	3
	Cost efficient health care	18	2	2
	Relevance to healthcare need	8	0	0
	Acceptable health care	4	5	5
Impacts relating to environmental determinants of health	Transport	0	0	0
	Natural and built environment	0	0	0
	Pollution	0	0	0
	Housing	0	0	0
Impacts relating to Economic determinants of health	Education, skills and learning	2	0	0
	Employment	2	0	0
	Business development	2	2	2
	Financial inclusion	0	0	0
TOTAL	ALL	252	132	132

Box 4: Positive HIIA Impact Scores

The positive impact scores indicate that all three Options could result in gains for health and health inequalities. These gains largely relate to the sustained improvements in service quality which could achieve better outcomes for stroke patients and in turn, improve population health and reduce health inequalities.

The positive HIIA scores for Options 2 and 3 are identical but lower than those achieved for Option 1. Option 1 achieves consistently higher scores because of its ability to secure adequate and sustainable staffing levels for specialist stroke allied health professionals. These staffing levels are not achieved by Options 2 or 3.

4.1.2 Negative EqIA and HIIA Impact Scores

Negative equality impact scores

The negative EqIA impact scores for each option and equality group are summarised in the table below.

Equality group	Negative Equality Impact Scores		
	Option 1	Option2	Option 3
Sex/ gender	-1	-1	-1
Sexual orientation	0	0	0
Gender reassignment	0	0	0
Race	-4	-4	-2
Marriage and civil partnership	0	0	0
Pregnancy / maternity	-2	-2	-2
Religion or belief	0	0	0
Disability	-4	-4	-2
Socioeconomic deprivation	-4	-4	-2
Age	-6	-6	-3

Box 5: Negative EqIA Scores

A potential small disadvantage for women was noted, based on their longer life expectancy, childcare responsibilities and greater likelihood of being a carer for someone with a stroke.

Other moderate or minor negative impacts were identified for the following four equality groups

1. Socioeconomic deprivation
2. Disability
3. Race (BME communities)
4. Age (older groups)
5. Pregnancy and maternity

The equality groups living in South Tyneside were most likely to be affected because of the more significant changes relating to availability of services there. This has important implications for health inequalities within and across South Tyneside

The negative EqIA showed that the same equality groups might be affected more by the changes regardless of the chosen Option, but the scale of the impact was less for Option 3 than Options 1 or 2. This is because Option 3 enables more care to be provided closer to home which could be more convenient for, and attractive to, vulnerable groups.

Negative health and inequalities impact scores

The negative HIIA impact scores for each option and health are summarised in the table below:

		Total NEGATIVE integrated health and health inequality impact score		
	Health and Health care outcomes	Option 1	Option 2	Option 3
Impacts relating to outcomes of high quality health care	Death / premature death	-3	-12	-12
	Disease	0	-6	-6
	Disability - physical, mental, learning	-4	-12	-12
	Emotional wellbeing	-8	-6	-6
	Sensory impairment	-4	-12	-12
	Cognitive impairment / disability	-4	-12	-12
	Social dependency	-4	-12	-12
	Health related quality of life	-4	-12	-12
	Stroke risk factors (biological eg BP)	-4	-6	-6
	Stroke risk factors (Lifestyle eg smoking)	-4	-12	-12
Impacts relating to access to high quality health care	Effective health care	-4	-12	-12
	Safe health care	-4	-3	-3
	Cost efficient health care	-2	-7	-7
	Relevance to healthcare need	-4	-12	-12
	Acceptable health care	-4	-3	-3
Impacts relating to environmental determinants of health	Transport	-2	-2	-2
	Natural and built environment	0	0	0
	Pollution	-2	-2	0

		Total NEGATIVE integrated health and health inequality impact score		
		Option 1	Option 2	Option 3
	Health and Health care outcomes			
	Housing	0	0	0
Impacts relating to Economic determinants of health	Education, skills and learning	-2	0	0
	Employment	-2	0	0
	Business development	-2	-2	-2
	Financial inclusion	0	0	0
TOTAL	ALL	-67	-145	-143

Box 6: Negative HIIA Impact scores

The numeric results indicate that all three Options could have some possible drawbacks but those for Option 1 are on a much smaller scale than for Options 2 or 3.

The high HIIA negative impact scores for Options 2 and 3 were almost identical and related to the fact that these Options cannot achieve the adequate levels of specialist stroke allied health professionals which are essential for improving outcomes from stroke.

4.1.3 Total Integrated Impact Scores

Total impact scores sum the positive and negative scores to give an overall indication of the likely overall scale and direction of the impact.

Total equality impact scores

When summed together, the large positive and small negative impacts resulted in strongly positive impact scores for all equality groups as indicated by the summary below

Equality group	Total Equality Impact score		
	Option 1	Option 2	Option 3
Sex/ gender	8	8	8
Sexual orientation	9	9	9
Gender reassignment	9	9	9
Race	5	5	7
Marriage and civil partnership	9	9	9
Pregnancy / maternity	7	7	7
Religion or belief	9	9	9
Disability	5	5	7

Socioeconomic deprivation	5	5	7
Age	3	3	6

Box 7: Total EqIA impact scores

These results show that all Equality groups have the opportunity to benefit from any of the improvements associated with either Option. However, the scores suggest that some of the groups are likely to be more vulnerable to any drawbacks associated with the Options. The most vulnerable groups are :

- BME communities
- Disability groups
- Socioeconomically deprived communities
- Older people

The total EqIA scores suggest that the equality related drawbacks are of a similar scale and nature for Options 1 and 2, but on a smaller scale for Option 3.

Total Health and Inequality Impact scores

When summed together, the majority of the total HIIA impact scores were positive for Option 1 but negative for Options 2 and 3 as indicated by the summary below:

Health Outcome Domains	Health attributes	TOTAL INTEGRATED IMPACT SCORES		
		Option1	Option 2	Option 3
	Health and Health care outcomes			
Impacts relating to outcomes of high quality health care	Death / premature death	15	0	0
	Disease	18	6	6
	Disability - physical, mental, learning	14	0	0
	Emotional wellbeing	10	0	0
	Sensory impairment	14	0	0
	Cognitive impairment / disability	14	0	0
	Social dependency	14	0	0
	Health related quality of life	14	0	0
	Stroke risk factors (biological eg BP)	14	6	6
	Stroke risk factors (Lifestyle eg smoking)	14	0	0
Impacts relating to access to high quality health care	Effective health care	14	-6	-6
	Safe health care	14	0	0
	Cost efficient health care	16	-5	-5
	Relevance to healthcare need	4	-12	-12

Health Outcome Domains	Health attributes	TOTAL INTEGRATED IMPACT SCORES		
		Option1	Option 2	Option 3
	Health and Health care outcomes			
	Acceptable health care	0	2	2
Impacts relating to environmental determinants of health	Transport	-2	-2	-2
	Natural and built environment	0	0	0
	Pollution	-2	-2	0
	Housing	0	0	0
Impacts relating to Economic determinants of health	Education, skills and learning	0	0	0
	Employment	0	0	0
	Business development	0	0	0
	Financial inclusion	0	0	0
TOTAL	ALL	185	-13	-11

Box 8: Total HIIA Impact scores

The key areas of differences in terms of overall HIIA impact are summed up in the following Box:

Total HIIA impact scores	Option 1	Option2	Option 3
Positive	All 10 outcomes of stroke services Four of the five outcomes relating to access to high quality health care – acceptable care was scored as neutral	One of the 10 outcomes of stroke services (biological risk factors for stroke) One of the five outcomes relating to access to high quality health care – acceptable health care	One of the 10 outcomes of stroke services (biological risk factors for stroke) One of the five outcomes relating to access to high quality health care – acceptable health care
Negative	Two of the four outcomes relating to environmental determinants of health – pollution and transport	Three of the five outcomes relating to access to high quality health care – effective, cost-efficient, relevant to need Two of the four outcomes relating to environmental determinants of health – pollution and transport	Three of the five outcomes relating to access to high quality health care – effective, cost-efficient, relevant to need One of the four outcomes relating to environmental determinants of health – transport
Neutral	Access to acceptable health care All four outcomes relating to economic determinants of health Two of the four outcomes relating to environmental determinants of health – housing	Nine of the 10 outcomes for stroke services One of the five outcomes relating to access to high quality health care – safe health care All four outcomes relating to	Nine of the 10 outcomes for stroke services One of the five outcomes relating to access to high quality health care – safe health care All four outcomes relating to

	and the natural/built environment	economic determinants of health Two of the four outcomes relating to environmental determinants of health – housing and the natural/built environment	economic determinants of health Three of the four outcomes relating to environmental determinants of health – pollution, housing and the natural/built environment
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Box 9: Areas of differences between the Options in terms of Total HIIA impact scores

The results in this Box emphasise the many drawbacks associated with Options 2 and 3 compared with the multiple advantages of Option 1.

The main advantage of Options 2 & 3 compared with Option 1 relates to acceptable health care. The repatriation feature of Options 2 and 3 could seem attractive to stroke patients and their families and friends because of the apparent ability to access high quality health care whilst still being cared for close to home. However, repatriated patients would not be cared for on specialist stroke wards and there is strong evidence proving that stroke patients who are cared for on a stroke ward are more likely to be alive, independent and living at home after one year than if they are cared for on other wards²².

The many advantages of Option 1 are described more fully below.

4.2 Details of the rationale driving the IIA scores for Option 1

4.2.1 Vulnerable groups

The EqIA and the HIIA indicated that communities in South Tyneside and certain vulnerable might be more likely to be affected by the changes. The identified vulnerable groups were:

1. Socioeconomic deprivation
2. Disability
3. Race (BME communities)
4. Age (older people)

These groups are more affected because of their increased risk of stroke and their vulnerability to some of the changes. Positively, these groups are more likely to realise the benefits of improvements to stroke services but they may also be more vulnerable to any associated drawbacks such as increased travel costs.

Demographic information relating to those groups is summarised below (further details and sources provided in Appendix 3)

²² Stroke Unit Trialists' Collaboration. Organised inpatient (stroke unit) care for stroke. The Cochrane Database of Systematic Reviews. 2007 Oct 17;(4):CD000197

Equality group		South Tyneside Count (%)	Sunderland Count (%)
Race	BME groups	7,259 (4.9)	14,326 (5.2)
Disability	Disability – day to day activities limited a little or a lot	34,069 (23%)	63,366 (23%)
Age	Population aged 65 and over	26583 (18%)	46793 (17%)
Socio-economic deprivation	Socio-economic Deprivation – households with some level of deprivation	42,315 (63%)	76,645 (64%)

Box 10: Demographic details of key vulnerable groups

4.2.2 Stroke sufferers in South Tyneside

Service users living in South Tyneside are most likely to be affected by the changes to Stroke services. This has important implications for health inequalities within and across South Tyneside.

4.2.3 Positive impacts on equality, population health and inequalities

The benefits identified by the HIA were similar to those identified by the EqIA and related to improvements in the services provided i.e:

- Improved and sustainable levels of specialist medical staff
- Improved and sustainable levels of specialist stroke allied health professionals
- Improved and sustainable quality of stroke care 24/7

These improvements can deliver multiple benefits for stroke sufferers and their carers, family and friends

- Reduced mortality
- Reduced morbidity
- Less disability and / or sensory impairment
- Improved quality of life and emotional wellbeing
- Less social dependency
- Improved stroke prevention

All of these improved outcomes can have a significant impact on population health and health inequalities across South Tyneside and Sunderland.

4.2.4 Possible negative impacts on equality, health and health inequalities (Option 1)

It is essential to recognise that the identified drawbacks were rarely significant enough to offset the strongly positive benefits that were identified.

The drawbacks of Option 1 related to (in no specific order):

- Ability to understand and adapt to the changes in service provision
- Additional travel burden for carers, families and friends from South Tyneside visiting stroke survivors in Sunderland
- Emergency transfers between South Tyneside and Sunderland hospitals
- Integrated and continuous health & social care for stroke survivors and their carer
- Additional pressures placed on hospital services in Sunderland and on the ambulance services.
- Some loss of public sector skills, jobs and public sector investment in South Tyneside
- Sustained capacity to meet the needs of an ageing population
- Increased traffic flowing between South Tyneside and Sunderland

These possible drawbacks are described more fully below:

1. Understanding and adapting to the changes in service provision

Adapting to any change is more challenging for the identified equality groups due to their increased risk of difficulties relating to English language, communication or cognitive difficulties.

For these reasons, these groups may find it harder to access health care in the face of acute illness and may be less resilient in the face of unexpected transfers of care. They may also be less likely to become involved in public consultations relating to the reconfiguration.

2. Travelling to visit stroke survivors in Sunderland

Travelling to visit ill relatives or friends can generate additional expense, time, inconvenience and emotional stress for everyone concerned.

The challenges are even greater for those from affected vulnerable groups because of related socio-economic difficulties; disabilities and impairments; cognitive and mental or emotional problems; language difficulties and difficulties navigating an unfamiliar environment or service; being pregnant or breastfeeding.

The detailed transport analysis could provide further information regarding the extent of these risks.

3. Emergency transfers between South Tyneside and Sunderland hospitals

This additional step in the patient pathway for South Tyneside patients presenting to A&E in South Tyneside or for South Tyneside inpatients was identified as having the potential to affect the timeliness of acute stroke care and subsequent stroke outcomes including mortality, disability, dependency and emotional wellbeing.

It could also increase patient safety risks arising from handovers between various health care providers. These risks are likely to disproportionately affect key groups with language or communication difficulties in South Tyneside i.e. BME communities, disabled groups, older patients and those with socioeconomic deprivation.

4. Integrated and continued health & social care for stroke survivors and their carers

System-wide effectiveness is essential to promote user satisfaction, rehabilitation for stroke survivors, support for carers and to reduce the risk of recurrent stroke due to lifestyle and biological risk factors.

System factors are more complex in relation to South Tyneside stroke survivors because the different providers of primary care, prevention and rehabilitation services do not have a strong tradition of working with the acute hospital in Sunderland.

This issue is likely to have a greater impact on those with the greatest need for support to reduce risk factors and rehabilitate i.e. equality groups such as older people, BME communities, socioeconomically deprived groups. These risks could therefore negatively impact on health and health inequalities in and across South Tyneside

5. Demands on hospital services in Sunderland and on the ambulance services.

More inpatients, carers and visitors will place greater demands on all hospital facilities such as parking, cafes, diagnostics etc. The extent to which these demands can be accommodated have not yet been fully assessed and so there is a theoretical potential for a negative impact on user experience.

The increased demand for emergency transfers between South Tyneside and Sunderland will impact on the ambulance service and current modelling is underway to explore this in more detail. Provisional feedback suggests the service can accommodate the extra demand. Ambulance performance data is presented in Appendix 3.

6. Changes to public sector skills, jobs and public sector investment in South Tyneside

These changes were recognised as being small scale but with significant impacts on the economic and emotional wellbeing of those affected and potential to affect the wider economic health of the population. The groups affected most include

women, pregnancy and maternity groups and socio economically deprived groups.

7. Sustainable capacity to meet the needs of an ageing population

The business plan identifies capacity to respond to the current demands however, an ageing population will lead to growing numbers of acute stroke patients and may generate additional pressures on the acute hospital service and the wider care and ambulance system. The extent to which services can expand to meet these growing needs has not been assessed in detail.

8. Increased traffic flowing between South Tyneside and Sunderland

The small increases in traffic flow were identified as having a small negative impact on health risks associated with noise and air pollution and road traffic accidents. These negative impacts will have a greater impact on residents in South Tyneside and Sunderland living close to commuter routes and the hospitals. The detailed transport analysis could provide further information to ascertain whether this is a relevant health risk.

4.3 Rationale for the IIA scores achieved for Options 2 and 3

These Options were assessed as having similar drawbacks to Option1 as noted above, but unlike Option 1, they were unlikely to achieve significantly improved outcomes for stroke sufferers and survivors. This is because neither Option could achieve the recommended levels of specialist stroke professionals which are essential to deliver improved outcomes after a stroke. This meant that these Options consistently scored poorly in terms of impact on health & wellbeing.

The only apparent advantage of these Options was their ability to care for stroke patients closer to home. However, this care would not meet national guidelines and standards for stroke services and would not achieve improved outcomes for stroke survivors.

4.4 Summary of the IIA findings

The results provide detailed insights into the possible impacts of the proposals on population equality, health and inequalities.

South Tyneside communities and vulnerable groups could be more likely to be affected by the changes. These vulnerable groups may be at increased risk of stroke and may therefore benefit from improvements to stroke services. However, they may also be more vulnerable to some of the drawbacks associated with the changes. The identified groups are:

- BME communities
- Disability groups
- Socioeconomically deprived communities
- Older people

The total HIIA scores emphasise that Option 1 can achieve significant benefits compared with Options 2 and 3.

