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Stroke Care in the West Midlands: Early Supported Discharge & Rehabilitation

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Contents

1 Executive Summary

This paper summarises:

1. Current stroke performance of Early Supported Discharge, Inpatient Rehabilitation Beds, Community Rehabilitation Teams, Stroke Outreach Teams and Community Stroke Teams within the West Midlands
2. A summary of the programme of work assessing regional rehabilitation service standards for 7 day stroke rehabilitation and care
3. The recommendations for improvement in community stroke services across the West Midlands.

2 Foreword

Stroke is one of the most significant causes of death and disability in the West Midlands. Our ability to prevent stroke and our ability to treat stroke has never been better. Our challenge is to implement a strategy to deliver prevention, treatment and rehabilitation at scale to the entire population of the West Midlands. Should we succeed in delivering this strategy, we will prevent thousands of strokes in the next decade.

For those unfortunate enough to suffer a stroke, we will provide prompt high quality treatment, including thrombectomy and thrombolysis, coupled to high quality rehabilitation, to reduce disability and maintain independent living.

I am pleased to have witnessed a great collaborative effort between all stakeholders to culminate in this stroke strategy for the west midlands and am highly optimistic that patients and populations will receive high quality stoke care as a consequence.

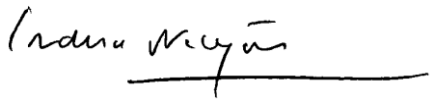
Professor Kiran Patel
Medical Director
NHS England and NHS Improvement (West Midlands)

3 Summary Statement from Dr Indira Natarajan

It was a great experience as Clinical Director for stroke services across the West Midlands to support the fantastic collaborative work undertaken by Early Supported Discharge, Community Stroke, Outreach and rehabilitation teams across the 6 STP areas. The CVD Clinical Network was incredibly delighted to see how all the dedicated stroke teams are committed to delivering high quality care for our patients at such a vulnerable time in their lives.

The purpose of our work is to support the teams to address issues to meet the high standards of care in the rehabilitation areas of stroke pathway and to deliver these 7 days a week. We have had the benefit of seeing different models of care being provided in the ESD and rehabilitation teams, whether they be inpatient or community based, and they have highlighted and shared their strengths and weakness. We look forward to sharing this learning with our stroke colleagues across and beyond the region.

We are working closely with each of the organisations trust executives to aid and support the stroke teams with the delivery of high standards of stroke care, and look forward to building strong relationships with the teams into the future. A real learning point has been that a regional approach to solving some difficult issues gives us strength to stand together and address them with a unified collective approach.



Dr Indira Natarajan
Clinical Director for Stroke
West Midlands CVD Clinical Network
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4 Background

Stroke is the fourth most common cause of death in the UK and a leading cause of disability. Whilst the reduced prevalence of smoking and high blood pressure has seen the incidence of strokes decline, in excess of 100,000 people in the UK suffer a stroke each year (State of the nation 2018). The West Midlands footprint (Staffordshire, Shropshire, Coventry, Warwickshire, Birmingham, Black Country, Herefordshire and Worcestershire) has a higher than national prevalence of stroke at 1.8% against the national prevalence of 1.7%; in 2017/2018 there were approximately 85,000 strokes nationally with the West Midlands seeing around 8,100 strokes (SSNAP 2017-2018). The number of stroke patients discharged to an Early Supported Discharge Team nationally was 72,788 with 6,840 of those patients residing in the West Midlands (SSNAP 2017-2018).

Together with the social care costs, the cost of all stroke care in the UK for those aged 45 years and over has been estimated at **£26 billion a year**; with overall costs of stroke **rising to £43 billion in 2025 and £75 billion in 2035, an increase of 194% over 20 years** (Stroke Association, 2015 & 2018). Based on average costings it is estimated that the total cost of all stroke care is £77 million In the West Midlands.
Moreover, at the start of the last decade the quality of stroke care in England was found to be lagging behind other advanced economies. In recent decades clinical evidence has established that patients treated in specialist acute units have better outcomes. Morbidity and mortality rates could be substantially improved with rapid thrombolysis (the use of “clot busting” drugs), whilst specialist teams and integrated rehabilitation services enable better quality care and faster recovery. The introduction of thrombectomy services will also greatly improve outcomes for patients.

Evidence based models of Early Supported Discharge (ESD) services have resulted in equivalent or better outcomes for mild to moderate stroke patients and their carers’, and a significant reduction in hospital length of stay; principal findings in Fisher *et al* (2016) showed that ESD accelerated the recovery of mild to moderate stroke survivors and those patients obtained a sharper recovery trajectory compared to non-ESD patients (Fisher et al, 2016).

5 Introduction

Stroke patients require specialist multidisciplinary care and rehabilitation. A centralised model of acute stroke care, in which hyper-acute care is provided to all patients with stroke across an entire metropolitan area, can reduce mortality, reduce length of stay, and improve patient experience. The Five year Forward View stated that by 2017, 25% of urgent and emergency services should comply with four priority clinical standards on every day of the week, rising to half by 2018 and complete coverage by 2020. The NHS Long Term Plan states that significant savings are expected following the implementation and further development of higher intensity care models for stroke rehabilitation, and that by 2020, the NHS will begin improved post-hospital stroke rehabilitation models, with full roll-out over the period of the Long Term Plan (NHS Long Term Plan, 2019); NHS England and the Stroke Association have established the National Stroke Programme with the NHS Long Term Plan building on this programme to make further progress for stroke survivors and their families.

In the West Midlands it is evident that improvements are required across the region for stroke rehabilitation and long-term care; regional service standards and the development of higher intensity care models for stroke rehabilitation will improve the outcomes for stroke survivors in the future.