Total HIIA scores			
	Option 1	Option2	Option 3
Total positive integrated impact score	252	132	132
Total negative integrated impact score	-67	-145	-143
Total Integrated Impact Scores	185	-13	-11

The advantages of Option1 over Options 2 or 3 are further illustrated by scrutiny of the negative HIIA impact scores. Option 1 was associated with barely any negative total impact scores whereas Options 2 and 3 achieved negative impacts in relation to outcomes from stroke care.

Health outcomes generating negative total impact scores		
Option 1	Option2	Option 3
Two of the four outcomes relating to environmental determinants of health - pollution and transport	Three of the five outcomes relating to access to high quality health care - effective, cost-efficient, relevant to need Two of the four outcomes relating to environmental determinants of health - pollution and transport	Three of the five outcomes relating to access to high quality health care - effective, cost-efficient, relevant to need One of the four outcomes relating to environmental determinants of health - transport

Although the possible drawbacks associated with Option 1 have been described in detail, they should be viewed in context because the IIA process generated strong evidence that the proposal can achieve significant benefits for stroke patients, their carers, families and friends.

5 Mitigating Action Planning

Undertaking an integrated impact assessment enables services to be developed in an integrated way to reduce potential health inequalities.

This section outlines actions that could mitigate against the potentially negative impacts identified by the integrated assessment and described more fully in Section 4.

These actions are merely suggestions, they are **not** intended to be either instructions or recommendations.

The suggestions should be considered with realistic reference to what can be achieved in the face of overstretched resources and the economic pressures on the NHS, hospitals and acute stroke services. They provide an opportunity for stakeholders – across all sectors including the voluntary and 3rd sector - to consider how they can contribute to maximise the impact of the changes on equality, health or inequalities.

There may also be advantages to considering these suggestions alongside those identified in other service re-configurations as there may be interdependencies. Where the findings are similar, there may be opportunities to identify actions which achieve economies of scale.

In general, the suggestions should be considered with reference to the identified at risk groups which are most likely to be affected by the proposals i.e. :

- Socioeconomic deprivation
- Disability (physical, mental, learning, cognitive)
- Race (BME communities)
- Age (older women, older and teenage mothers)

5.1 Suggested mitigating actions - all Options

5.1.1 *Helping everyone to understand and adapt to the changes in service provision*

- Patient and public information campaigns could promote understanding and enable service users can get the maximum benefits from the service reconfiguration
- Population health education promoting the FAST test could improve timely access, promote better outcomes and reduce health inequalities
- Stroke prevention programmes targeting at risk groups (could reduce their stroke risk and further reduce health inequalities)
- A cross area stroke user group could be supported to champion the needs of patients, their carers, friends and relatives.
- The new service specification could specify responsibilities for monitoring and evaluation of service outcomes

- Oversight arrangements could ensure scrutiny of surveys and timely solutions to emerging problems.

5.1.2 Addressing travel and transport costs

- A range of opportunities to minimise the additional travel costs could be explored. Possibilities include provision of shuttle buses between hospital sites or less costly alternatives such as volunteer drivers or subsidised parking at hospital sites
- Additional disabled parking bays could be provided at both hospital sites
- Patient and public information campaigns could maximise the benefits of any new transport services
- Future service user experience surveys could monitor and evaluate travel needs and experiences with reference to differences between equality groups in South Tyneside and Sunderland.
- Oversight arrangements could ensure scrutiny of user experience data and ensure that this information is translated into timely and appropriate service developments whenever necessary.

5.1.3 Emergency transfers between South Tyneside and Sunderland hospitals

- The service specification could include provision to identify and minimise delays in A&E assessment and inter-hospital transfer for all stroke patients
- The capacity of the North East Ambulance Service to respond to the increased demand for transfers could be clarified – this is underway and will provide valuable information
- Relevant A&E and NEAS performance data could be collected, monitored and evaluated in a timely manner
- Oversight arrangements could scrutinise data and hold the system to account to ensure timely solutions to emerging problems

5.1.4 Promoting continuity of health & social care for stroke survivors and their carers

- Best practice could be adopted in terms of provider handovers and integrated care planning with special reference to the needs of priority equality groups (Older people, disabled groups, BME groups, socioeconomically deprived groups)
- South Tyneside and Sunderland hospitals could initiate a programme of primary, community and social care engagement across South Tyneside and Sunderland to promote communication and collaboration across the system
- A multi-agency improvement collaborative could lead service improvements at the system level
- Patient safety incident data could be collected, monitored and evaluated
- User experience survey data should be collected, monitored and evaluated

- Oversight arrangements could ensure scrutiny of safety and experience data and hold the system to account to ensure timely solutions to emerging problems

5.1.5 Sustainable capacity to meet the needs of an ageing population.

- Further modelling could be helpful to assess the future capacity of all services involved in the care of this population. This is a national priority for stroke and other age related illnesses.
- User experience survey data, patient safety incident data and other quality indicators at hospital level could be collected, monitored and evaluated
- Oversight arrangements could ensure scrutiny of quality data and hold the acute provider to account to ensure timely solutions to emerging problem
- Formal modelling could shed light on the future health care needs and the level of capacity required to meet those needs
- Considering prioritising existing plans to improve early supported discharge work will reduce lengths of stay and free up capacity

5.1.6 Public sector skills, jobs and investment in South Tyneside

- Other Path to Excellence proposals could be developed in ways that offset the apparent losses in South Tyneside. For example, this might entail some Sunderland hospital functions being transferred to South Tyneside e.g. quality improvement.

5.1.7 Increased traffic commuting between South Tyneside and Sunderland

- The transport analysis currently underway could provide insights into possible risks and mitigating actions
- Wherever possible, any new transport initiatives could seek to minimise air and noise pollution, avoid congestion and promote road safety. Possibilities include park and ride facilities with free hospital shuttle buses.

6 Conclusions and Recommendations

6.1 Conclusions

This IIA entailed a process that systematically considered the proposed changes to acute stroke services with the aim of identifying potentially positive or negative impacts on equality, health and health inequalities. It drew on relevant research and statistics to evaluate the impact that three proposed models for stroke services could have with reference to 24 service specific attributes of health.

The results of this IIA suggested that the changes could have a greater effect on communities in South Tyneside and on certain vulnerable groups, most notably:

- BME communities
- Disability groups

- Socioeconomically deprived communities
- Older people

These groups may be more likely to need stroke services and will therefore benefit from the proposed improvements in service quality. However, they may also be more vulnerable to some of the changes with respect to continuity of care; travel costs (personal, economic and social); barriers to access; traffic commuting between South Tyneside and Sunderland

The IIA provided strong evidence to favour Option 1 over Options 2 and 3. Total HIIA scores were strongly positive for Option 1 but negative for Options 2 and 3.

Total HIIA Impact scores		
Option 1	Option2	Option 3
185	-13	-11

The differences between the Options related to the inability of Options 2 or 3 to deliver sustained improvements in levels of specialist stroke allied health professionals. Care from these experts is essential to the delivery of improved outcomes after stroke.

Option 1 had very few net disadvantages other than possible small risks relating to the increased traffic commuting between South Tyneside and Sunderland. The extent of those risks is being studied as part of a separate analysis.

Health outcomes for which total HIIA impact scores were negative : Option 1
Two of the four outcomes relating to environmental determinants of health - pollution and transport

The IIA included some suggested actions that could mitigate against the identified drawbacks. These suggestions could enable stakeholders to identify how they can contribute to the reconfiguration so that the benefits can be maximised. The suggestions largely related to patient transport, organisational development, quality improvement, education and training, monitoring and evaluation

Overall, the IIA provided quantitative and qualitative evidence that the proposed changes relating to Option 1 could have major benefits for the resident populations including vulnerable groups. The key benefits relate to the ability of the changes to achieve:

- Improved and sustainable levels of specialist medical staff
- Improved and sustainable levels of specialist stroke allied health professionals
- Improved and sustainable quality of stroke care 24/7

These improvements can deliver multiple benefits for stroke sufferers and their carers, family and friends

- Reduced mortality
- Reduced morbidity
- Less disability and / or sensory impairment
- Improved quality of life and emotional wellbeing
- Less social dependency
- Improved stroke prevention

All of these improved outcomes could have an enduring and sustainable benefit to population health and health inequalities across South Tyneside and Sunderland.

The results of this integrated impact assessment can be used, alongside the other evidence developed by the Path to Excellence Board, to:

- empower stakeholders to contribute to the consultation process by enabling them to understand the potential positive and negative impacts of each option
- enable Commissioners to demonstrate compliance with their Public Sector duties around equality and health inequalities
- enable all decision makers to rigorously consider, and give due regard, to the equality, health and health inequality impacts of each Option
- identify possible ways in which services can be integrated to promote equality and reduce health inequalities
- re-configure local services which promote equality, promote health, and reduce health inequalities.

The consultation process might generate additional insights into other impacts arising from the proposals.

5.2 Recommendations to all stakeholders

All stakeholders are invited to:

1. Consider and give due regard to the nature, scale, and scope of the benefits and challenges identified by this integrated impact assessment
2. Consider and highlight any other positive or negative impacts which should be incorporate into the assessment

3. Consider the suggested mitigating actions and identify whether there are other opportunities to maximise the benefits arising from the proposed reconfiguration
4. Identify mitigating actions which should be implemented and consider contributing to the development of relevant mitigating action plans.

Results of the Equality Impact Scoping Assessment for Acute Stroke Services

Table 1: Equality Impact Assessment for the Proposed Stroke Reconfiguration – Option 1 (for further details regarding sources and statistics, please refer to the evidence base summarised in Appendix 3)

Option 1 entails a single acute stroke unit at SRH accommodating all stroke patients across South Tyneside and Sunderland for the duration of their care

KEY: A score = level of evidence B score = scale of impact C score = AXB Total impact score = sum of C scores

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
Sex / Gender	A=3 B=3 C=9	South Tyneside Women A=1 B=-1 C=-1	-8	<p>Men are at a 25% higher risk of having a stroke and at a younger age than women²³. However, women live longer than men and therefore experience more incidences of stroke(23).</p> <p>Positive</p> <p>Both gender groups in both areas have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes.</p> <p>Negative</p> <p>Affected women and their visitors are more likely to be elderly widows, without a carer at home and with associated economic disadvantage. This means that the additional costs and opportunity costs associated with travel to Sunderland are likely to pose a greater burden on [older]women in South Tyneside.</p> <p>The staff changes will impact more on those currently working in South Tyneside and will be more challenging for those with childcare responsibilities. Such responsibilities</p>

²³ State of the Nation: Stroke Statistics 2016. Stroke Association: 2016

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
				disproportionately fall to women.
Sexual orientation	A=3 B=3 C=9	A=1 B=0 C=0	9	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes No evidence or anecdote available to suggest this group will be disproportionately disadvantaged
Gender reassignment	A=3 B=3 C=9	A=1 B=0 C=0	9	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes No evidence or anecdote available to suggest this group will be disproportionately disadvantaged
Race	A=3 B=3 C=9	A=2 B=-2 C=-4	5	Black, South Asian, Bangladeshi and Pakistani communities are at increased risk of strokes. These groups may therefore benefit by proposals to enhance care quality and improve outcomes. Improved outcomes could reduce inequalities experienced by this group. These groups in South Tyneside may be at a disadvantage if English is not their first language as this may generate challenges around understanding and adapting to the new changes. This might affect their access to services as stroke patients or as visitors / carers. Delays in access can adversely affect outcomes and further deepen health inequalities experienced by this group. Communication difficulties experienced by service users compound the challenges of achieving safe and effective handovers between different providers and integrated care planning and delivery. These are greater for S Tyneside residents.
Marriage and civil partnership	A=3 B=3 C=9	A=1 B=0 C=0	9	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes No evidence or anecdote available to suggest this group will be disproportionately disadvantaged

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
Pregnancy and maternity	A=3 B=3 C=9	A=2 B=-1 C=-2	7	<p>Pregnancy can raise stroke risk although it remains a very rare event in pregnancy with minimal numbers affected. The planning evidence suggests that this group suffering a stroke will equally advantaged by any service improvements achieved by these changes.</p> <p>Because stroke in pregnancy remains rare, the more common negative impacts relate to the changes in the travel and staffing arrangements.</p> <p>Pregnant women are more likely to have young families and suffer economic deprivation. Pregnant and maternity groups in South Tyneside may be more adversely affected by the increased travel costs and opportunity costs associated with visiting friends and relatives affected by stroke.</p> <p>The staff changes will impact more on those currently working in South Tyneside and will be more challenging for those pregnant or postnatal faced with additional childcare or even breastfeeding responsibilities.</p>
Religion or belief	A=3 B=3 C=9	A=1 B=0 C=0	9	<p>Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes</p> <p>No evidence or anecdote available to suggest this group will be disproportionately disadvantaged</p>
Disability	A=3 B=3 C=9	A=2 B=-2 C=-4	5	<p>Between 25-33% of strokes are recurrent . Stroke is a leading cause of physical, cognitive, sensory and emotional disability for both sufferers - over half of all stroke survivors are left with a disability and a third experience depression. Carers of stroke survivors experience significant emotional and mental health problems.</p> <p>(Additionally, disability is associated with ageing and socioeconomic disadvantage - see relative sections).</p> <p>Positive</p>

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
				<p>Stroke sufferers in this group have the potential to benefit from the proposals to enhance care quality and improve outcomes. Improved outcomes could reduce inequalities experienced by this group.</p> <p>Negative</p> <p>However, these groups in South Tyneside may be disadvantaged by the proposals because – their disability may generate challenges around understanding and adapting to the new changes in service provision. This might affect their access to services as stroke patients or as visitors / carers. Delays in access can adversely affect outcomes and further deepen health inequalities experienced by this group.</p> <p>Furthermore, carers, friends and families with disabilities will face further challenges visiting those affected by stroke – the practical challenges, additional time and travel complexities will generate significant personal, economic and emotional costs.</p> <p>This group is more likely to have communication difficulties. Communication difficulties experienced by service users compound the challenges of handovers between different providers and integrated care planning and delivery. These are greater for South Tyneside residents.</p>
Socio - Economic deprivation	A=3 B=3 C=9	A=2 B=2 C=-4	5	<p>People from the most economically deprived areas are more likely to suffer a stroke and more likely to die from a stroke than those from the least deprived areas.</p> <p>Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes. Improved outcomes could reduce inequalities experienced by this group.</p> <p>Economic deprivation is an important factor in both districts - more so in South Tyneside. Job losses in South Tyneside could compound current levels of socioeconomic deprivation. Additional jobs in Sunderland could benefit current socio economically deprived groups.</p>

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
				<p>Socioeconomic deprivation is associated with lower educational attainment. This may generate challenges around understanding and adapting to the new changes in service provision. This might affect their access to services as stroke patients or as visitors / carers. Delays in access can adversely affect outcomes and may therefore deepen inequalities.</p> <p>Socio economic deprivation is associated with age and disability and so the issues affecting those groups are compounded. – see relevant sections</p> <p>Furthermore, carers, friends and families with socioeconomic disadvantage will face further challenges visiting those affected by stroke – the practical challenges, additional time and travel complexities will generate significant personal, economic and emotional costs.</p> <p>Poorer educational attainment is associated with communication difficulties. Communication difficulties experienced by service users compound the challenges of handovers between different providers and integrated care planning and delivery. These are greater for South Tyneside residents</p>
Age	A=3 B=3 C=9	A=3 B=-2 C=-6	3	<p>Stroke risk increases with age. 74% of strokes in the UK affect people aged 65 years and over.</p> <p>All stroke sufferers have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes regardless of their age.</p> <p>Increased age is associated with higher mortality from stroke with increased needs for access to high quality palliative care and bereavement services. For stroke patients, carers, friends and family from South Tyneside, increased travel to new and unfamiliar environments will be especially burdensome amidst the emotional challenges of loss.</p> <p>Increased age is also associated with increasing disability, frailty, co-morbidity, social isolation and economic hardship. Age related co-morbidities are associated with</p>

Protected characteristic	Positive equality impact Score	Negative equality impact Score	TOTAL equality impact score	Details of possible impacts on equality
				<p>communication difficulties.</p> <p>Communication difficulties experienced by service users compound the challenges of handovers between different providers and integrated care planning and delivery. These are greater for S Tyneside residents</p> <p>All of these factors will generate challenges around understanding and adapting to the new changes in service provision. This might affect their access to services as stroke patients or as visitors / carers. Delays in access can adversely affect outcomes and may therefore deepen inequalities.</p> <p>Furthermore, carers, friends and families with socioeconomic disadvantage will face further challenges visiting those affected by stroke – the practical challenges, additional time and travel complexities will generate significant personal, economic and emotional costs.</p> <p>Staffing changes are likely to have an impact on those approaching retirement age who may be disadvantaged in the job market.</p>

Table 2: Equality Impact Assessment for the Proposed Stroke Reconfiguration – Options 2 and 3 (for further details regarding sources and statistics, please refer to the evidence base summarised in Appendix 3)

KEY A score = level of evidence B score = scale of impact C score = AXB = positive or negative Impact score Total impact score = sum of C scores

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
Sex/gender	Both gender groups in both areas have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes. This option does not achieve the same levels of service quality improvement as Option 1. The health impact will be restricted to those extra stroke patients who are eligible for, and subsequently receive thrombolysis due to the improved levels of specialist staffing. Only around 15% of stroke emergencies in England are eligible for thrombolysis treatment. The limited improvements are equal for all regardless of gender	Affected women and their visitors are more likely to be elderly widows, without a carer at home and with associated economic disadvantage. This option reduces some of the additional costs associated with travel between South Tyneside and Sunderland. This Option results in less changes for staff currently working in S Tyneside.	Both gender groups in both areas have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes. This option does not achieve the same levels of service quality improvement as Option 1. The health impact will be restricted to those extra stroke patients who are eligible for, and subsequently receive thrombolysis due to the improved levels of specialist staffing. Only around 15% of stroke emergencies in England are eligible for thrombolysis treatment.	The additional costs associated with travel between sites and changes for staff are further minimised with this option
Impact Scores	A=3 B= 3 C=9	A=1 B=-1 C=-1	A=3 B= 3 C=9	A=1 B=-1 C=-1
Sexual orientation	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
Impact Scores	A=3 B= 3 C=9	A=1 B=0 C=0	A=3 B= 3 C=9	A=1 B=0 C=0
Gender reassignment	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged
Impact Scores	A=3 B= 3 C=9	A=1 B=0 C=0	A=3 B= 3 C=9	A=1 B=0 C=0
Race	BME communities are at increased risk of stroke and can benefit equally from any improvements in service quality achieved by this model.	This Option includes more transfers of care than Option 1 for S Tyneside stroke sufferers but a potentially shorter additional travel burden for that group compared with Option 1 BME communities may experience difficulties with the English language with implications for: <ul style="list-style-type: none"> • Understanding and adapting to the new changes • Access to care as an emergency stroke patient or as a visitor or carer • Negotiating the challenges of travel between areas • Communicating with different providers during handovers and transfers. 	BME communities are at increased risk of stroke and can benefit equally from any improvements in service quality achieved by this model.	This Option includes more transfers of care than Option 1 for South Tyneside stroke sufferers but a shorter additional travel burden for that group compared with Option 1 and Option 2 BME communities may experience difficulties with the English language with implications for: <ul style="list-style-type: none"> • Understanding and adapting to the new changes • Access to care as an emergency stroke patient or as a visitor or carer • Negotiating the challenges of travel between areas • Communicating with different providers during handovers and transfers.
Impact Scores	A=3 B=3 C=9	A=2 B=-2 C=-4	A=3 B=3 C=9	A=2 B=-1 C=-2
Marriage and civil	Stroke sufferers in this group have an	No evidence or anecdote available to	Stroke sufferers in this group have an	No evidence or anecdote available to

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
partnership	equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	suggest this group will be disproportionately disadvantaged	equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	suggest this group will be disproportionately disadvantaged
Impact Scores	A=3 B= 3 C=9	A=1 B=0 C=0	A=3 B= 3 C=9	A=1 B=0 C=0
Pregnancy and maternity	Pregnancy can raise stroke risk although it remains a very rare event in pregnancy with minimal numbers affected. The planning evidence suggests that this group suffering a stroke will equally advantaged by any service improvements achieved by these changes.	Because stroke in pregnancy remains rare, the more common negative impacts relate to the changes in the travel and staffing arrangements. This option reduces some of the additional costs associated with travel between South Tyneside and Sunderland. This Option results in less changes for staff currently working in South Tyneside.	Pregnancy can raise stroke risk although it remains a very rare event in pregnancy with minimal numbers affected. The planning evidence suggests that this group suffering a stroke will equally advantaged by any service improvements achieved by these changes.	The additional costs associated with travel between sites and changes for staff are further minimised with this option
Impact Scores	A=3 B= 3 C=9	A=2 B=-1 C=-2	A=3 B= 3 C=9	A=2 B=-1 C=-2
Religion or belief	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged	Stroke sufferers in this group have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes	No evidence or anecdote available to suggest this group will be disproportionately disadvantaged
Impact Scores	A=3 B= 3 C=9	A=1 B=0 C=0	A=3 B= 3 C=9	A=1 B=0 C=0
Disability	Stroke sufferers in this group have an equal opportunity to benefit from any of the improvements in care quality arising from this option	Disability groups can be more likely to experience difficulties with communication, mobility and accessing unfamiliar environments. The proposed changes may generate additional challenges for this group when	Stroke sufferers in this group have an equal opportunity to benefit from any of the improvements in care quality arising from this option	The impacts of this Option are similar to the impacts in Option 2 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than in Option 1 or 2.

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
		<p>accessing care or caring for or visiting friends or relatives. They might experience difficulties in</p> <ul style="list-style-type: none"> • Understanding and adapting to the new changes • Access to care as an emergency stroke patient or as a visitor or carer • Negotiating the challenges of travel between areas • Communicating with different providers during handovers and transfers. • Navigating unfamiliar environments <p>The impacts of this Option are similar to the impacts in Option 3 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than that in Option 1 but higher than Option 2.</p>		
Impact Scores	A=3 B=3 C=9	A=2 B=-2 C=-4	A=3 B=3 C=9	A=2 B=-1 C=-2
Socio - Economic deprivation	Stroke sufferers in this group have an equal opportunity to benefit from any of the improvements in care quality arising from this option	<p>People in this group may be at greater risk of stroke and poorer outcomes from stroke. They might also be at greater risk of poor educational attainment, social exclusion, poverty, or physical or mental health problems or disability or sensory impairment. Children and older people are more likely to live in poverty.</p> <p>This means that they will be more likely to experience difficulties relating to:</p>	Stroke sufferers in this group have an equal opportunity to benefit from any of the improvements in care quality arising from this option	The impacts of this Option are similar to the impacts in Option 2 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than in Option 1 or 2.

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
		<ul style="list-style-type: none"> • Understanding and adapting to the new changes • Access to care as an emergency stroke patient or as a visitor or carer • Negotiating the challenges and costs of travel between areas • Communicating with different providers during handovers and transfers. • Navigating unfamiliar environments <p>The impacts of this Option are similar to the impacts in Option 3 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than that in Option 1 but higher than Option 2</p>		
Impact Scores	A=3 B=3 C=9	A=2 B=-2 C=-4	A=3 B=3 C=9	A=2 B=-1 C=-2
Age	All stroke sufferers have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes regardless of their age.	<p>Older age groups are more likely to suffer a stroke and suffer poorer outcomes, and higher mortality rates.</p> <p>Older people are also a higher risk of economic hardship, social isolation, sensory impairment, physical disability, and other important co-morbidities.</p> <p>People approaching retirement age may be disproportionately affected by changes to their employment status or arrangements.</p>	All stroke sufferers have an equal opportunity to benefit from the proposals to enhance care quality and improve outcomes regardless of their age.	The impacts of this Option are similar to the impacts in Option 2 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than in Option 1 or 2.

	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDGH after 72 hours</i>	
Protected characteristic	Potentially Positive Impacts	Potentially Negative Impacts	Potentially Positive Impacts	Potentially Negative Impacts
		<p>For all of these reasons, older people may be disproportionately affected by the proposals to reconfigure stroke services. These negative impacts relate to:</p> <ul style="list-style-type: none"> • Understanding and adapting to the new changes • Access to care as an emergency stroke patient or as a visitor or carer • Negotiating the challenges and costs of travel between areas • Communicating with different providers during handovers and transfers. • Navigating unfamiliar environments <p>The impacts of this Option are similar to the impacts in Option 3 and 1. However, there may be more handovers of care compared with Option 1. The travel burden may be smaller than that in Option 1 but higher than Option 2</p>		
Impact Scores	A=3 B=3 C=9	A=3 B=-2 C=-6	A=3 B=3 C=9	A=3 B=-1 C=-3

Table 3: Equality Impact scores for each equality group

Key to categories and colour codes	Total Impact (C) Score	Positive	Negative
Major impact	+/- 7-9		
Moderate impact	+/- 4-6		
Minor impact	+/- 0-3		

Equality group	Option 1: All acute strokes being redirected to CHS.			Option 2: All acute strokes being redirected to CHS with the repatriation of South Tyneside patients back to STDGH after 7 days.			Option 3 : All acute strokes being redirected to CHS with the repatriation of South Tyneside patients back to STDGH after 72 hours		
	Positive impact score	Negative impact score	Total Impact score	Positive impact score	Negative impact score	Total Impact score	Positive impact score	Negative impact score	Total Impact score
Sex/ gender	9	-1	8	9	-1	8	9	-1	8
Sexual orientation	9	0	9	9	0	9	9	0	9
Gender reassignment	9	0	9	9	0	9	9	0	9
Race	9	-4	5	9	-4	5	9	-2	7
Marriage and civil partnership	9	0	9	9	0	9	9	0	9
Pregnancy / maternity	9	-2	7	9	-2	7	9	-2	7
Religion or belief	9	0	9	9	0	9	9	0	9
Disability	9	-4	5	9	-4	5	9	-2	7
Socioeconomic deprivation	9	-4	5	9	-4	5	9	-2	7
Age	9	-6	3	9	-6	3	9	-3	6

Results of the Health and Health Inequalities Impact Assessment of Options for stroke services

Table 4: Details of the health and health inequalities assessment of Option 1

A score = level of evidence B score = scale of impact C score = AXB Total negative impact score = sum of C scores relating to negative health and health inequalities impacts

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
Impacts relating to outcomes of high quality health care					
Death/Premature Death	A= 3 B= 3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=1 B=-2 C=-3	<p>Health</p> <p>Positive impact - Stroke is a leading cause of mortality in England. There is strong research evidence to show that access to high quality acute stroke services can reduce mortality. The proposed changes promote wider and more consistent access to high quality stroke services and should reduce stroke related mortality rates.</p> <p>Negative health - No negative impacts have been identified</p> <p>Health inequalities The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland. The key change will be a further transfer between South Tyneside and Sunderland.</p> <p>Positive inequalities - However, the proposed changes will enable more</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					<p>acute stroke patients to consistently access high quality stroke care which will reduce associated mortality and thus reduce health inequalities</p> <p>Negative inequalities - In theory, this extra step in the patient pathway may lead to delays which disproportionately affect patients in South Tyneside. Delays may increase risk of mortality from acute stroke and increase health inequalities experienced by the population in South Tyneside.</p>
Disease	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=3 B=0 C=0	<p>Health - In the medium to longer term, stroke can increase the risk of other illnesses e.g. pneumonia or malnutrition. Evidence shows that specialist stroke teams reduce the incidence of such problems.</p> <p>Positive impact - Stroke is a leading cause of morbidity in England. There is strong research evidence to show that access to high quality acute stroke services can reduce morbidity. The proposed changes promote wider and more consistent access to high quality stroke services.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Positive inequalities - The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce subsequent diseases such as pneumonia, malnutrition and reduce health inequalities.</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					Negative inequalities - No negative impacts have been identified
Disability – physical, mental, learning	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Health</p> <p>Positive impact - Stroke is a leading cause of morbidity in England. There is strong research evidence to show that access to high quality acute stroke services can improve stroke outcomes such as physical disability. The proposed changes promote wider and more consistent access to high quality stroke services and should reduce levels of physical disability post stroke.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Positive The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce subsequent physical disability and thus reduce health inequalities.</p> <p>Negative – Theoretically, transfer delays may increase risk of delayed access to thrombolysis and opportunities to reduce disability arising from acute stroke and this might increase health inequalities experienced by the population in South Tyneside</p>
Emotional wellbeing	A=3 B=3	A= -2	A=3 B=3	A= 2	<p>Health</p> <p>Evidence shows that stroke survivors and their carers suffer significant mood</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
	C=9	B=-2 C=-4	C=9	B=-2 C=-4	<p>disorders.</p> <p>Positive impact - The proposed changes promote wider and more consistent access to high quality stroke services which should improve outcomes and reduce the risk of emotional complications for survivors and carers.</p> <p>Negative impact - South Tyneside residents who are relatives and friends of those affected by stroke could face additional stresses generated by the burden associated with increased travel. This additional burden could generate further emotional suffering and related ill health.</p> <p>Health inequalities</p> <p>Positive The proposed changes promote wider and more consistent access to high quality stroke services which should improve outcomes and reduce the risk of emotional complications for survivors and carers thus reducing health inequalities.</p> <p>Negative impact - The quality impact assessment showed that the additional travel burden would disproportionately affect some equality groups in South Tyneside. This additional burden could generate further emotional suffering and related ill health and deepen health inequalities.</p>
Sensory Impairment	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Positive impact - Stroke is a leading cause of sensory impairment in England. There is strong research evidence to show that access to high quality acute stroke services can reduce the incidence and severity of sensory impairment post stroke. The proposed changes promote wider and more consistent access to high quality stroke services and should reduce levels of sensory impairment.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					<p>groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Negative – Theoretically, transfer delays may increase risk of delayed access to thrombolysis and opportunities to reduce disability arising from acute stroke and this might increase health inequalities experienced by the population in South Tyneside</p> <p>Positive The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce subsequent sensory impairment and thus reduce health inequalities.</p>
Cognitive impairment and disability	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Positive impact - Stroke is a leading cause of cognitive problems in England. There is strong research evidence to show that access to high quality acute stroke services can reduce the incidence and severity of cognitive problems post stroke. The proposed changes promote wider and more consistent access to high quality stroke services and should reduce the burden of ill health relating to cognitive problems.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Positive The proposed changes will enable more acute stroke patients to</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					<p>consistently access high quality stroke care which will reduce subsequent cognitive impairment and thus reduce health inequalities.</p> <p>Negative – Theoretically, transfer delays may increase risk of delayed access to thrombolysis and opportunities to reduce cognitive disability arising from acute stroke and this might increase health inequalities experienced by the population in South Tyneside</p>
Social Dependency	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Health</p> <p>Positive impact - Stroke is a leading cause of social dependency in England. There is strong research evidence to show that access to high quality acute stroke services can improve stroke outcomes such as social dependency. The proposed changes promote wider and more consistent access to high quality stroke services and should reduce levels of dependency post stroke.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Positive The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce subsequent dependency and thus reduce health inequalities.</p> <p>Negative – Theoretically, transfer delays may increase risk of delayed access to thrombolysis and opportunities to reduce dependency arising from acute stroke and this might increase health inequalities experienced by the</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					population in South Tyneside.
Health related quality of life	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Health</p> <p>Positive impact - Stroke is a leading cause of disability and distress in England leading to significantly reduced quality of life. There is strong research evidence to show that access to high quality acute stroke services can improve stroke outcomes such as quality of life. The proposed changes promote wider and more consistent access to high quality stroke services and should improve quality of life post stroke.</p> <p>Negative impact - No negative impacts have been identified</p> <p>Health inequalities - The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland.</p> <p>Positive The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will improve quality of life post stroke and thus reduce health inequalities.</p> <p>Negative – Theoretically, transfer delays may increase risk of delayed access to thrombolysis and opportunities to improve quality of life post acute stroke and this might increase health inequalities experienced by the population in South Tyneside.</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
Health related biological risk factors eg, atrial fibrillation	A=3 B=3 C=9	A=3 B=0 C=0	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Health - High quality health stroke care includes biological risk reduction in the short and longer term.</p> <p>Positive health- The proposed changes promote wider and more consistent access to high quality stroke services and should reduce stroke related biological risk factors and reduce the risk of stroke recurrence .</p> <p>Negative health - No negative impacts have been identified</p> <p>Health inequalities - Biological risk factors are more prevalent in some equality groups identified in the equality impact assessment. Long term risk reduction of biological risk factors hinges on high quality primary care. Issues of continuity e.g. prescribing handovers between hospital and primary care services might disproportionately affect residents of South Tyneside where relationships between primary and Sunderland secondary care are weaker.</p> <p>Positive inequalities - the proposed changes will enable more acute stroke patients to consistently access high quality stroke care which should reduce stroke related biological risk factors and reduce the risk of stroke recurrence and thus reduce health inequalities</p> <p>Negative inequalities – there is a small theoretical risk that, without effective joint working between primary care services in South Tyneside and acute services in Sunderland, biological risk factors will not be consistently managed over time and this might deepen health inequalities in South Tyneside.</p>
Lifestyle related risk factors for	A=3	A=3	A=3	A=2	Health - High quality health stroke care includes action on lifestyle factors in the short and longer term.