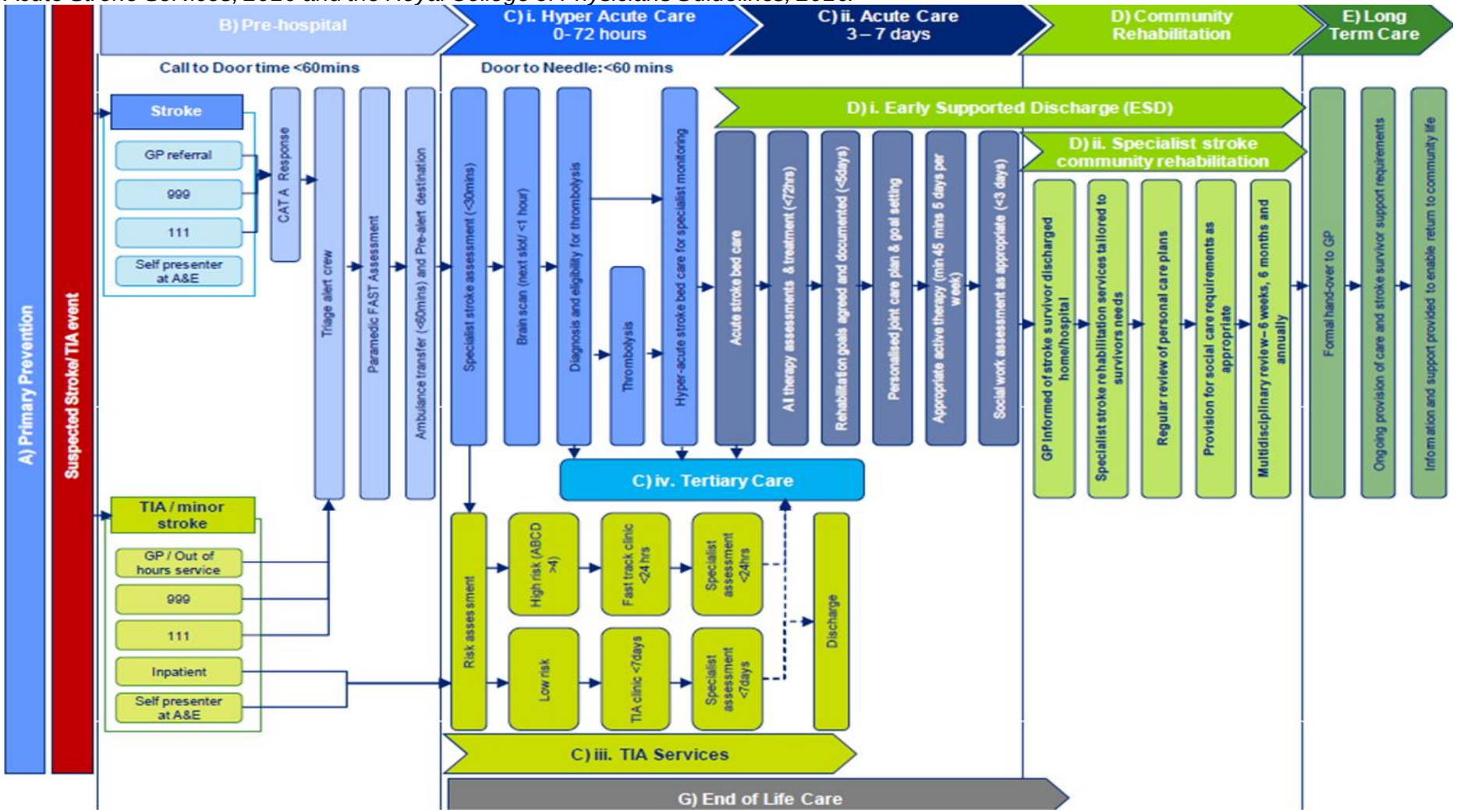
Currently, approximately 38% of West Midland stroke patients are discharged to stroke/neurology specific Early Supported Discharge Teams (SSNAP Annual Report 2017-2018): “Early supported discharge is an intervention for adults after a stroke that allows their care to be transferred from an inpatient environment to a community setting. It enables people to continue their rehabilitation therapy at home, with the same intensity and expertise that they would receive in hospital” (NICE 2016). Community Stroke Teams (CST) provide stroke care and rehabilitation for adults in the community after Early Supported Discharge or immediately after leaving hospital (where no Early Supported Discharge exists).

Following on from the regional recommendation for ESD and community rehabilitation in the report ‘Stroke Care in the West Midlands: Clinical Review for the

delivery of 7 Day Stroke Services' published in September 2018: ***Commitment from commissioners is required to ensure equitable access to ESD and community rehab is achieved across the region*.** The development of robust pathways is a necessity. The West Midlands Cardiovascular (CVD) Clinical Network has established and worked collaboratively with the West Midlands ESD & Rehabilitation Working Group to develop and agree gold standard stroke care in the West Midlands based on the National Stroke Care Pathway (Stroke Services: Guidance for STP's on recommended standards for Acute Stroke Services, 2016 (figure 1)), NICE guidance (2013 and 2016) and RCP guidelines (2016). (Terms of reference for the working group can be found in the appendix (section 17.2).

5.1 Figure 1: National Stroke Care Pathway

The National Stroke Care Pathway diagram taken from the document *Stroke Services: Guidance for STP's on recommended standards for Acute Stroke Services, 2016 and the Royal College of Physicians Guidelines, 2016.*



5.2 Current Performance

The Sentinel Stroke National Audit Programme (SSNAP) is the single source of stroke data in England, Wales and Northern Ireland (table 1). The results in this table should be read in combination with the SSNAP Summary Report which includes named team results for the 44 key indicators comprising of the 10 domains. Full details, including access to this report and SSNAP data are available to download from SSNAP and the Royal College of Physicians (RCP) website: www.strokeaudit.org/results.

National expectations are for, teams to achieve A or B SSNAP grade, such scores are indicative of world-class stroke care and a good or excellent service in many aspects respectively. A SSNAP score of a C or less would suggest that some or several areas of care require improvement (*SSNAP Public Report, 2017*).

West Midlands SSNAP benchmarking data (table 1; page 17) shows data submitted between October 2018 and December 2018, with this being the latest SSNAP summary release at the time of this report.

SSNAP data highlighted first class services in the following non-acute inpatient services:

- 1 team (Moseley Hall Stroke Rehabilitation Unit [Birmingham & Solihull] were rated A in their overall SSNAP level;
- 4 teams (Walsall Inpatient Rehabilitation Team, Staffordshire Rehabilitation Team, Feldon Stroke Rehabilitation Unit) and Worcestershire Stroke Rehabilitation Unit) were rated A in relation to occupational therapy, and one team (Moseley Hall Stroke Rehabilitation Unit [Birmingham & Solihull]) was rated B;
- 3 teams (Staffordshire Rehabilitation Team, Walsall Inpatient Rehabilitation Team and Worcestershire Stroke Rehabilitation Unit) were rated A in relation to physiotherapy and one team (Feldon Stroke Rehabilitation Unit [Coventry & Warwickshire]) were rated B;
- 1 team (Moseley Hall Stroke Rehabilitation Unit [Birmingham & Solihull] were rated A for speech and language therapy.

Therefore, out of the 5 non-acute inpatient rehabilitation units across the region 1 is rated A, 3 are rated B and one is rated C overall in their SSNAP level score. This

highlights the variation in commissioned non-acute inpatient rehabilitation services as there are only 5 units in 6 STP areas.

SSNAP data for non-acute inpatient rehabilitation services also highlighted that improvements are required in 2 teams for speech and language therapy (Staffordshire Rehabilitation Team and Worcestershire Stroke Rehabilitation Unit); this is due staffing issues - With regards to Speech and Language Therapy (SLT), it must be highlighted that there is a known National shortage of Speech and Language Therapists impacting centres across the UK and is not an issue localised to the West Midlands. The shortage of SLT is listed on the National database for skills shortages https://www.gov.uk/guidance/immigration-rules/immigration-rules-appendix-k-shortage-occupation-list.

In the West Midlands, out of the total 12 routinely admitting rehabilitation teams in acute patient services in the West Midlands recorded by SSNAP (excluding Burton on Trent), 2 teams are rated A, 4 teams are rated B, 4 teams are rated C and 2 teams are rated D overall in their SSNAP level score; 5 teams in the region have increased their overall SSNAP score since the July to September 2018 data submission.

For the 3 therapeutic areas (occupational therapy, physiotherapy and speech and language therapy), SSNAP reported a range of scores from A to E (figure 5.2.1 Table A). This highlights the variation in commissioned acute rehabilitation services across the region and how this can impact on long term patient outcomes in areas that are not providing services that match other A rated areas. They are also seen as fragile services nationally.

Out of the 4 non-routinely admitting teams, SSNAP data highlighted that both Good Hope General Hospital and Solihull Hospital requires improvements with speech and language therapy. Occupational therapy and physiotherapy were rated A at Good Hope General Hospital, and rated B and D at Solihull Hospital respectively (Figure 5.2.1 Table B).

SSNAP does not directly report data for clinical psychology and dietetic input in the SSNAP level score which are integral parts of the stroke care pathway.

5.2.1 Table 1: West Midlands SSNAP Data (October 2018 to December 2018)

A: Team-centred results for routinely admitting teams

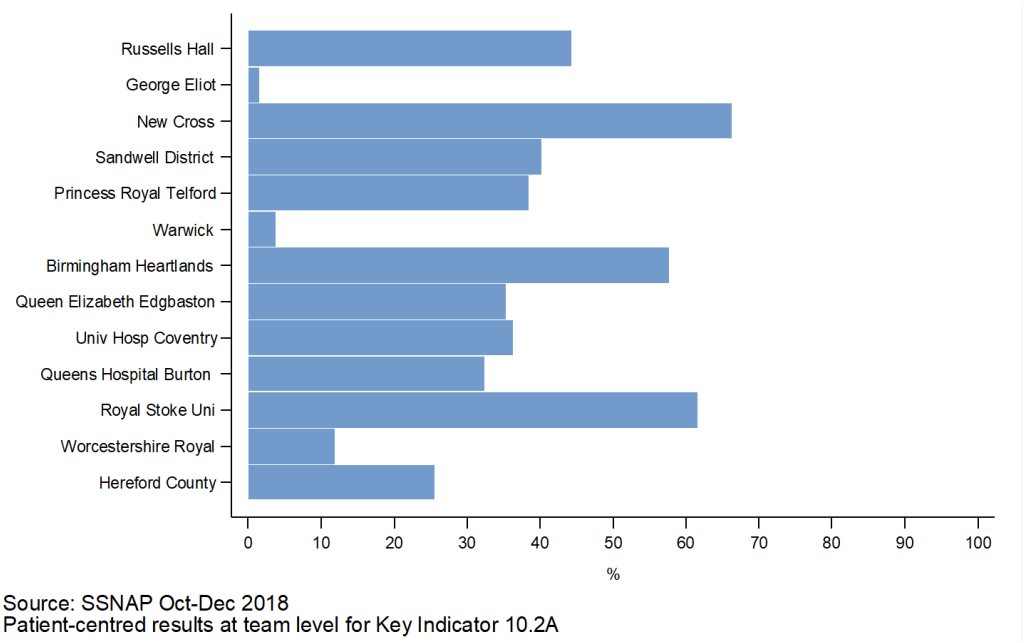
Routinely Admitting Teams	Number of patients		Overall Performance				Team Centred Data										
Team Name	Admit	Disch	SSNAP Level	CA	AC	Combined KI Level	D1 Scan	D2 SU	D3 Throm	D4 Spec Asst	D5 OT	D6 PT	D7 SALT	D8 MDT	D9 Std Disch	D10 Disch Proc	TC KI Level
Russells Hall Hospital	167	176	B↓	A	A↑	B↓	B↓	C↓	D↓↓	A	B	A↑	C↓	B	A↑	A	B↓
George Eliot Hospital	60	64	C	A	C	B	C	E	E	C↓	A	A	C	A	A	C	C↓
New Cross Hospital	201	215	C↑	B↓	B↑	B↑↑	B	C	C↑	B↑↑	A	B	D↓	C	B↑↑	A↑↑	B↑
Sandwell District Hospital	138	148	B↑	A	B	B	A	C	C↓	B↓	C	B↑	C↑↑	B	B	B	B
Princess Royal Hospital Telford	216	231	D↓	A	B	D↓↓	C↓	E↓↓	D↓	D↓	C↓↓	D↓↓	E	D↓	B	A	D↓↓
Warwick Hospital	67	91	C	A	A	C	D	E	NA	E↓	B↓	A	C↑	A↑	A	C↑	C
Birmingham Heartlands Hospital	203	208	B↓	A	A	B↓	B↓	D	B	B↓	A	B	C	B	B	A	B↓
Queen Elizabeth Hospital Edgbaston	174	176	B↑	A↑	A	B↑	B	D	D↓	C	A↑↑	B	C	C↑	B	A	B↑
University Hospital Coventry	214	232	A↑	A	A	A↑	A	C↑	A↑	C	A↑	B	B↑	B	B	A	A↑
Queens Hospital Burton upon Trent	85	86	D	B↑	C	D↓	B↓	D↓	D	D	C↓↓	D↓↓	D↓	B	D	B↑	D↓
Royal Stoke University Hospital	312	390	A	A	A	A	A	C	B	B↓	A	A	D	B↓	B	A	A
Worcestershire Royal Hospital	229	226	D	A	B↑	D	C	E	D	D	A	B↓	C↑	D↑	C	D↓	D
Hereford County Hospital	146	158	C↑	A↑	A	C↑	C	E	E	C	B↑	A↑	C↑	B	B↓	C	C↑