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
stroke eg smoking, exercise	B=3 C=9	B=0 C=0	B=3 C=9	B=-2 C=-4	<p>Positive health- The proposed changes promote wider and more consistent access to high quality stroke services and should reduce lifestyle related stroke risk factors and reduce the risk of stroke recurrence .</p> <p>Negative health - No negative impacts have been identified</p> <p>Health inequalities - lifestyle related stroke risk factors are more prevalent in some equality groups identified in the equality impact assessment. Long term risk reduction of lifestyle risk factors hinges on high quality integrated care. Issues of care continuity and integration between Sunderland acute services and South Tyneside community and primary care services might disproportionately affect residents of South Tyneside.</p> <p>Positive inequalities - the proposed changes will enable more acute stroke patients to consistently access high quality stroke care which should reduce lifestyle related stroke risk factors and reduce the risk of stroke recurrence and thus reduce health inequalities</p> <p>Negative inequalities – there is a small theoretical risk that, without effective integration between community and primary care services in South Tyneside and acute services in Sunderland, lifestyle related stroke risk factors will not be consistently managed over time and this might deepen health inequalities in South Tyneside.</p>
Health inequalities – not scored as addressed					The equality assessment and the health and health inequalities assessments have explored this issue with relevance to specific priority groups and health outcomes.

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
throughout					
Access to high quality health care					
Effective health care	A=3 B=3 C=9	☐☐☐ ☐☐☐ ☐☐☐	A=3 B=3 C=9	A=2 B=-2 C=-4	<p>Health</p> <p>Positive impact - The national evidence base and recommendations provide strong evidence to indicate that the proposed model for reconfiguration of stroke services will create a more effective service. The proposals will promote wider and more consistent access to high quality stroke services and should improve stroke outcomes.</p> <p>Negative health - No negative impacts have been identified</p> <p>Health inequalities The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland. The key change will be a further transfer between S Tyneside and Sunderland.</p> <p>Positive inequalities - The proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce associated mortality and thus reduce health inequalities</p> <p>Negative inequalities - In theory, this extra step in the patient pathway may lead to delays which disproportionately affect patients in South Tyneside.</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					Delays may increase risk of mortality from acute stroke and increase health inequalities experienced by the population in South Tyneside
Safe health care	A=3 B=3 C=9	A=1 B=-2 C=-2	A=3 B=3 C=9	A=1 B=-2 C=-2	<p>Health</p> <p>Positive impact – The national evidence base and recommendations provide strong evidence to indicate that the proposed model for reconfiguration of stroke services will create a safer service. The proposals will promote wider and more consistent access to safer stroke services and reduce lengths of stay. This should reduce the incidence of unintended negative consequences of health care.</p> <p>Negative health - In the patient safety literature, communication and handovers between teams are recognised as key risk factors. This suggests that – in theory - the extra step in the patient pathway for South Tyneside residents may lead them experiencing a a greater risk to patient safety arising from greater demands for effective communication and handovers between teams</p> <p>Health inequalities The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland. The key change will be a further transfer between South Tyneside and Sunderland.</p> <p>Positive inequalities - the proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce the incidence of unintended negative consequences of health care and thus reduce health inequalities</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					<p>Negative inequalities - In the patient safety literature, communication and handovers between teams are recognised as key risk factors. This suggests that – in theory - the extra step in the patient pathway for South Tyneside residents may lead them experiencing a greater risk to patient safety arising from greater demands for effective communication and handovers between teams. This might deepen health inequalities in South Tyneside.</p>
<p>Cost - Efficient health care</p>	<p>A=3 B=3 C=9</p>	<p>□□□□ □□□ □□□</p>	<p>A=3 B=3 C=9</p>	<p>A=1 B=-2 C=-2</p>	<p>Health</p> <p>Positive impact – The national evidence base and recommendations provide strong evidence to indicate that the proposed model for reconfiguration of stroke services will create a more cost-efficient service. The proposals will promote wider and more consistent access to high quality stroke services and should improve stroke outcomes.</p> <p>Negative health - No negative impacts have been identified</p> <p>Health inequalities The equality impact assessment identified that some groups in South Tyneside may find it harder to understand and adapt to the proposed changes. However, acute stroke patients will access services in the same way (through direct ambulance transfer to acute stroke services in Sunderland or presentation to A&E in with onward transfer to acute stroke services Sunderland. The key change will be a further transfer between South Tyneside and Sunderland.</p> <p>Positive inequalities - However, the proposed changes will enable more acute stroke patients to consistently access high quality stroke care which will reduce associated mortality and thus reduce health inequalities</p> <p>Negative inequalities - In theory, this extra step in the patient pathway may lead to delays which disproportionately affect patients in South Tyneside.</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					Delays may increase risk of mortality from acute stroke and increase
Health care relevant to population need	A=2 B=2 C=4	A=1 B=-2 C=-2	A=2 B=2 C=4	A=1 B=-2 C=-2	<p>The ageing population is at greater risk of stroke and death from stroke. All population projections indicate that the population is ageing and this will generate increased need for acute stroke services. The current stroke business case gives reassuring evidence that the reconfiguration has capacity for current levels of need but does not address future need based on demographic modelling.</p> <p>Positive impact -The proposals will promote wider and more consistent access to high quality stroke services and reduced lengths of stay for current levels of need.</p> <p>Negative health - No negative impacts have been identified however there is insufficient evidence to assess relevance to future projected need. This is relevant to both acute hospital services and ambulance services. There is a theoretical possibility of negative impact for both population groups</p> <p>Health inequalities.</p> <p>Positive inequalities - the proposed changes will enable the needs of more acute stroke patients to be more effectively met and will therefore reduce health inequalities.</p> <p>Negative inequalities - No negative impacts have been identified however there is insufficient evidence to assess relevance to future projected need especially of the ageing population. It is not clear whether the ambulance service has the capacity to meet the needs of the service reconfiguration</p>
Acceptable health care (patient and	A=1 B=-2	A=1 B=-2	A=1 B=2	A=1 B=-2	From the perspective of service users and carers, the proposed changes will generate increased need for inpatient care and hospital amenities in Sunderland. This might affect acceptability to Sunderland and South

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
carer experience)	C=2	C=-2	C=2	C=-2	<p>Tyneside populations. For South Tyneside residents, there will be greater need for satisfactory continuity of care and communication between a wide range of services across areas (ambulance, primary care, social care, community care, secondary care) and there will be an increased social and economic burden associated with travel to Sunderland.</p> <p>Health</p> <p>Positive impact - There is strong evidence that the proposed model for reconfiguration of stroke services will promote wider and more consistent access to high quality stroke services and should improve stroke outcomes. The business case gives reassuring evidence that there is capacity to deal with the higher throughput of patients. User groups should benefit from the improved quality.</p> <p>Negative health - No negative impacts have been identified however there is insufficient evidence to assess whether increased throughput will affect patient and carer experience in relation to inpatient care, hospital parking and other facilities, and the ambulance service. There is a theoretical possibility of negative impact for both population groups but especially South Tyneside residents..</p> <p>Health inequalities The equality impact assessment identified that some groups in South Tyneside will be more affected by the changes.</p> <p>Positive - The improved quality of service provision could improve patient experience and reduce inequalities.</p> <p>Negative inequalities - There is a theoretical basis to suggest that the changes will affect patient experience for all parties with a greater impact on South Tyneside residents and equality groups in South Tyneside which could</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					deepen inequalities.
Equitable health care – not scored as addressed throughout					The equality assessment and the health inequalities assessments have explored this issue with relevance to specific priority groups and health outcomes.
Environment					
Transport	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=-1 C=-1	<p>A detailed transport analysis is underway. The proposals will increase commuting traffic between South Tyneside and Sunderland. The travel implications for service users and carers have been discussed elsewhere</p> <p>Health</p> <p>Positive impact – no clear evidence of positive health impacts relating to increased traffic / transport activity</p> <p>Negative impact – The small increased risk in RTAs disproportionately affect residents in South Tyneside and Sunderland living close to commuter routes and the hospitals.</p> <p>Health inequalities</p> <p>Positive impact - no clear evidence of positive health inequalities impacts relating to increased traffic / transport activity</p> <p>Negative impacts The small increased risk in RTAs disproportionately affect residents in South Tyneside and Sunderland living close to commuter routes and the hospitals. This is likely to affect socio-economically deprived</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					communities more commonly and contribute to health inequalities.
Natural and built environment	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	Health & Health inequalities - no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL
Pollution	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=-1 C=-1	<p>Health - the increased traffic may make a small contribution to noise and air pollution</p> <p>Positive impact - no clear evidence of positive health impacts relating to increased traffic / transport activity</p> <p>Negative impact - Those residents near commuter routes in South Tyneside and Sunderland and Sunderland hospitals could suffer from increased noise and air pollution.</p> <p>Health inequalities</p> <p>Positive impact - no clear evidence of positive health inequalities impacts relating to increased traffic / transport activity</p> <p>Negative impacts The negative pollution impacts have the potential to disproportionately affect residents in South Tyneside and Sunderland living close to commuter routes and the hospitals. This is likely to affect socio-economically deprived communities more commonly and impact negatively to health inequalities</p>
Housing	A=1	A=1	A=1	A=1	Health & Health inequalities - no clear evidence of any health or health inequalities impacts relating to housing

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
	B=0 C=0	B=0 C=0	B=0 C=0	B=0 C=0	
Economy					
Education, skills, learning	A=1 B=1 C=1	A=1 B=-1 C=-1	A=1 B=1 C=1	A=1 B=-1 C=-1	<p>The proposal entails a ward closure in South Tyneside with associated shifts of skilled staff from the borough to Sunderland. Public sector skills will be lost from South Tyneside .</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the expansion of public sector skills there.</p> <p>Negative impact - the numbers are very small but there is a net negative health impact for people in South Tyneside arising from the loss of public sector skills there</p> <p>Health inequalities</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the expansion of public sector skills there. This could positive reduce health inequalities in Sunderland – on a very small scale</p> <p>Negative impact - the numbers are very small but there is a net negative</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					health impact for people in South Tyneside arising from the loss of public sector skills there – this could negatively impact on health inequalities in South Tyneside – on a very small scale
Employment	A=1 B=1 C=1	A=1 B=-1 C=-1	A=1 B=1 C=1	A=1 B=-1 C=-1	<p>The proposal entails a ward closure in South Tyneside with associated shifts of skilled staff from the borough to Sunderland. Public sector skills will be lost from South Tyneside.</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the small expansion of public sector job opportunities there.</p> <p>Negative impact - the numbers are very small but there is a net negative health impact for people in South Tyneside arising from the loss of public sector jobs there.</p> <p>Health inequalities</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the small expansion of public sector job opportunities there . This could positive reduce health inequalities n Sunderland – on a very small scale</p> <p>Negative impact - the numbers are very small but there is a net negative health impact for people in South Tyneside arising from the loss of public</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					sector jobs there – this could negatively impact on health inequalities there.
Business development and investment	A=1 B=1 C=1	A=1 B=-1 C=-1	A=1 B=1 C=1	A=1 B=-1 C=-1	<p>The proposal entails expansion of the specialist stroke service in Sunderland with a related ward closure in South Tyneside. The public sector is a key source of business development and investment in South Tyneside and Sunderland.</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the public sector investment there.</p> <p>Negative impact - the numbers are very small but there is a net negative health impact for people in South Tyneside arising from the loss of public sector investment there.</p> <p>Health inequalities</p> <p>Health</p> <p>Positive impact – the numbers are very small but there is a net benefit to the health impact for people in Sunderland arising from the small expansion of public sector investment there . This could positive reduce health inequalities n Sunderland – on a very small scale</p> <p>Negative impact - the numbers are very small but there is a net negative health impact for people in South Tyneside arising from the loss of public sector investment there – this could negatively impact on health inequalities</p>

The health and health inequalities impact	Health Positive	Health Negative	Health inequalities Positive	Health inequalities Negative	Explanatory notes
					there.
Financial inclusion	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	Health & Health inequalities - no clear evidence of any health or health inequalities impacts relating to financial inclusion i.e. NEUTRAL

Table 5: Details of the health and health inequalities assessment of options 2 and 3 (for further details regarding sources and statistics, please refer to the evidence base summarised in Appendix 3)

A score = level of evidence B score = scale of impact C score = AXB				
	Solution 2: <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 7 days.</i>		Solution3 <i>All acute strokes being directed to SRH with the repatriation of South Tyneside patients back to STDH after 72 hours</i>	
	Positive	Negative	Positive	Negative
Impact relating to outcomes of health care				
Death/premature death: Impact on health	This Option achieves better levels of medical staff for emergency assessment and treatments such as thrombolysis. This could have a small positive effect on mortality rates.	Unlike Option 1, this Option achieves neither the recommended levels of specialist stroke allied health professionals nor the recommended levels of throughput. This means that stroke outcomes in the short and medium terms may not be improved.	This Option achieves better levels of medical staff for emergency assessment and treatments such as thrombolysis. This could have a small positive effect on mortality rates.	Unlike Option 1, this Option does not achieve the recommended levels of specialist stroke allied health professionals nor the recommended levels of throughput. This means that stroke outcomes in the short and medium terms may not be improved.
Death/premature death: Impact on health inequalities	The small impact on premature mortality from stroke could have a small impact on health inequalities relating to stroke.	Improved services which meet nationally recommended quality standards are essential to achieve improved outcomes from stroke and reduce health inequalities. This option does not achieve those standards	The small impact on premature mortality from stroke could have a small impact on health inequalities relating to stroke.	Improved services which meet nationally recommended quality standards are essential to achieve improved outcomes from stroke and reduce health inequalities. This option does not achieve those standards
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIA score - (Mortality)	12	-12	12	-12

Disease: Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent diseases arising post stroke .	Most of the disease related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent diseases arising post stroke.	Most of the disease related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Disease: Impact on health inequalities	Reduced risks of disease could help to reduce premature mortality and improve health inequalities	This option does not maximise the opportunity to reduce risks of disease and thus reduce premature mortality and improve health inequalities	Reduced risks of disease could help to reduce premature mortality and improve health inequalities	This option does not maximise the opportunity to reduce risks of disease and thus reduce premature mortality and improve health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-1 C=-3	A=3 B=2 C=6	A=3 B=-1 C=-3
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-1 C=-3	A=3 B=2 C=6	A=3 B=-1 C=-3
Total HIIA Scores (Disease)	12	-6	12	-6
Disability - physical, mental, learning Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent disability post stroke	Many of the disability related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent disability post stroke	Many of the disability related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Disability - physical, mental, learning Impact on health inequalities	Reduced risks of disability could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to, disability and thus reduce associated socio-economic suffering and improve health inequalities	Reduced risks of disability could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to, disability and thus reduce associated socio-economic suffering and improve health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA Impact score (Disability)	12	-12	12	-12

Emotional wellbeing Impact on health	Stroke survivors and their carers suffer significant mood disorders. Improved outcomes due to improved levels of specialist medical staff could reduce the scale of emotional complications facing those affected. Care closer to home could have an added benefit for stroke survivors.	Maximal stroke outcomes and related emotional wellbeing cannot be achieved without adequate levels of specialist stroke allied health professionals.	Stroke survivors and their carers suffer significant mood disorders. Improved outcomes due to improved levels of specialist medical staff could reduce the scale of emotional complications facing those affected. Care closer to home could have an added benefit for stroke survivors.	Maximal stroke outcomes and related emotional wellbeing cannot be achieved without adequate levels of specialist stroke allied health professionals.
Emotional wellbeing Impact on health inequalities	Smaller scale emotional complications could improve health & socio-economic outcomes for stroke survivors and their families with an associated impact on health inequalities	The inadequate levels of specialist stroke allied health professionals cannot realise the potential to reduce health inequalities	Smaller scale emotional complications could improve health & socio-economic outcomes for stroke survivors and their families with an associated impact on health inequalities	The inadequate levels of specialist stroke allied health professionals cannot realise the potential to reduce health inequalities
HEALTH Impact Score	A=3 B=1 C=3	A=3 B=-1 C=-3	A=3 B=1 C=3	A=3 B=-1 C=-3
HEALTH INEQUALITIES Impact Score	A=3 B=1 C=3	A=3 B=-1 C=-3	A=3 B=1 C=3	A=3 B=-1 C=-3
Total HIIA Impact score (Emotional wellbeing)	6	-6	6	-6
Sensory impairment Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent sensory impairment post stroke	Many of the sensory impairment related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent sensory impairment post stroke	Many of the sensory impairment related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Sensory impairment Impact on health inequalities	Reduced risks of sensory impairment could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to sensory impairment and thus reduce associated socio-economic suffering and improve health inequalities	Reduced risks of sensory impairment could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to sensory impairment and thus reduce associated socio-economic suffering and improve health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6

HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA impact score (sensory impairment)	12	-12	12	-12
Cognitive impairment and disability Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent cognitive impairment post stroke Care closer to home could be less distressing for those survivors and their relatives affected by cognitive problems	Many of the cognitive impairment related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could reduce risks for subsequent cognitive impairment post stroke Care closer to home could be less distressing for those survivors and their relatives affected by cognitive problems	Many of the cognitive impairment related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Cognitive impairment and disability Impact on health inequalities	Reduced risks of cognitive impairment could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to cognitive impairment and thus reduce associated socio-economic suffering and improve health inequalities	Reduced risks of cognitive impairment could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to cognitive impairment and thus reduce associated socio-economic suffering and improve health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA impact score	12	-12	12	-12
Social dependency Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could improve outcomes and reduce risks for subsequent social dependency post stroke	Many of the improved outcomes related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could improve outcomes and reduce risks for subsequent social dependency post stroke	Many of the improved outcomes related benefits arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Social dependency Impact on health	Reduced risks of social dependency could help to reduce associated socio-economic suffering and improve health	This option does not maximise the opportunity to reduce risks of, and outcomes relating to stroke and thus	Reduced risks of social dependency could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to stroke and thus

inequalities	inequalities	reduce associated social dependency and improve health inequalities		reduce associated social dependency and improve health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA Impact score (social dependency)	12	-12	12	-12
Health related quality of life Impact on health	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could improve outcomes including health related quality of life post stroke	Many of the improved outcomes arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.	More medical staff on the Sunderland site could lead to more timely assessment and management by specialist stroke teams this could improve outcomes including health related quality of life post stroke	Many of the improved outcomes arise from improved levels of assessment and input from specialist stroke allied health practitioners. This option does not achieve requisite levels of these specialists. The option achieves only a small improvement on current service provision.
Health related quality of life Impact on health inequalities	Improved quality of life could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to stroke and thus improve quality of life and related health inequalities	Improved quality of life could help to reduce associated socio-economic suffering and improve health inequalities	This option does not maximise the opportunity to reduce risks of, and outcomes relating to stroke and thus improve quality of life and related health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA impact score (quality of life)	12	-12	12	-12
Health related biological risk factors eg, atrial fibrillation Impact on health	The improved levels of medical staff in Sunderland could provide service leadership to maximise the benefits associated with secondary prevention..	Transfers of care could undermine medical leadership and focus on secondary prevention.	The improved levels of medical staff in Sunderland could provide service leadership to maximise the benefits associated with secondary prevention..	Transfers of care could undermine medical leadership and focus on secondary prevention.
Health related biological risk factors eg, atrial fibrillation Impact on health inequalities	Secondary prevention for stroke survivors could reduce further risk of stroke and reduce risk of other cardiovascular related co-morbidities thus reducing health inequalities	Weaknesses in secondary prevention could contribute to deepening health inequalities	Secondary prevention for stroke survivors could reduce further risk of stroke and reduce risk of other cardiovascular related co-morbidities thus reducing health inequalities	Weaknesses in secondary prevention could contribute to deepening health inequalities

HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-1 C=-3	A=3 B=2 C=6	A=3 B=-1 C=-3
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-1 C=-3	A=3 B=2 C=6	A=3 B=-1 C=-3
Total HIIA impact score	12	-6	12	-6
Lifestyle related risk factors for stroke eg smoking, exercise Health impact	The transfers to a local hospital which is co-terminous with provision of lifestyle services could promote lifestyle related prevention activities for stroke survivors	Inadequate levels of specialist stroke AHPS could compromise opportunities to address lifestyle related secondary prevention.	The transfers to a local hospital which is co-terminous with provision of lifestyle services could promote lifestyle related prevention activities for stroke survivors	Inadequate levels of specialist stroke AHPS could compromise opportunities to address lifestyle related secondary prevention.
Lifestyle related risk factors for stroke eg smoking, exercise Health inequalities impact	These increased lifestyle prevention activities could have an impact on health inequalities by reducing risk for many related co-morbidities	Failure to address lifestyle related risk factors could compromise the opportunities to reduce the many lifestyle related health inequalities	These increased lifestyle prevention activities could have an impact on health inequalities by reducing risk for many related co-morbidities	Failure to address lifestyle related risk factors could compromise the opportunities to reduce the many lifestyle related health inequalities
HEALTH Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=3 B=2 C=6	A=3 B=-2 C=-6	A=3 B=2 C=6	A=3 B=-2 C=-6
Total HIIA impact score	12	-12	12	-12
<i>Health inequalities not scored as addressed throughout</i>				
Outcomes relating to Access to high quality health care				
Effective health care Impact on health	This Option could achieve better levels of medical staff to provide more consistent assessment and treatment. However adequate levels of multidisciplinary staff are essential to maximise effectiveness of stroke services	There is strong evidence to indicate that this Option does not achieve nationally recommended standards for effective stroke services	This Option could achieve better levels of medical staff to provide more consistent assessment and treatment. However adequate levels of multidisciplinary staff are essential to maximise effectiveness of stroke services	There is strong evidence to indicate that this Option does not achieve nationally recommended standards for effective stroke services
Effective health care Impact on health inequalities	The improvements in levels of medical staff could have a small impact on health inequalities	This Option cannot achieve the stroke outcomes which could be achieved by more effective services and could therefore deepen health inequalities.	The improvements in levels of medical staff could have a small impact on health inequalities	This Option cannot achieve the stroke outcomes which could be achieved by more effective services and could therefore deepen health inequalities.
HEALTH Impact Score	A=3 B=1 C=3	A=3 B=-2 C=-6	A=3 B=1 C=3	A=3 B=-2 C=-6
HEALTH INEQUALITIES	A=3 B=1 C=3	A=3 B=-2 C=-6	A=3 B=1 C=3	A=3 B=-2 C=-6

Impact Score				
Total HIIA Impact Score	6	-12	6	-12
Safe health care Impact on health	The options can achieve safer levels of medical staff in Sunderland.	This option introduces more handovers and transfers of care which are recognised to pose risks to patient safety. Inadequate levels of specialist stroke staff may also lead to more stroke patients suffering unintended consequences of healthcare	The options can achieve safer levels of medical staff in Sunderland.	This option introduces more handovers and transfers of care which are recognised to pose risks to patient safety. Inadequate levels of specialist stroke staff may also lead to more stroke patients suffering unintended consequences of healthcare
Safe health care Impact on health inequalities	No clear impacts could be identified	No clear impacts could be identified	No clear impacts could be identified	No clear impacts could be identified
HEALTH Impact Score	A=3 B=1 C=3	A=3 B=-1 C=-3	A=3 B=1 C=3	A=3 B=-1 C=-3
HEALTH INEQUALITIES Impact Score	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIIA Impact score (safe care)	3	-3	3	-3
Cost-efficient health care Impact on health	This Option does not achieve cost saving. There are some savings achieved by rationalising specialist medical staff in Sunderland.	This option introduces changes without proven cost-efficiencies	This Option does not achieve cost saving. There are some savings achieved by rationalising specialist medical staff in Sunderland.	This option introduces changes without proven cost-efficiencies
Cost-efficient health care Impact on health inequalities	No clear benefits could be identified	The impact on health inequalities is likely to be negative but there was little evidence to quantify this.	No clear benefits could be identified	The impact on health inequalities is likely to be negative but there was little evidence to quantify this.
HEALTH Impact Score	A=2 B=1 C=2	A=3 B=-2 C=-6	A=2 B=1 C=2	A=2 B=-2 C=-6
HEALTH INEQUALITIES Impact Score	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=-1 C=-1
Total HIIA Impact score (cost efficient care)	2	-7	2	-7
Healthcare relevant to	There was no evidence that this Option	As the population ages, the incidence	There was no evidence that this Option	As the population ages, the incidence

population need	could have a positive impact on sustainable health care relevant to population need	of stroke will increase, this option does not provide a means of meeting current or future needs	could have a positive impact on sustainable health care relevant to population need	of stroke will increase, this option does not provide a means of meeting current or future needs
Impact on health				
Healthcare relevant to population need	No positive impacts were identified	Lack of capacity to meet the needs of stroke patients could deepen health inequalities	No positive impacts were identified	Lack of capacity to meet the needs of stroke patients could deepen health inequalities
Impact on health inequalities				
HEALTH Impact Score	A=1 B=0 C=0	A=2 B=-3 C=-6	A=1 B=0 C=0	A=2 B=-3 C=-6
HEALTH INEQUALITIES Impact Score	A=1 B=0 C=0	A=2 B=-3 C=-6	A=1 B=0 C=0	A=2 B=-3 C=-6
Total HIIA score (relevant)	0	-12	0	-12
Acceptable healthcare	The opportunity to 'repatriate' locally could be attractive to service users from South Tyneside seeking care closer to home. It might appear like the 'best of both worlds' - specialist care in Sunderland with follow up care closer to home.	The increased number of handovers and transfers could create challenges for user satisfaction relating to communication, continuity and coordination of care	The opportunity to 'repatriate' locally could be attractive to service users from South Tyneside seeking care closer to home. It might appear like the 'best of both worlds' - specialist care in Sunderland with follow up care closer to home.	The increased number of handovers and transfers could create challenges for user satisfaction relating to communication, continuity and coordination of care
Impact on health				
Acceptable healthcare	The reduced travel costs associated with this option could have a positive - albeit minimal - impact on health inequalities relating to this aspect of care	The negative consequences of handovers and transfers could have a negative impact on health outcomes and related health inequalities	The reduced travel costs associated with this option could have a positive - albeit minimal - impact on health inequalities relating to this aspect of care	The negative consequences of handovers and transfers could have a negative impact on health outcomes and related health inequalities
Impact on health inequalities				
HEALTH Impact Score	A=2 B=2 C=4	A=1 B=-2 C=-2	A=2 B=2 C=4	A=1 B=-2 C=-2
HEALTH INEQUALITIES Impact Score	A=1 B=1 C=1	A=1 B=1 C=-1	A=1 B=1 C=1	A=1 B=1 C=-1
Total HIIA impact score (acceptable care)	5	-3	5	-3
<i>Equitable health care - not scored as addressed throughout</i>				
Outcomes relating to Environmental determinants of health				
Transport HEALTH IMPACT	This option increases inter-hospital transfers for patients from South Tyneside. It reduces commuting traffic relating to stroke patients' visitors.	The net impact on traffic could be almost neutral - more transfers but less visitors. Any net increases would be greater for this Option than Option	This option increases inter-hospital transfers for patients from South Tyneside. It reduces commuting traffic relating to stroke patients' visitors. There was no	The net impact on traffic could be almost neutral - more transfers but less visitors. Of the 3 proposed options, this might have the smallest

	There was no evidence of any related positive benefits on health.	3. Negative health impacts could arise from the increased traffic causing pollution , congestion and increased risks of road traffic accidents. Any risks are minimal.	evidence of any related positive benefits on health.	impact on traffic and related pollution , congestion and increased risks of road traffic accidents.
Transport HEALTH INEQUALITIES IMPACT	There was no evidence of any benefit for health inequalities relating to transport	The impact on health inequalities relates to the health risks identified above which could disproportionately affect those living close to commuting routes and hospital sites.	There was no evidence of any benefit for health inequalities relating to transport	The impact on health inequalities relates to the health risks identified above which could disproportionately affect those living close to commuting routes and hospital sites.
Transport HEALTH IMPACT score	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=-1 C=-1
Transport HEALTH INEQUALITIES IMPACT score	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=-1 C=-1
Total HIIA impact score (transport)	0	-2	0	-2
Natural and built environment HEALTH IMPACT	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL
Natural and built environment HEALTH INEQUALITIES IMPACT	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL	no clear evidence of any health or health inequalities impacts relating to the natural / built environment i.e. NEUTRAL
Natural and built environment HEALTH IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Natural and built environment HEALTH INEQUALITIES IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIIA impact score (natural/built environment)	0	0	0	0
Pollution HEALTH IMPACT	There was no evidence of any related positive benefits on health arising from pollution.	This option increases inter-hospital transfers for patients from South Tyneside. But, it reduces commuting traffic relating to stroke patients'	There was no evidence of any related positive benefits on health arising from pollution.	This option increases inter-hospital transfers for patients from South Tyneside. But, it minimises commuting traffic relating to stroke

		visitors. The net impact on exposure to air or noise pollution would be very small.		patients' visitors. The net impact on exposure to air or noise pollution would be very minimal
Pollution HEALTH INEQUALITIES IMPACT	There was no evidence of any benefit for health inequalities relating to pollution	The impact on health inequalities arising from exposure to traffic related noise and air could disproportionately affect those living close to commuting routes and hospital sites but would be very small indeed .	There was no evidence of any benefit for health inequalities relating to pollution	The impact on health inequalities arising from exposure to traffic related noise and air could disproportionately affect those living close to commuting routes and hospital sites but would be minimal
Pollution HEALTH IMPACT SCORE	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=0 C=0
Pollution HEALTH INEQUALITIES IMPACT SCORE	A=1 B=0 C=0	A=1 B=-1 C=-1	A=1 B=0 C=0	A=1 B=0 C=0
Total HIA Impact scores (pollution)	0	-2	0	0
Housing HEALTH impact	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing
Housing HEALTH INEQUALITIES impact	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing	no clear evidence of any health or health inequalities impacts relating to housing
Housing HEALTH impact score	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Housing HEALTH INEQUALITIES impact score	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIA Impact score (housing)	0	0	0	0
Outcomes relating to Economic determinants of health				
Education, skills, learning HEALTH IMPACT	This option entails minimal changes to staffing levels with minimal implications for education / skills related health gains	The small shift of specialist medical staff from South Tyneside to Sunderland could have a small negative impact (largely due to wider long term consequences) on skills related health impacts in South Tyneside. But this would be offset by the equivalent gains for Sunderland.	This option entails minimal changes to staffing levels with minimal implications for education / skills related health gains	The small shift of specialist medical staff from South Tyneside to Sunderland could have a small negative impact (largely due to wider long term consequences) on skills related health impacts in South Tyneside. But this would be offset by the equivalent gains for Sunderland.

Education, skills, learning HEALT INEQUALITIES IMPACT	This option entails minimal changes to staffing levels with minimal implications for health inequalities	The same impacts on health can be generated for health inequalities	This option entails minimal changes to staffing levels with minimal implications for health inequalities	The same impacts on health can be generated for health inequalities
Education, skills, learning HEALT IMPACT score	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Education, skills, learning HEALT INEQUALITIES IMPACT score	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIIA score (education)	0	0	0	0
Employment HEALT IMPACT	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities
Employment HEALT INEQUALITIES IMPACT	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities	The staffing changes are minimal in scale and without positive or negative implications for health or health inequalities
Employment HEALT IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Employment HEALT INEQUALITIES IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIIA Impact score (employment)	0	0	0	0
Business development and investment HEALT IMPACT	The transfer of specialist stroke care from South Tyneside to Sunderland could have a small positive impact (largely due to wider longterm consequences) on related health impacts in Sunderland.	These benefits for Sunderland are offset by the losses in South Tyneside.	The transfer of specialist stroke care from South Tyneside to Sunderland could have a small positive impact (largely due to wider longterm consequences) on related health impacts in Sunderland.	These benefits for Sunderland are offset by the losses in South Tyneside.
Business development and investment HEALT INEQUALITIES IMPACT	Increased investment in Sunderland could have positive impacts on health inequalities.	The benefits for Sunderland are offset by the losses in South Tyneside.	Increased investment in Sunderland could have positive impacts on health inequalities.	The benefits for Sunderland are offset by the losses in South Tyneside.