B: Team-centred results for Non-routinely admitting / Non-Acute Inpatient Teams

Non-Routinely Admitting Teams	Number of patients		Overall Performance				Team Centred Data										
Team Name	Admit	Disch	SSNAP Level	CA	AC	Combined KI Level	D1 Scan	D2 SU	D3 Throm	D4 Spec Asst	D5 OT	D6 PT	D7 SALT	D8 MDT	D9 Std Disch	D10 Disch Proc	TC KI Level
Royal Shrewsbury Hospital	TFP	TFP	TFP	NA	TFP	TFP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	TFP
Good Hope General Hospital	TFP	78	C	A	A	C	NA	D↓	NA	NA	A↑	A	E	NA	A↑	A	B
Solihull Hospital	TFP	55	C	A	A	C	NA	B	NA	NA	B↑	D	E	NA	B	A	C
County Hospital	TFP	TFP	TFP	NA	TFP	TFP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	TFP
Non -Acute Inpatient Teams	**Number of patients**		**Overall Performance**				**Team Centred Data**										
Team Name	**Admit**	**Disch**	SSNAP Level	CA	AC	Combined KI Level	D1 Scan	D2 SU	D3 Throm	D4 Spec Asst	D5 OT	D6 PT	D7 SALT	D8 MDT	D9 Std Disch	D10 Disch Proc	TC KI Level
Moseley Hall Stroke Rehabilitation Unit	TFP	36	A	A	B↓	A	NA	A	NA	NA	B↓	C↓	A	NA	A	B↑	A
Staffordshire Rehabilitation Team	TFP	42	B	A	C	A	NA	A	NA	NA	A	A	E	NA	B	A	A
Feldon Stroke Rehabilitation Unit SWFT	TFP	43	B↓	A	B	B↓	NA	A	NA	NA	A	B↓	C↓	NA	B↓	D↓	B↓
Walsall Inpatient Rehab Team	TFP	22	C	A	C	B	NA	A	NA	NA	A	A	C	NA	E	C	B
Worcestershire Stroke Rehabilitation Unit	TFP	57	B	A	D↓	A	NA	A	NA	NA	A	A	E	NA	A↑	A	A

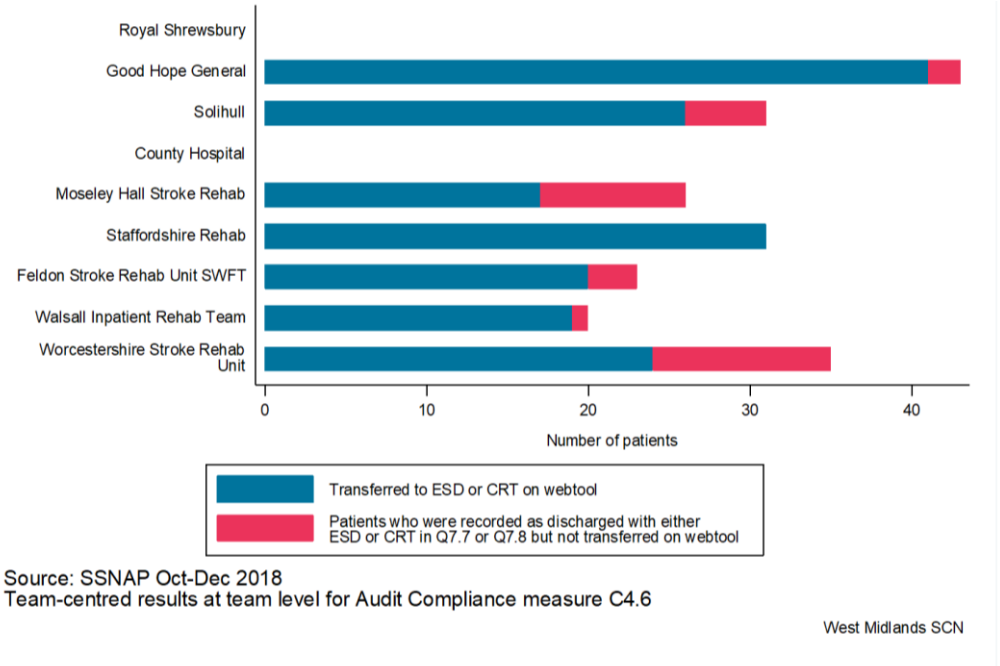
SSNAP data (October 2018 - December 2018; figures 2A, 2B & 2C below) demonstrates the number of patients seen in the West Midlands by an ESD or CST/CRT team in the acute and inpatient rehabilitation settings. The geographical areas that these teams cover can be seen in figures 7 to 13.