Business development and investment HEALTH IMPACT SCORE	A=1 B=1 C=1	A=1 B=-1 C=-1	A=1 B=1 C=1	A=1 B=-1 C=-1
Business development and investment HEALTH INEQUALITIES IMPACT SCORE	A=1 B=1 C=1	A=1 B=-1 C=-1	A=1 B=1 C=1	A=1 B=-1 C=-1
Total HIIA impact score (business development)	2	-2	2	-2
Financial inclusion HEALTH IMPACT	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion
Financial inclusion HEALTH INEQUALITIES IMPACT	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion	no clear evidence of any health or health inequalities impacts relating to financial inclusion
Financial inclusion HEALTH IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Financial inclusion HEALTH INEQUALITIES IMPACT SCORE	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0	A=1 B=0 C=0
Total HIIA Impact score (financial inclusion)	0	0	0	0

Table 6: Integrated Health & Health Inequalities Impact scores for all Options

Colour Key

Positive	Negative
Major impact 13-18	Major impact _13-18
Moderate impact 7-12	Moderate impact -(7- 12)
Minor impact 0-6	Minor impact -(0—6)

Option 1: *All acute strokes being redirected to CHS*

Option 2: *All acute strokes being redirected to CHS with the repatriation of South Tyneside patients back to STDGH after 7 days.*

Option 3 *All acute strokes being redirected to CHS with the repatriation of South Tyneside patients back to STDGH after 72 hours*

		Total POSITIVE integrated health and health inequality impact score			Total NEGATIVE integrated health and health inequality impact score			TOTAL INTEGRATED IMPACT SCORE		
Health and Health care outcomes		Option 1	Option 2	Option 2	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Impacts relating to outcomes of high quality health care	Death / premature death	18	12	12	-3	-12	-12	15	0	0
	Disease	18	12	12	0	-6	-6	18	6	6
	Disability - physical, mental, learning	18	12	12	-4	-12	-12	14	0	0
	Emotional wellbeing	18	6	6	-8	-6	-6	10	0	0
	Sensory impairment	18	12	12	-4	-12	-12	14	0	0

		Total POSITIVE integrated health and health inequality impact score			Total NEGATIVE integrated health and health inequality impact score			TOTAL INTEGRATED IMPACT SCORE		
		Option 1	Option 2	Option 2	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
	Health and Health care outcomes									
	Cognitive impairment / disability	18	12	12	-4	-12	-12	14	0	0
	Social dependency	18	12	12	-4	-12	-12	14	0	0
	Health related quality of life	18	12	12	-4	-12	-12	14	0	0
	Stroke risk factors (biological eg BP)	18	12	12	-4	-6	-6	14	6	6
	Stroke risk factors (Lifestyle eg smoking)	18	12	12	-4	-12	-12	14	0	0
Impacts relating to access to high quality health care	Effective health care	18	6	6	-4	-12	-12	14	-6	-6
	Safe health care	18	3	3	-4	-3	-3	14	0	0
	Cost efficient health care	18	2	2	-2	-7	-7	16	-5	-5
	Relevance to healthcare need	8	0	0	-4	-12	-12	4	-12	-12
	Acceptable health care	4	5	5	-4	-3	-3	0	2	2
Impacts	Transport	0	0	0	-2	-2	-2	-2	-2	-2

		Total POSITIVE integrated health and health inequality impact score			Total NEGATIVE integrated health and health inequality impact score			TOTAL INTEGRATED IMPACT SCORE		
	Health and Health care outcomes	Option 1	Option 2	Option 2	Option 1	Option 2	Option 3	Option1	Option 2	Option 3
relating to environmental determinants of health	Natural and built environment	0	0	0	0	0	0	0	0	0
	Pollution	0	0	0	-2	-2	0	-2	-2	0
	Housing	0	0	0	0	0	0	0	0	0
Impacts relating to Economic determinants of health	Education, skills and learning	2	0	0	-2	0	0	0	0	0
	Employment	2	0	0	-2	0	0	0	0	0
	Business development	2	2	2	-2	-2	-2	0	0	0
	Financial inclusion	0	0	0	0	0	0	0	0	0
TOTAL	ALL	252	132	132	-67	-145	-143	185	-13	-11

Appendix 1: The scoring system used for the Equality Impact Assessment²⁴

Impact decision = Score A x Score B

Level of available evidence scoring system (A)

Level of available evidence	Score A
Existing data/research	3
Anecdotal / awareness data only	2
No evidence or suggestion	1

Potential Impact scoring system (B)

Potential Scale of Impact	Definitions	Score B
High negative	Evidence indicates: <ul style="list-style-type: none"> the organisation will/may not meet its statutory requirements under equality and human rights legislation there is/may be disproportionate and/or unjustifiable adverse impact on staff, service users and/or the community. 	-3
Medium negative	Evidence indicates: <ul style="list-style-type: none"> the proposal may adversely impact on some elements of the equality legislative requirements, but the impact will not affect compliance there is potential for some adverse impact which may affect groups differently. 	-2
Low negative	Evidence indicates: <ul style="list-style-type: none"> there is little or no relevance regarding the equality legislative requirements there may be some differential impact, but this does not have disproportionate or inequitable outcome and can be reasonably justified 	-1
No impact		0
Low positive	Evidence indicates: <ul style="list-style-type: none"> there is little or no relevance regarding the equality legislative requirements there is a positive and/or proportionate impact on staff, service users and/or the community 	+1

²⁴ NHS Centre for Equality and Human Rights. A toolkit for carrying out Equality impact assessment.

Medium positive	Evidence indicates: the proposal supports the organisation in meeting its statutory duties under equality and human rights legislation there is a positive and/or proportionate impact on staff, service users and/or the community	+2
High positive	Evidence indicates: the proposal supports the organisation in meeting its statutory duties under equality and human rights legislation there is a positive and/or proportionate impact on staff, service users and/or the community	+3

Appendix 2: Scoring system used for the Health Impact Assessment

Impact decision = Score A x Score B
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Level of available evidence scoring system (A)

Level of available evidence	Score A
Existing data/research	3
Anecdotal / awareness data only	2
No evidence or suggestion	1

Potential Impact scoring system (B)

Potential Scale of Impact	Definitions	Score B
High negative	Evidence indicates: A high risk to the health of the community, patients or staff	-3
Medium negative	Evidence indicates: A medium risk to the health of the community, patients or staff	-2
Low negative	Evidence indicates: A low risk to the health of the community, patients or staff	-1
No impact		0
Low positive	Evidence indicates: A small benefit to the health of the community, patients or staff	+1
Medium positive	Evidence indicates: A medium benefit to the health of the community, patients or staff	+2
High positive	Evidence indicates: A significantly positive benefit to the health of the community, patients or staff	+3

Appendix 3: Evidence to support the Integrated Impact Assessment.

SECTION 1: Supporting Evidence - Research

Stroke Risk groups and Risk Factors

Incidence - The incidence of stroke varies across the UK – between 115 per 100,000 population to 150 per 100,000 populationⁱ. Approximately 30% of stroke survivors will experience a recurrent stroke or TIA. Most studies state that between 25 and 33% of all strokes are recurrentⁱ.

Gender - Men are at a 25% higher risk of having a stroke and at a younger age than womenⁱ. Because women live longer, there are more incidences of stroke amongst womenⁱ.

Age - Age is the single most important risk factor for strokeⁱ. The risk of suffering a stroke doubles every decade after the age of 55 yearsⁱⁱ. 74% of strokes in the UK occur in people aged 65 years and overⁱ.

Ethnicity - Black people are twice as likely to have a stroke and at a younger age than white people. This is partly due to a high prevalence of high blood pressure, diabetes and sickle cell diseaseⁱ.

South Asian people have strokes at a significantly younger age than white people and are more likely to have high blood pressure, high cholesterol and diabetesⁱ.

Bangladeshi and Pakistani men are more likely to smoke than the rest of the UK populationⁱ.

Social Deprivation - In the UK, people from the most economically deprived areas are around twice as likely to have a stroke than those from the least deprived areasⁱ.

People from the most economically deprived areas of the UK are three times more likely to die from a stroke than those from the least deprivedⁱ.

Maternity and pregnancy - Pregnancy can raise stroke risk; gestational diabetes, high blood pressure and increased bleeding after birth are all factors that can make expectant mothers more susceptible to stroke. Stroke affects around 34 in every 100,000 pregnancies. Among women aged 25-34, pregnant or postpartum women are 1.6 times more likely to have a stroke event than non-pregnant women of the same age. However, among women aged 35-44, stroke incidence among pregnant or postpartum women is comparable to that of non-pregnant women.ⁱⁱⁱ

High blood pressure - High blood pressure is a contributing factor to 54% of

strokes in Englandⁱ.

Diabetes - Diabetes almost doubles your risk of stroke and contributes to 20% of all strokes in Englandⁱ.

Atrial fibrillation (AF) - AF increases the risk of stroke five fold and is a contributing factor in 20% of strokes in Englandⁱ.

The incidence of AF increases with age ⁱ. Men are at greater risk of developing AFⁱ.

AF related strokes in women are more devastating than AF related strokes in menⁱ.

High cholesterol - Reducing cholesterol levels by just 1 mmol/l reduces the risk of stroke by more than 21% ⁱ.

Sickle cell disease - This predominantly affects people of African, African-Caribbean, Asian and Mediterranean heritageⁱ. 24% of people with sickle cell disease will have a stroke by the age of 45. Stroke occurs in 7-13% of children with sickle cell diseaseⁱ.

Smoking - Regular consumption of large amounts of alcohol greatly increases your risk of ischaemic stroke. Smoking doubles the risk of death from strokeⁱ.

Obesity - Being overweight increase risk of ischaemic stroke by 22% and being obese increases the risk by 64%ⁱ.

Exercise - Studies show that regular exercise is as important to stroke prevention as medicationⁱ.

Diet - Studies have found a clear dose related association between fruit and vegetable consumption and stroke risk meaning that the more you eat the more you lower your riskⁱ.

Stroke Care and Outcomes

Financial impact on stroke survivors and their families - 63% living in fuel poverty ⁱ.

Emotional Wellbeing - A third of stroke survivors experience post- stroke depression^{iv}. 55% of stroke survivors are unable to care for their family in the same way as before^{iv}

Carers and emotional wellbeing - 1 in 5 of dependent stroke survivors in the

UK are cared for by family and friends^v.

A survey conducted by the Stroke Association in 2013 discovered two thirds of carers experienced difficulties in their relationship with the stroke survivor. Of these 1 in 10 had broken up with their partner, or considered doing soⁱ.

64% of carers said the emotional impact of stroke is the hardest thing to cope with; up to 69% of carers experience stress; 79% experience anxiety; 84% experience frustration and over 60% experience anger.^{iv}

Mortality - Stroke is the fourth single leading cause of mortality in the UKⁱ.

Specialist wards - Stroke patients who are cared for on a stroke ward are more likely to be alive, independent and living at home after one year than if they are cared for on other wards^{vi}.

Thrombolysis - Thrombolysis is a treatment that can break down a clot that is blocking the blood supply to the brain. It is not suitable for everyone, but it should be offered to anyone for whom the treatment is appropriate. The best outcomes (in terms of persisting disability after stroke) are achieved when the time from onset of stroke to treatment is as short as possible. Thrombolysis treatment can only be given if patients arrive at hospital within four and a half hours of the onset of their stroke.

Patients treated quickly with thrombolysis have better outcomes^{vii}.

Around 15% of stroke emergencies in England are eligible for thrombolysis treatment on admission to hospital^v. Current evidence indicates that thrombolysis provision varies over time – patients arriving overnight and at a weekend are less likely to be treated quickly than patients arriving during working hours^{viii}.

CT Brain scanning - A brain scan is essential to make the diagnosis of stroke and to identify the cause. There are two main causes of stroke, the majority (8 out of 9) are caused by a blood clot blocking the blood supply to the brain but a minority, (1 in 9) are caused by a bleed in the brain. Bleeds and clots are treated very differently and so the sooner a brain scan is done, the sooner the right treatment can commence. Current guidelines recommend scanning within one hour of arrival in hospital.

Stroke teams – national guidance recommends that acute stroke patients are cared for in units with an annual minimum throughput of 600 patients per year

Assessments by specialist stroke teams The best way to ensure acute stroke treatments are given in a timely way is for patients to be seen by the specialist stroke teams as quickly as possible.

Around 40% of people with acute stroke cannot swallow safely and need a detailed assessment by a skilled speech and language therapist to ensure adequate hydration and nourishment. Recent research indicates that the longer it takes for a swallow assessment, the higher the risk is of developing

pneumonia(viii,^{ix}).

Early assessment and provision of specialist stroke therapy are known to reduce the length of hospital stay and promote recovery. Specialist assessment pre discharge can reduce the risk of key complications such as malnutrition, depression and falls, whilst promoting rehabilitation and independence

Disability - Over half of all stroke survivors are left with a disability ^x.

Social Care - 48% of stroke survivors and their carers reported problems caused by either poor or non-existent co working between health and social care provider ⁱ.

SECTION2: Equality Data

Stroke

Table 7: Numbers of people affected by stroke (Source PHE CVD profiles - Stroke April 2016)

	South Tyneside	Sunderland
Total number of people with a stroke diagnosis in 2014/15	3,450	6,117
Number of admissions recorded on the Sentinel Stroke National Audit Programme during 2014/15	277	521

Gender

Table 8: Population gender profile (Source ONS Census Data 2011 KS101EW)

	S Tyneside		Sunderland	
	Count	%	Count	%
Total	148127	100	275506	100
Males	71560	48.3	133953	48.6
Females	76567	51.7	141553	51.4

Age

Table 9: Population age profile (Source ONS Census Data 2011 KS102EW)

	South Tyneside		Sunderland	
	Count	%	Count	%
All Usual Residents	148127		275506	
Age 0 to 4	8182	5.5	15378	5.6
Age 5 to 7	4619	3.1	8599	3.1
Age 8 to 9	2932	2	5534	2
Age 10 to 14	8233	5.6	15355	5.6
Age 15	1961	1.3	3326	1.2
Age 16 to 17	3735	2.5	6753	2.5
Age 18 to 19	3797	2.6	7708	2.8
Age 20 to 24	9447	6.4	19709	7.2

Age 25 to 29	8901	6	16945	6.2
Age 30 to 44	27436	18.5	52854	19.2
Age 45 to 59	32394	21.9	58541	21.2
Age 60 to 64	9637	6.5	18011	6.5
Age 65 to 74	13634	9.2	25031	9.1
Age 75 to 84	9632	6.5	16600	6
Age 85 to 89	2503	1.7	3576	1.3
Age 90 and Over	1084	0.7	1586	0.6
Population aged 65 and over	26583	18	46793	17

Ethnic Group

Table 10: Ethnic groups (Source ONS Census Data 2011 KS201EW)

Ethnic Group	South Tyneside		Sunderland	
	Count	%	Count	%
All Usual Residents	148127	100	275506	100
White; English/Welsh/Scottish/Northern Irish/British	140821	95.1	261209	94.8
White; Irish	305	0.2	608	0.2
White; Gypsy or Irish Traveller	9	0	70	0
White; Other White	964	0.7	2395	0.9
Mixed/Multiple Ethnic Groups; White and Black Caribbean	324	0.2	539	0.2
Mixed/Multiple Ethnic Groups; White and Black African	229	0.2	239	0.1
Mixed/Multiple Ethnic Groups; White and Asian	440	0.3	608	0.2
Mixed/Multiple Ethnic Groups; Other Mixed	332	0.2	392	0.1
Asian/Asian British; Indian	643	0.4	1736	0.6
Asian/Asian British; Pakistani	434	0.3	669	0.2
Asian/Asian British; Bangladeshi	1534	1	2075	0.8
Asian/Asian British; Chinese	235	0.2	1536	0.6
Asian/Asian British; Other Asian	465	0.3	1320	0.5

Black/African/Caribbean/Black British; African	316	0.2	1062	0.4
Black/African/Caribbean/Black British; Caribbean	61	0	111	0
Black/African/Caribbean/Black British; Other Black	43	0	100	0
Other Ethnic Group; Arab	566	0.4	292	0.1
Other Ethnic Group; Any Other Ethnic Group	406	0.3	545	0.2

Religion

Table 11: Religion profile (Source ONS census data 2011: KS209EW)

	S Tye		Sunderland	
	Count	%	Count	%
All Usual Residents	148127	100	275506	100
Christian	104090	70.3	193642	70.3
Buddhist	223	0.2	550	0.2
Hindu	254	0.2	607	0.2
Jewish	57	0	76	0
Muslim	2854	1.9	3650	1.3
Sikh	424	0.3	814	0.3
Other Religion	362	0.2	511	0.2
No Religion	31247	21.1	60358	21.9
Religion Not Stated	8616	5.8	15298	5.6

Marital status

Table 12: Marital and Civil partnership profile (Source ONS census data 2011: KS103EW)

	S Tyneside		Sunderland	
	Count	%	Count	%
All Usual Residents Aged 16 and Over	122200	100	227314	100
Single (Never Married or Never Registered a Same-Sex Civil Partnership)	41841	34.2	80195	35.3
Married	53528	43.8	102531	45.1
In a Registered Same-Sex Civil Partnership	163	0.1	313	0.1
Separated (but Still Legally	3460	2.8	5530	2.4

Married or Still Legally in a Same-Sex Civil Partnership)				
Divorced or Formerly in a Same-Sex Civil Partnership which is Now Legally Dissolved	12546	10.3	20823	9.2
Widowed or Surviving Partner from a Same-Sex Civil Partnership	10662	8.7	17922	7.9

Disability

Table 13: Disability profile (Source ONS Census Data 2011: QS303EW)

	S Tyneside		Sunderland	
	Count	%	Count	%
All Usual Residents	148127	100	275506	100
Day-to-Day Activities Limited a Lot	18166	12	34206	12
Day-to-Day Activities Limited a Little	16315	11	30346	11
Day-to-Day Activities Not Limited	113646	77	210954	77

Pregnancy and Maternity

Table 14: Total Number of Live births in each area: (source ONS Data 2015)

	Total number of live births (2015)
South Tyneside	1,647
Sunderland	2,889

Socioeconomic Deprivation

Table 15: Socio-economic deprivation of households (source ONS Census data 2011: QS119EW)

	S Tyneside		Sunderland	
	Count	%	Count	%
All Households	67167	100	119758	100
Household is Not Deprived in Any Dimension	24531	37	42790	36

Household is Deprived in 1 Dimension	21705	32	38223	32
Household is Deprived in 2 Dimensions	15947	24	29259	24
Household is Deprived in 3 Dimensions	4679	7	8920	7
Household is Deprived in 4 Dimensions	305	0	566	0

Description : All households in the area at the time of the 2011 Census with four of the selected deprivation dimensions. The dimensions of deprivation are indicators based on the four selected household characteristics - Employment (any member of a household not a full-time student is either unemployed or long-term sick); Education (no person in the household has at least level 2 education, and no person aged 16-18 is a full-time student); Health and disability (any person in the household has general health 'bad or very bad' or has a long term health problem.); and Housing (Household's accommodation is either overcrowded, with an occupancy rating -1 or less, or is in a shared dwelling, or has no central heating).