5.2.2 Figure 2A: Patients discharged from Acute with a Stroke Skilled ESD Team in the West Midlands



Source: SSNAP Oct-Dec 2018
Patient-centred results at team level for Key Indicator 10.2A

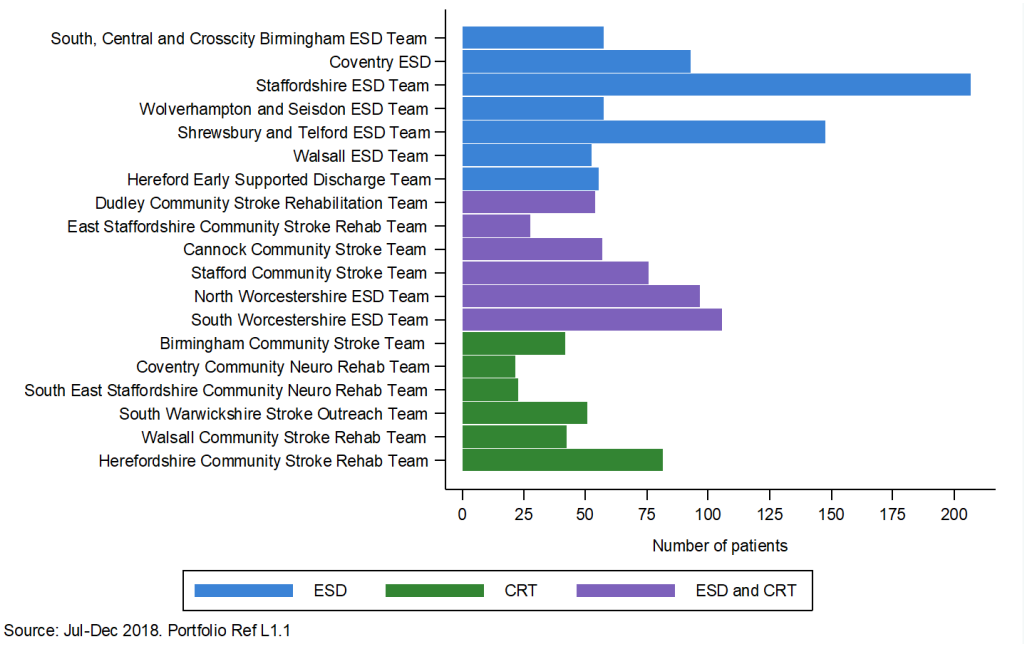
5.2.3 Figure 2B: Patients discharged from Inpatient Rehabilitation with ESD or CRT in the West Midlands



Source: SSNAP Oct-Dec 2018
Team-centred results at team level for Audit Compliance measure C4.6

West Midlands SCN

5.2.4 Figure 2C: The Number of Stroke Patients seen in ESD and CRT in the West Midlands



Source: Jul-Dec 2018. Portfolio Ref L1.1

Figure 2A suggests that teams across the region are discharging a wide range of percentage (%) caseload through Early Supported Discharge (ESD); the figure also highlights that only up to approximately 70% of stroke patients in the West Midlands can access ESD with a skilled ESD team, however it must be noted that not all services across the region have a fully funded ESD team or have an integrated ESD and CRT service (figure 2C). Those non-ESD teams are providing patients with the benefits of ESD with rehabilitation and support; for example, those patients treated in a stroke outreach team such as Warwick, or in a community stroke team such as Worcester cannot be recorded in SSNAP in the ESD domain (figure 2A) but both provide ESD stroke specific therapy to patients after discharge. It is likely that there are other services or parts of services across the region who are providing a community service for patients after stroke but are not able to participate in SSNAP.

SSNAP data (October 2018 - December 2018) demonstrates the compliance of rehabilitation therapy teams (non-routinely admitting teams) in the West Midlands for the three therapeutic areas: occupational therapy, physiotherapy and speech and language therapy as shown in figures 3, 4 and 5.