Compared with benchmark ● Better ● Similar ● Worse ● Lower ● Similar ● Higher ○ Not Compared



Indicator	Period	S Tyneside			Region England		England			
		Recent Trend	Count	Value	Value	Value	Worst/Lowest	Range	Best/Highest	
% of total population aged 65-74	2013	↑	14,709	9.9%	10.0%	9.3%	3.2%		14.0%	
% of total population aged 75-84	2013	↓	9,735	6.6%	6.2%	5.7%	2.1%		8.9%	
% of total population aged 85+	2013	↑	3,778	2.54%	2.23%	2.30%	0.72%		4.01%	
IDAOP (Income Depr. - Older People)	2015	-	-	24.5%	-	16.2%	49.7%		6.3%	
% in long-term unemployment	Aug 2016	↓	1,000	1.07%*	0.67%*	0.37%*	1.36%		0.00%	
Prevalence of dementia	2015/16	↑	1,529	0.98%	0.89%	0.76%	1.35%		0.29%	
Prevalence of mental health diagnoses	2014/15	↑	1,410	0.91%	0.90%	0.88%	1.50%		0.27%	
Prevalence of learning disabilities aged 18+	2013/14	-	744	0.59%	0.62%	0.48%	0.05%		0.72%	
Prevalence of learning disabilities	2014/15	-	865	0.56%	0.58%	0.44%	0.07%		0.78%	
People aged 18-64 registered deaf or hard of hearing per 100,000	2009/10	-	75	79.2	253.4	172.8	0.0		492.4	
People aged 65-74 registered deaf or hard of hearing per 100,000	2009/10	-	35	257	1037	620	0		3,518	
People aged 75+ registered deaf or hard of hearing per 100,000	2009/10	-	55	403	4780	3089	140		12,183	
People aged 18-64 registered blind or partially sighted per 100,000	2013/14	-	240	264.1	240.2	214.1	0.0		451.3	
People aged 65-74 registered blind or partially sighted	2013/14	-	110	748	638	569	0		1,436	
People aged 75+ registered blind or partially sighted	2013/14	-	440	3,256	4057	4255	0		10,403	
Adults with physical disabilities supported throughout the year per 100,000	2013/14	-	615	677	611	462	178		1,601	
Adults with learning disabilities supported throughout the year per 100,000	2013/14	-	535	588.8	531.1	414.0	0.0		800.6	
Adults with mental health problems supported throughout the year per 100,000	2013/14	-	220	242	357	391	0		2,333	
Older people (65+) supported throughout the year per 100,000	2013/14	-	4,180	14,811	12297	9781	4,187		22,713	
People aged 65+ in receipt of Attendance Allowance per 1,000	May 2014	↓	4,660	168.2	164.7	149.9	99.5		221.3	
Receiving DLA Pensionable Age per 1,000	May 2014	→	4,470	137.7	122.9	80.9	16.3		241.9	
Receiving DLA Working Age per 1,000	May 2014	→	5,720	63.4	58.8	45.5	15.3		90.1	

Figure 2: Excerpt from PHE adult social care profiles 2015 - People with care and support needs - S Tyneside

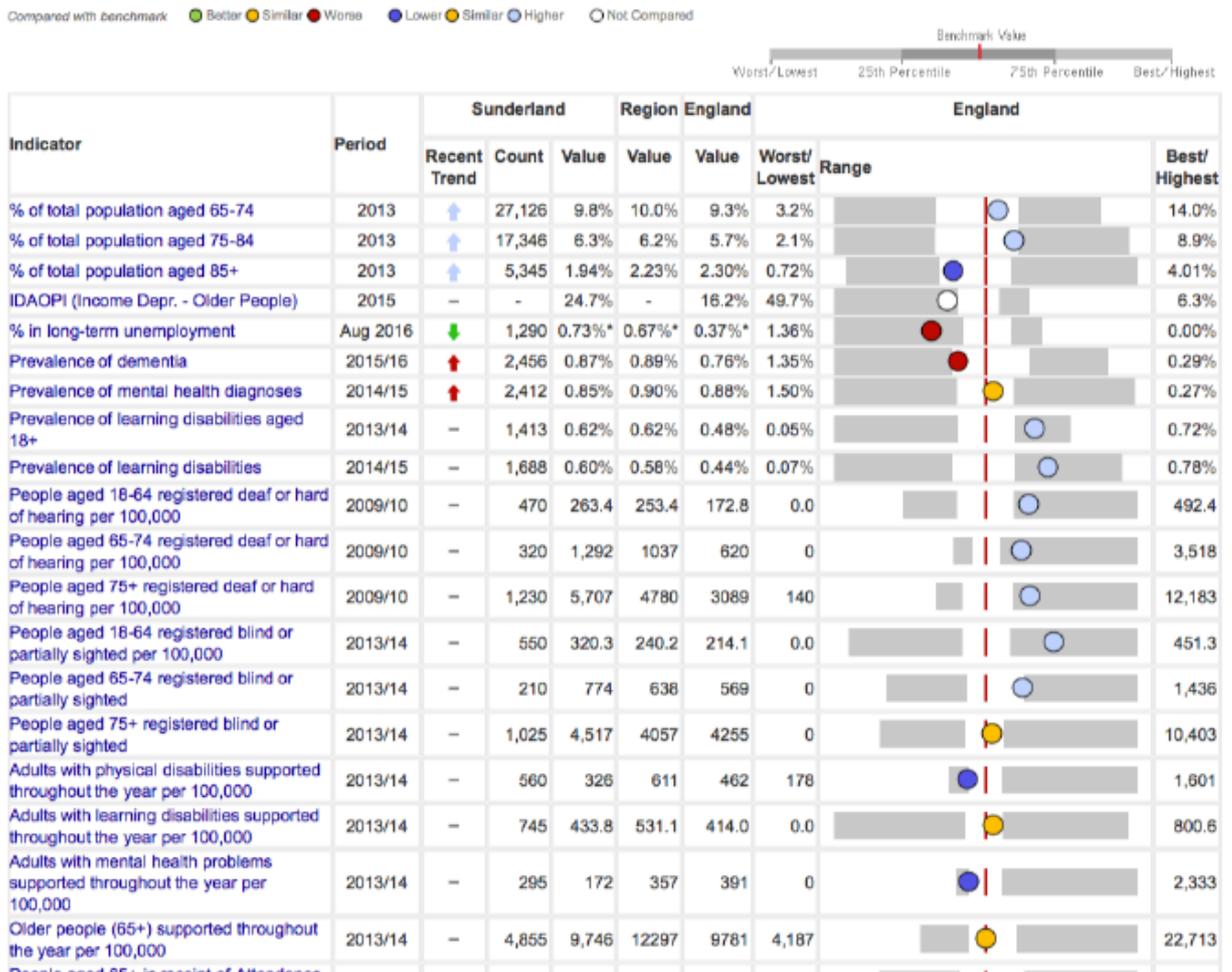


Figure 3: Excerpt from PHE adult social care profiles 2015 – People with care and support needs – Sunderland

SECTION 3: Stroke related health data

Overview^{25, 26}

Table 16: Overview of stroke statistics for South Tyneside, Sunderland and England

	Sunderland	South Tyneside	England
Deprivation score (IMD 2015)	29.7	30.6	21.8
Percentage of population living in most deprived neighbourhoods in England	38	46.1	20
Longterm unemployment	8.4	12.5	4.6
Life expectancy at birth(males)	77.3	77.1	79.5
Life expectancy at birth(females)	80.8	81.6	83.2
Life expectancy gap between most and least deprived areas - females (years)	7.6	8.0	
Life expectancy gap between most and least deprived areas - males (years)	9.9	8.6	
Under 75 mortality rate - Cardiovascular disease	92.8	92.2	75.7
% Population aged 65 and over	18.4%	19.4%	
Number of people diagnosed with a stroke 2014/15	6,117	3,450	
Number of stroke admissions 2014/15	521	277	
Early mortality rates (under 75) due to stroke	15.8 per 100,000	15.6 per 100,000	13.8 per 100,000
Later mortality rates (&5 and older) from stroke	705.4 per 100,000	687.8 per 100,000	616.4 per 100,000

²⁵ Data extracted from Public Health England Health Profiles 2016

²⁶ Data extracted from Public Health England CVD profile – stroke 2016

Risk factors for Stroke

Compared with benchmark Better Similar Worse Lower Similar Higher Not compared

Indicator	Period	England	Cumbria and North East NHS region	NHS Cumbria CCG	NHS Darlington CCG	NHS Durham Dales, Easington And S...	NHS Hartlepool And Stockton-On-Te...	NHS Newcastle And Gateshead CCG	NHS North Durham CCG	NHS North Tyneside CCG	NHS Northumberland CCG	NHS South Tees CCG	NHS South Tyneside CCG	NHS Sunderland CCG
Proportion of people aged 65 and over	2014	17.6	19.4*	22.8	19.1	20.1	17.6	16.2	19.1	19.1	22.5	18.5	19.4	18.4
Percentage of people in the most deprived quintile	2015	20.1*	-	16.1	22.6	37.5	33.4	31.0	15.4	21.3	17.2	46.7	46.1	38.0
Percentage of people from minority ethnic groups	2011	14.6	4.2*	1.5	3.8	1.2	4.4	10.0*	2.5	3.4	1.6	6.7	4.1	4.1
Estimated smoking prevalence (QOF)	2014/15	18.4	19.6	17.7	20.5	21.3	20.1	20.5	16.8	18.6	16.7	22.0	21.7	22.0
Percentage of adults classified as overweight or obese	2012 - 14	64.6	68.5*	67.5	64.9	69.0	71.5	65.1	69.0	67.4	69.5	70.5	71.9	70.8
Percentage of physically active and inactive adults - inactive adults	2014	27.7	31.4*	29.9	28.4	32.1	32.1	29.2	32.1	31.5	35.9	33.2	32.9	35.8
Proportion of the population meeting the recommended '5-a-day' on a 'usual day' (adults)	2014	53.5	54.9*	58.5	52.5	60.1	53.9	54.0	60.1	53.6	59.9	50.2	42.3	53.4
Admission episodes for alcohol-related cardiovascular disease conditions (Broad)	2014/15	1077	-	1336	1240	1305	1326	-	1228	1327	1152	1502	1553	1120
Hypertension: QOF prevalence (all ages)	2014/15	13.8	15.6	15.8	15.1	17.2	15.1	13.9	15.4	15.3	17.2	14.9	16.1	16.6
Model based estimate of the prevalence of hypertension	2011	24.7	26.6*	28.3	26.3	27.6	25.6	24.6*	25.6	26.3	28.2	26.1	27.1	26.5
HYP006: Blood pressure <= 150/90 mmHg in people with hypertension	2014/15	80.4	81.5	81.1	83.3	81.7	81.9	81.5	82.8	80.9	83.1	80.6	81.2	79.6
CVD-PP001: new hypertension patients, age 30-74, with CV risk assessment >=20% treated w. statins (den.incl.exc.)	2014/15	67.7	66.2	60.4	73.8	68.0	73.3	72.2	64.5	63.6	63.8	78.5	59.5	61.6
BP002: Patients, aged 45+, who have a record of blood pressure (last 5yrs)	2014/15	90.6	91.2	90.6	92.0	92.7	91.3	91.0	91.7	90.3	90.6	91.6	91.3	91.4
SMOK002: status recorded in last 12 mths (certain conditions), den.incl.exc.	2014/15	93.2	93.7	92.3	95.4	95.5	95.1	93.4	95.2	93.5	94.1	94.9	93.7	90.1
SMOK004: record of offer of support and treatment (15+, last 24 mnths), den. incl. exc.	2014/15	85.8	85.9	86.8	89.5	89.0	88.7	85.5	85.8	83.7	89.0	84.9	82.6	80.1

Figure 4: Excerpt from PHE Public Health Profiles for Cardiovascular Disease Risk Factors 2016 featuring NHS S Tyneside CCG and NHS Sunderland CCG populations.

Compared with benchmark Better Similar Worse Lower Similar Higher Not compared

Indicator	Period	England	Cumbria and North East NHS region	NHS Cumbria CCG	NHS Darlington CCG	NHS Durham Dales, Easington And S...	NHS Hartlepool And Stockton-On-Te...	NHS Newcastle And Gateshead CCG	NHS North Durham CCG	NHS North Tyneside CCG	NHS Northumberland CCG	NHS South Tees CCG	NHS South Tyneside CCG	NHS Sunderland CCG
Stroke: QOF prevalence (all ages)	2014/15	1.7	2.2	2.4	2.1	2.4	2.0	2.0	2.2	2.5	2.4	2.1	2.2	2.2
Atrial fibrillation: QOF prevalence	2014/15	1.6	1.8	2.1	1.8	1.9	1.9	1.5	1.7	1.8	2.1	1.7	1.9	1.8
Estimated prevalence of Atrial Fibrillation	2013/14	2.4	2.6*	3.0	2.6	2.7	2.4	2.2*	2.5	2.7	3.0	2.5	2.7	2.5
STIA003: Last BP reading is <=150/90 (den. incl. exc.)	2014/15	84.3	84.9	84.0	87.1	85.3	85.2	84.7	86.5	84.1	86.2	82.8	84.5	84.9
STIA007: Record that an anti-platelet agent or an anti-coagulant is taken (den. incl. exc.)	2014/15	91.7	92.5	90.9	93.2	93.9	92.3	93.3	92.3	93.2	92.3	92.9	93.5	91.5
AF005: treated w anti-coag./platelet therapy (if CHADS2 =1) (den.incl.exc.) - retired	2014/15	92.2	92.7	91.9	96.0	95.8	94.5	92.7	92.9	90.9	91.1	93.2	88.0	93.6
Stroke all age admission trends	2014/15	171.9	-	176.7	180.3	214.6	189.8	170.4	185.5	226.7	184.1	185.5	146.3	176.3
stroke admissions (sentinel stroke national audit programme)	2013/14	75861	0*	944	163	540	438	720	436	457	662	523	277	521
The proportion of all stroke admissions with AF who had previously been prescribed anticoagulation	2014/15	44.4	44.6*	43.2	43.3	41.5	44.6	49.0	52.6	47.8	38.5	44.0	55.3	38.5
Stroke patients who are assessed at 6 months	2014/15	24.5	-	47.2	0.0	18.4	69.2	73.7	1.7	39.8	66.4	95.0	82.7	34.3
Stroke mortality rates, under 75 years (age standardised)	2012 - 14	13.8	-	14.4	15.8	19.0	15.8	19.2	15.9	14.9	14.3	17.8	15.6	15.8
Stroke mortality rates, over 75 years (age standardised)	2012 - 14	616.4	-	674.6	649.5	651.8	671.9	625.9	723.0	622.4	668.6	733.4	687.8	705.4

Figure 5: Excerpt from PHE CVD Profiles 2016 - Stroke - featuring NHS S Tyneside CCG and NHS Sunderland populations

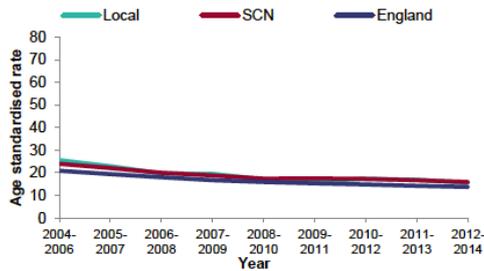
Stroke Care and Outcomes

Deaths from stroke, 2004 to 2014 (rate per 100,000 people)

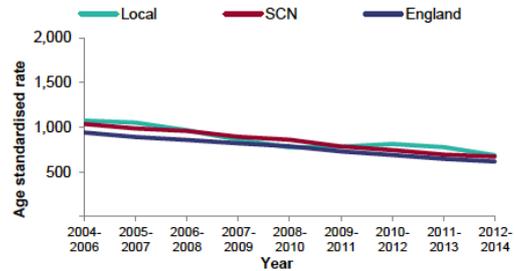
The early mortality rate due to stroke in NHS South Tyneside CCG was 15.6 per 100,000 in the three-year period 2012-2014. The early mortality rate is similar to England (13.8).

The later mortality rate due to stroke in NHS South Tyneside CCG is 687.8 per 100,000 in the three-year period 2012-2014. This is similar to the later mortality rate for England (616.4).