5.2.5 Figure 3: Compliance to National Target: Occupational Therapy

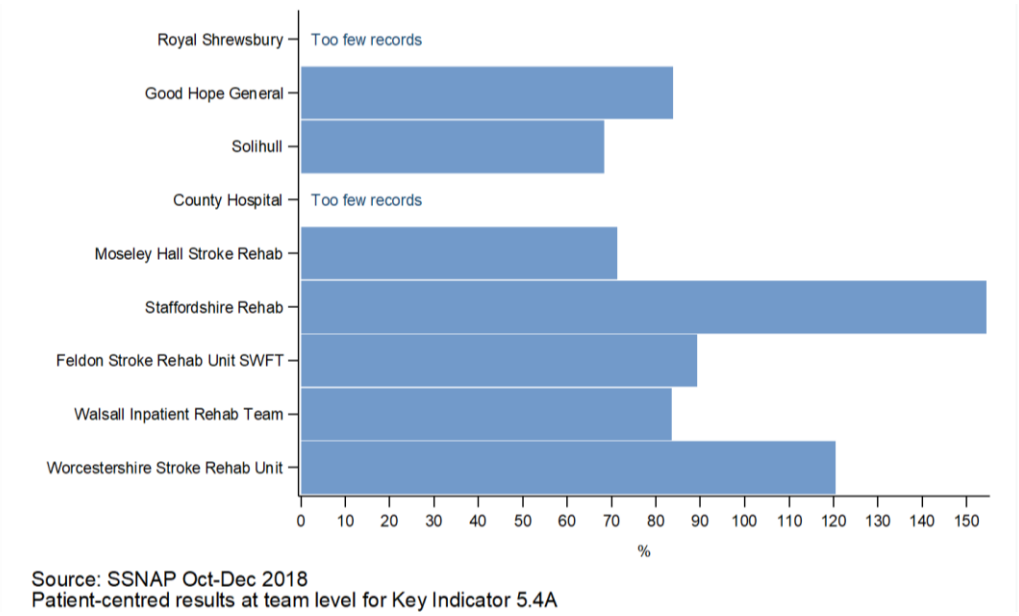


Figure 3 illustrates that the West Midlands is compliant against the national occupational therapy target; *Compliance (%) against the therapy target of an average of 25.7 minutes of occupational therapy across all patients (Target = 45 minutes x (5/7) x 0.8 which is 45 minutes of occupational therapy x 5 out of 7 days per week x 80% of patients)*.

5.2.6 Figure 4: Compliance to National Target: Physiotherapy

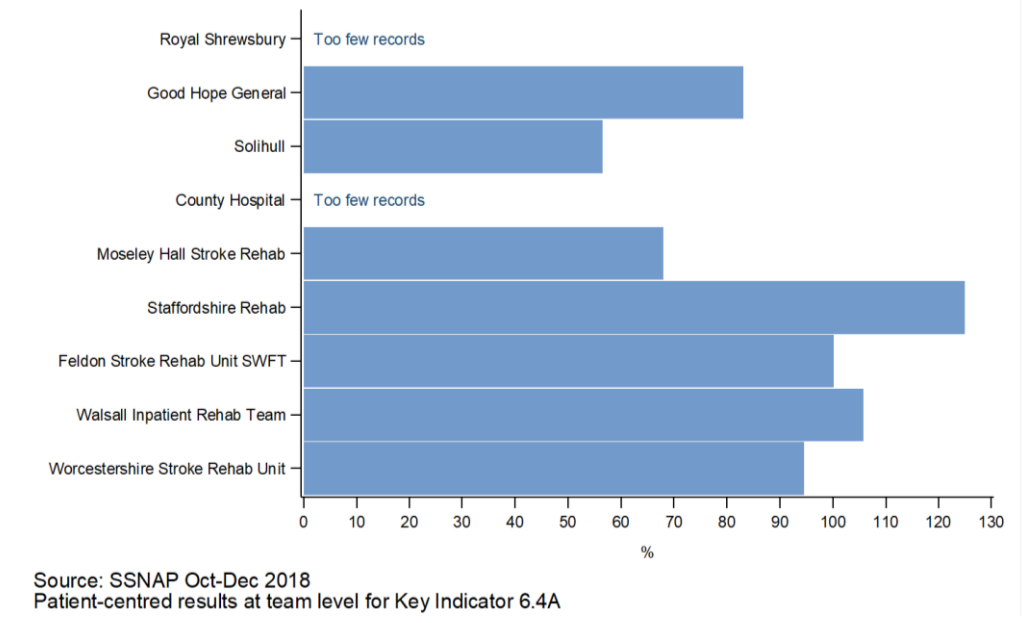


Figure 4 demonstrates that out of the 6 rehabilitation teams reported in the region, 5 teams are compliant against the national physiotherapy target; *Compliance (%) against the therapy target of an average of 27.1 minutes of physiotherapy across all patients (Target = 45 minutes x (5/7) x 0.85 which is 45 minutes of physiotherapy x 5 out of 7 days per week x 85% of patients).*

5.2.7 Figure 5: Compliance to National Target: Speech & Language Therapy

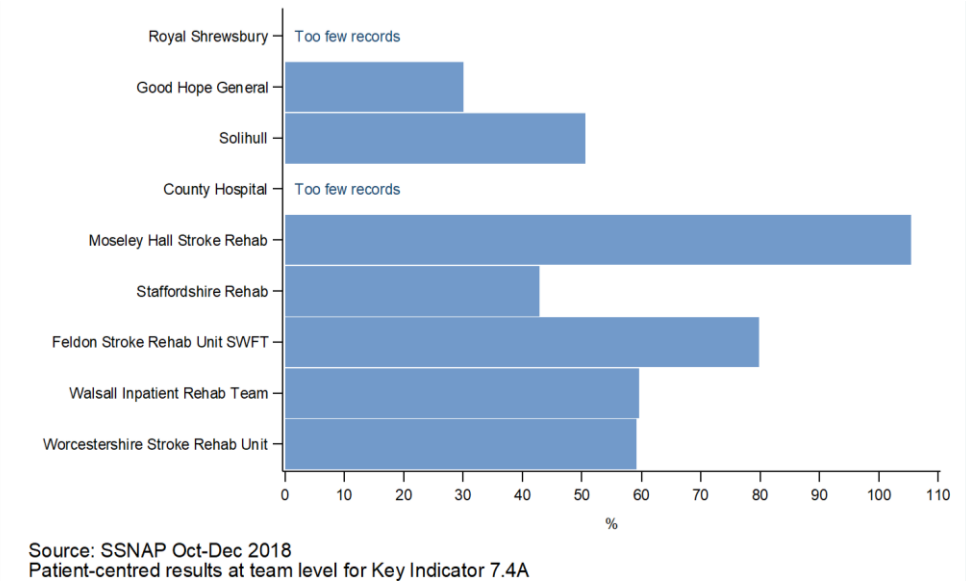


Figure 5 highlights that the West Midlands teams are meeting the compliance target for speech and language therapy; *Compliance (%) against the therapy target of an average of 16.1 minutes of speech and language therapy across all patients (Target = 45 minutes x (5/7) x 0.5 which is 45 minutes of speech and language therapy x 5 out of 7 days per week x 50% of patients).*

The impact of therapy on patient outcomes is substantial; a survey conducted by the Stroke Association in England in 2016 stated that patients felt that the physical effects of stroke were the most difficult to deal with, with **27%** of patients stating that access to rehabilitation and support was poor (Stroke Association, 2016).

5.3 Reduced Length of Stay

To predict the potential impact of extending access to specialist ESD services on length of stay (LoS), modelling work was commissioned and directed by the West Midlands CVD Clinical Network from Midlands and Lancashire Commission support Strategy Unit in 2018.

Given the availability of detailed data, modelling work included Identifying eligible mild/moderate stroke patients, using SSNAP data to determine current ESD coverage at each stroke unit, applying a nominal 2-day reduction in LOS for each patient (Fisher et al, 2016) and to moderate the above reduction

based on the scope of that unit to extend access to ESD to a nationally recognised 60% target.

The modelling work takes a baseline of inpatient activity data (2017/18) and applies adjustments for the following:

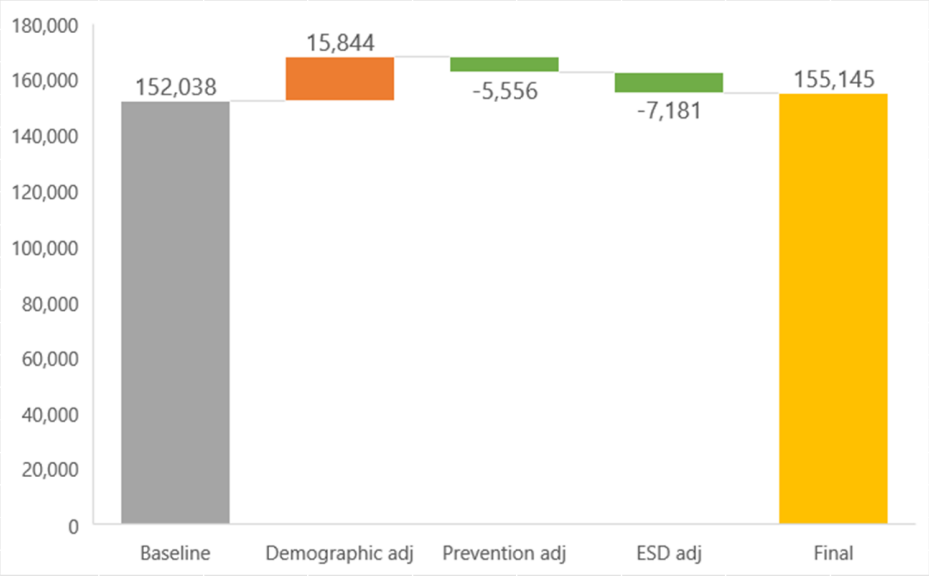
- Estimated demographic changes in the underlying population
- Plans for primary (health checks) and secondary (AF/BP management) prevention

The resulting analysis identified that extending access to specialist ESD could release **22 additional beds** in HASU, ASU and other IP rehab settings in the region for alternative use (figure 6). Prevention programmes could also offset this by 17 beds resulting in cost savings with bed days being saved.

5.3.1 Figure 6: The impact of ESD on Length of Stay

The graph below shows modelled stroke bed days on the population of the West Midlands. The calculations take into consideration demographic changes and prevention projects alongside the impact of a fully resourced ESD team. The final bed day calculation saving is equivalent to an additional 22 bed days.

Modelled stroke bed days for West Midlands residents 2017/18 to 2022/23



Notes: Baseline is the number of stroke patients in the West Midlands and equivalent of 463 beds in HASU, ASU and other IP rehab settings.

Demographic adj is the sub-national population projections by CCG of residence, single year of age and gender Demographic growth could require an additional 48 beds.

Prevention adj assumes by 2023 that there will be an increase of 10% health check population coverage across the region and GP's will halve the gap from current to optimal care of Hypertension and AF patients.

The cost savings from additional bed days could be used to support other services within the stroke care rehabilitation pathway, for example, long term care.

5.4 Table 2: ESD & Rehabilitation Teams in the West Midlands

The table below outlines the Early Supported Discharge and Rehabilitation teams in each STP in the West Midlands.