Early mortality under 75, 2004-2014 (rate per 100,000 people)



Later mortality 75 and over, 2004-2014 (rate per 100,000 people)



Source: Office for National Statistics-Mortality statistics, 2004 to 2014

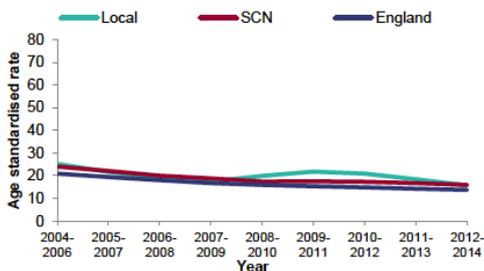
Figure 6: Excerpt from PHE CVD Stroke profiles 2016 (South Tyneside) - Deaths from Stroke

Deaths from stroke, 2004 to 2014 (rate per 100,000 people)

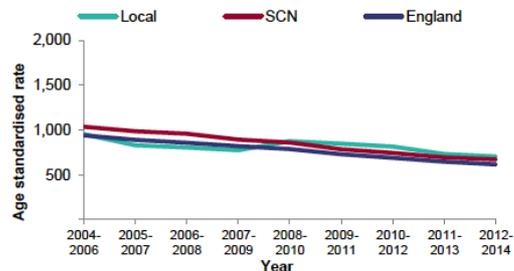
The early mortality rate due to stroke in NHS Sunderland CCG was 15.8 per 100,000 in the three-year period 2012-2014. The early mortality rate is similar to England (13.8).

The later mortality rate due to stroke in NHS Sunderland CCG is 705.4 per 100,000 in the three-year period 2012-2014. This is significantly higher than the later mortality rate for England (616.4).

Early mortality under 75, 2004-2014 (rate per 100,000 people)



Later mortality 75 and over, 2004-2014 (rate per 100,000 people)



Source: Office for National Statistics-Mortality statistics, 2004 to 2014

Figure 7: Excerpt from PHE CVD Stroke profiles 2016 (Sunderland) - Deaths from Stroke

Chapter 12: Stroke risk factors, secondary prevention
 disease (CHD), diabetes, kidney disease and stroke.
 This profile compares the CCG with data for England, a
 group of similar CCGs and the Northern England
 strategic clinical network (SCN).

Key facts	Local	Comparator CCGs	SCN	England
Stroke or transient ischaemic attacks prevalence (per cent)	2.2	2.1	2.2	1.7
Atrial fibrillation prevalence (per cent)	1.8	1.8	1.9	1.6
Estimated atrial fibrillation prevalence (per cent)	2.5	2.5	2.7	2.4
Stroke admissions with history of atrial fibrillation prescribed anticoagulation prior to stroke (per cent)	38.5	-	44.5	44.4
Applicable patients who are assessed at six months following a stroke (per cent)	34.3	-	48.4	24.5
Stroke early mortality (rate per 100,000)	15.8	-	15.9	13.8
Stroke later mortality (rate per 100,000)	705.4	-	670.9	616.4

In 2014/15 there were 6,117 people who had been diagnosed with a stroke in NHS Sunderland CCG. In the same period there were 521 admissions recorded on the Sentinel Stroke National Audit Programme.

Atrial fibrillation is a known risk factor for stroke. The diagnosed prevalence in this CCG is 1.8% and the estimated prevalence is 2.5%. There could be an additional 2,000 people with undiagnosed atrial fibrillation in the CCG.

In this CCG, 38.5% of stroke patients admitted who had a history of atrial fibrillation were prescribed anticoagulation prior to their stroke. This is lower than the England rate (44.4%).

Early mortality rates (under 75 years of age) for stroke in NHS Sunderland CCG were 15.8 per 100,000 people. This was similar to the England rate (13.8).

Later mortality (75 years and over) rates from stroke in NHS Sunderland CCG were 705.4 per 100,000 people. This was significantly higher than the England rate (616.4).

Figure 8: Excerpt from 2016 PHE CVD profiles - Stroke – Sunderland

group (CCG) in England. Each profile is made up of five chapters which look at risk factors, coronary heart disease (CHD), diabetes, kidney disease and stroke. This profile compares the CCG with data for England, a group of similar CCGs and the Northern England strategic clinical network (SCN).

Key facts	Local	Comparator CCGs	SCN	England
Stroke or transient ischaemic attacks prevalence (per cent)	2.2	2.1	2.2	1.7
Atrial fibrillation prevalence (per cent)	1.9	1.9	1.9	1.6
Estimated atrial fibrillation prevalence (per cent)	2.7	2.6	2.7	2.4
Stroke admissions with history of atrial fibrillation prescribed anticoagulation prior to stroke (per cent)	55.3	-	44.5	44.4
Applicable patients who are assessed at six months following a stroke (per cent)	82.7	-	48.4	24.5
Stroke early mortality (rate per 100,000)	15.6	-	15.9	13.8
Stroke later mortality (rate per 100,000)	687.8	-	670.9	616.4

represented in areas in England.

In 2014/15 there were 3,450 people who had been diagnosed with a stroke in NHS South Tyneside CCG. In the same period there were 277 admissions recorded on the Sentinel Stroke National Audit Programme.

Atrial fibrillation is a known risk factor for stroke. The diagnosed prevalence in this CCG is 1.9% and the estimated prevalence is 2.7%. There could be an additional 1,300 people with undiagnosed atrial fibrillation in the CCG.

In this CCG, 55.3% of stroke patients admitted who had a history of atrial fibrillation were prescribed anticoagulation prior to their stroke. This is higher than the England rate (44.4%).

Early mortality rates (under 75 years of age) for stroke in NHS South Tyneside CCG were 15.6 per 100,000 people. This was similar to the England rate (13.8).

Later mortality (75 years and over) rates from stroke in NHS South Tyneside CCG were 687.8 per 100,000 people. This was similar to the England rate (616.4).

Figure 9 Excerpt from 2016 PHE CVD profiles – Stroke – South Tyneside

Outcome data at discharge from inpatient care for patients with prior AF who are not on anticoagulation (per cent)

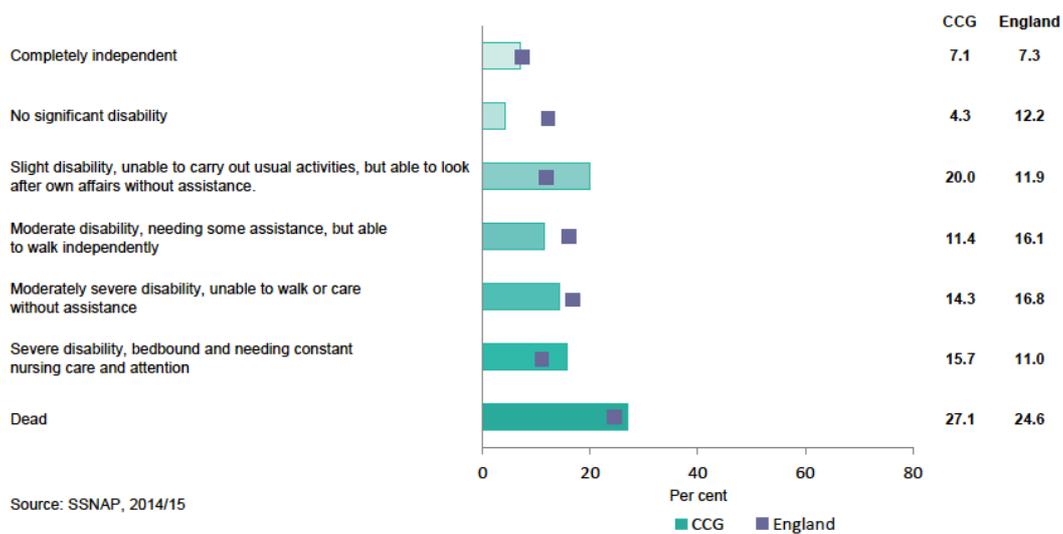
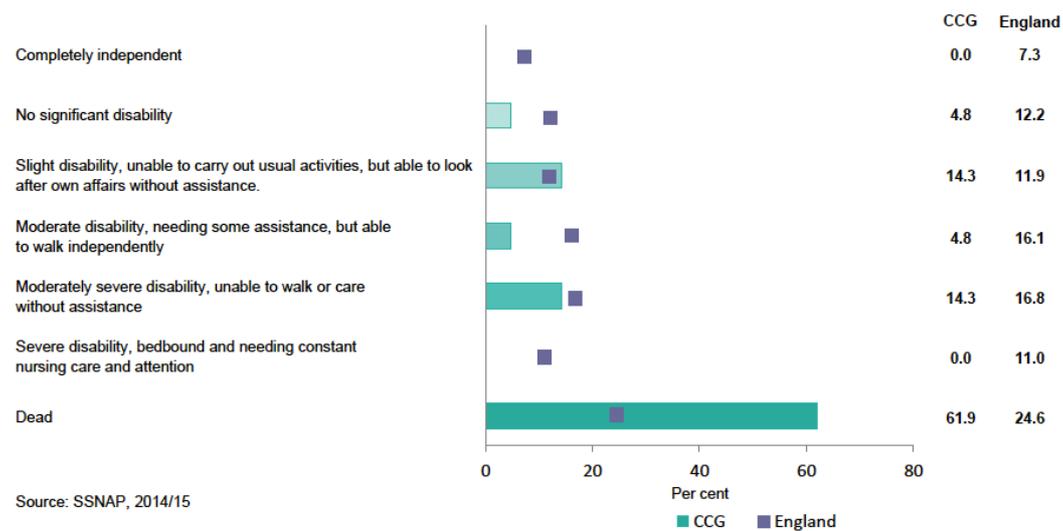


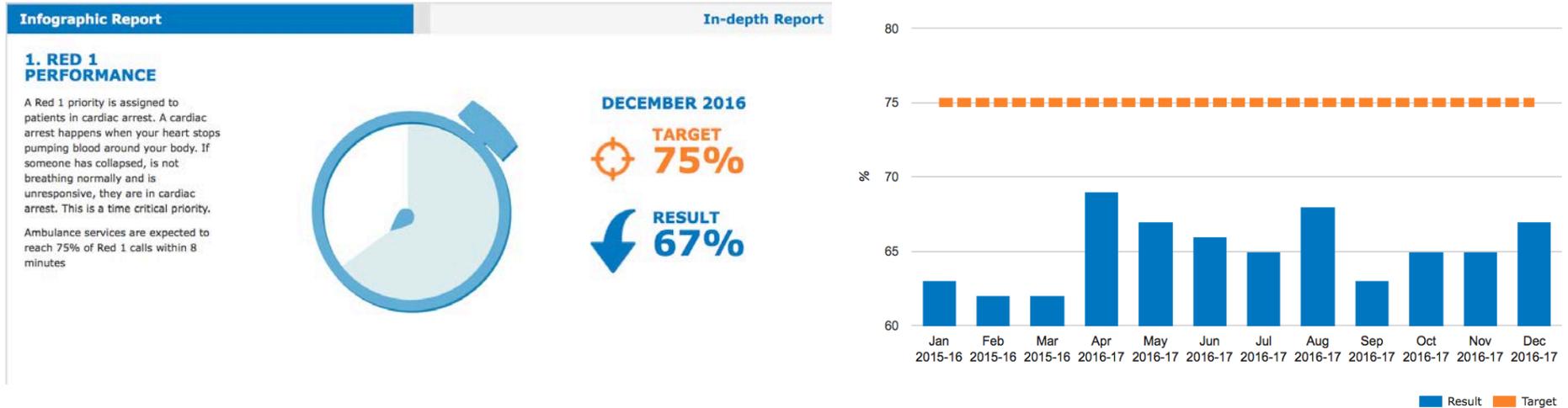
Figure 10: Excerpt from PHE CVD - Stroke profiles 2016 – Sunderland

Outcome data at discharge from inpatient care for patients with prior AF who are not on anticoagulation (per cent)



North East Ambulance Service Performance Indicators

Figure 11: Achievement of RED 1 Performance Target. (Source: NHS Ambulance Quality Indicators, North East Ambulance Service, Association of Ambulance Chief Executives accessed February 2017)



2. TIME CRITICAL RED 1 RESPONSE

Because Red 1 calls are a time critical priority, this indicator shows the time in which the ambulance arrived in 95% of all cases against the English national average.

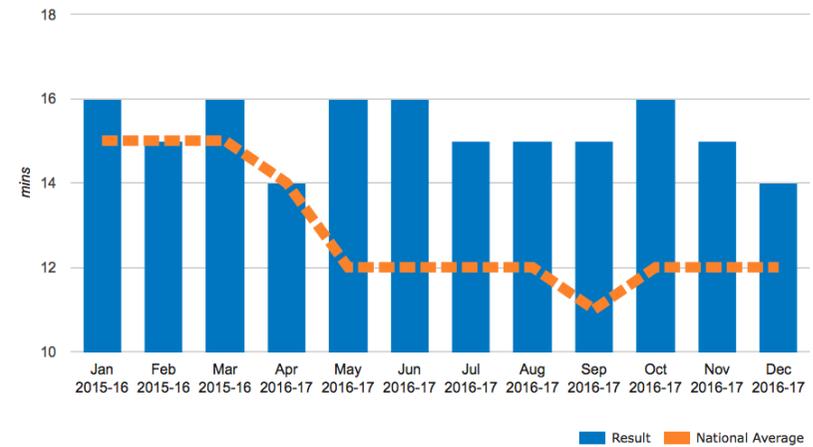


Figure 12: Achievement of RED 1 Response Time target (Source: NHS Ambulance Quality Indicators, North East Ambulance Service, Association of Ambulance Chief Executives accessed February 2017)

3. RED 2 PERFORMANCE

A Red 2 priority is assigned to other types of potentially life-threatening incidents. These include stroke, difficulty breathing, major loss of blood and heart attack.

A heart attack differs from cardiac arrest because the supply of blood to the heart is suddenly blocked, usually by a blood clot.

These cases are serious but less immediately time critical. Ambulance services are expected to reach 75% of Red 2 calls within 8 minutes.



DECEMBER 2016

TARGET
75%

RESULT
53%

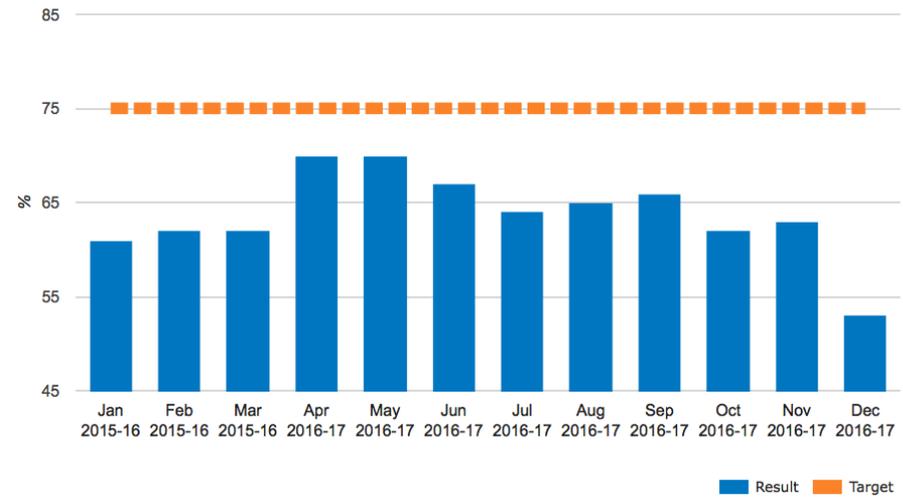


Figure 13: Figure 1: Achievement of RED 2 Performance Target (Source: NHS Ambulance Quality Indicators, North East Ambulance Service, Association of Ambulance Chief Executives accessed February 2017)

4. RED 19 PERFORMANCE

This target relates to how quickly ambulance services get a vehicle to the scene able to transport a patient. Trusts are expected to get a patient-carrying vehicle to Red 1 and Red 2 incidents within 19 minutes in 95% of the time.



DECEMBER 2016
TARGET
95%
RESULT
83%

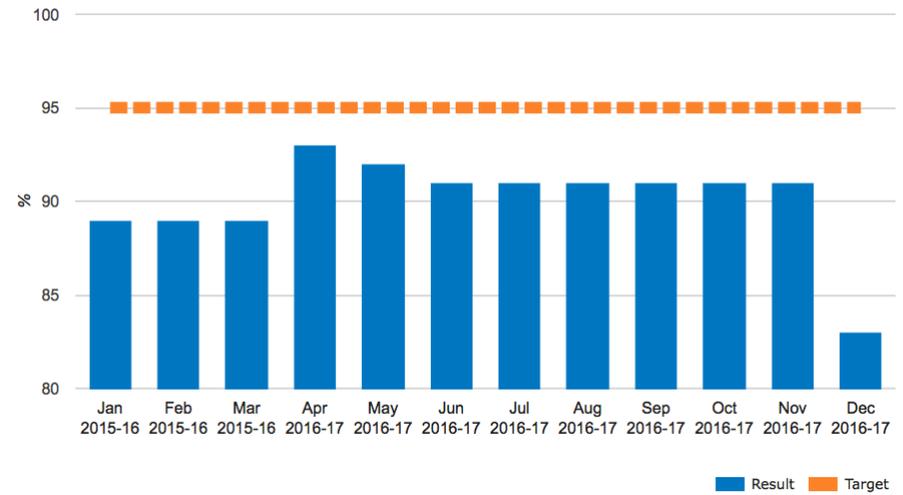


Figure 14: Achievement of RED 19 Performance Target (Source: NHS Ambulance Quality Indicators, North East Ambulance Service, Association of Ambulance Chief Executives accessed February 2017)

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