STP	ESD or Outreach Teams	Community Teams
Birmingham & Solihull	Birmingham Heartlands Hospital ESD Team (Heartlands, Good Hope & Solihull (HGS)) Birmingham Community Healthcare NHS Trust (BCHC) ESD (South, Central & Cross City Birmingham ESD Team)	Birmingham Community Stroke Team (North, East, West & Central Birmingham) Birmingham Neuro Rehabilitation Team (South Birmingham) Community Neuro Physio (South, Central & North Birmingham) Solihull Neuro Team (South Birmingham)
Black Country & West Birmingham	Russells Hall ESD Team Sandwell & West Birmingham NHS Trust ESD Royal Wolverhampton NHS Trust ESD (Wolverhampton & Seisdon Peninsula ESD Team) Walsall ESD Team Cannock ESD Team [Provided by Walsall Healthcare NHS Trust] Stafford ESD Team [Provided by Walsall Healthcare NHS Trust]	Dudley Community Stroke Rehabilitation Team Outpatient Community Occupational Therapy Walsall Community Stroke Rehab Team Cannock Community Stroke Team [Provided by Walsall Healthcare NHS Trust] Stafford Community Stroke Team [Provided by Walsall Healthcare NHS Trust; NOT Seisdon Peninsula] Community Stroke Services (Stafford/Seisdon Peninsula)
Coventry & Warwickshire	Stroke Outreach Rehabilitation Team (North) [Provided by George Eliot Hospital] Rugby ESD Team Coventry & Warwickshire Partnership Trust ESD Team South Warwickshire Stroke Outreach Team	Community SALT/Dietetics Generic Community Team Coventry Community Neuro Rehab Team Community SALT/Dietitian/Physiotherapist Community Dietitian
Herefordshire & Worcestershire	Hereford ESD Team Community Stroke Service: North Worcestershire ESD Team & South Worcestershire ESD Team	Herefordshire Community Stroke Rehab Team Community Stroke Service (Worcestershire) Neuro Rehabilitation Team
Shropshire, Telford & Wrekin	Shrewsbury & Telford Hospitals NHS Trust ESD (Shrewsbury & Telford ESD Team)	Community Neuro Rehabilitation Team (based in Shrewsbury)
Staffordshire & Stoke on Trent	University Hospitals of North Midlands NHS Trust Enhanced ESD (Cheshire, Stoke, Stafford) ESD (Cheshire East) Cannock ESD Team [Provided by Walsall Healthcare NHS Trust] Stafford ESD Team [Provided by Walsall Healthcare NHS Trust]	Community Stroke Team (Cheshire) Neuro Community Team (Macclesfield) East Staffordshire Community Stroke Rehab Team Cannock Community Stroke Team [Provided by Walsall Healthcare NHS Trust] Stafford Community Stroke Team [Provided by Walsall Healthcare NHS Trust] South East Staffordshire Community Neuro Rehab Team

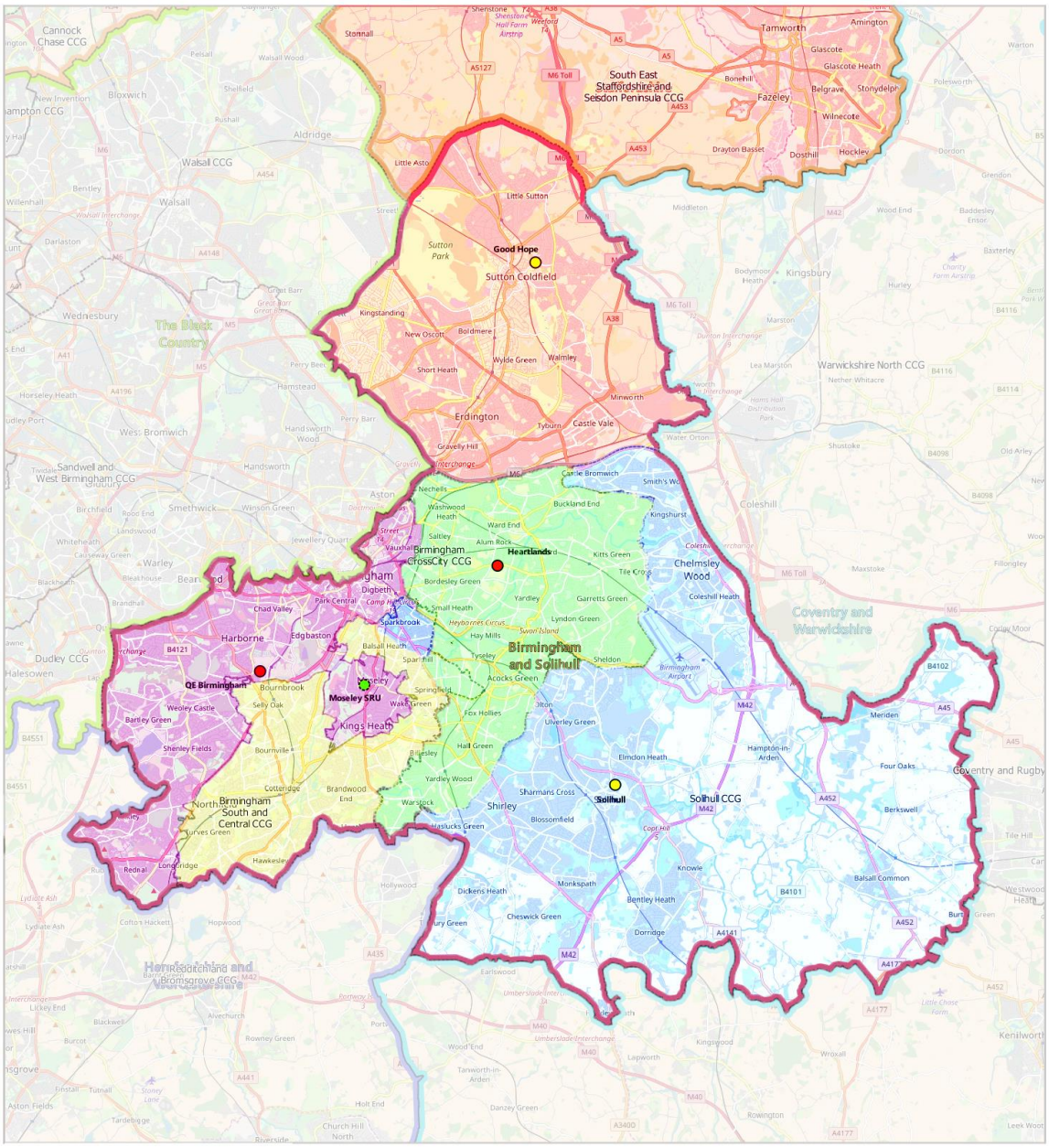
The table above highlights the variation across the region; in some STP areas there are no ESD teams available and in others, there is no CST. This emphasises the commissioning difference across the West Midlands and the high variance in outcomes for stroke patients.

Maps of services per STP area are shown in figures 7 to 13.

Referral pathways in each STP are shown in appendix section 17.3. Information gathered June – October 2018.

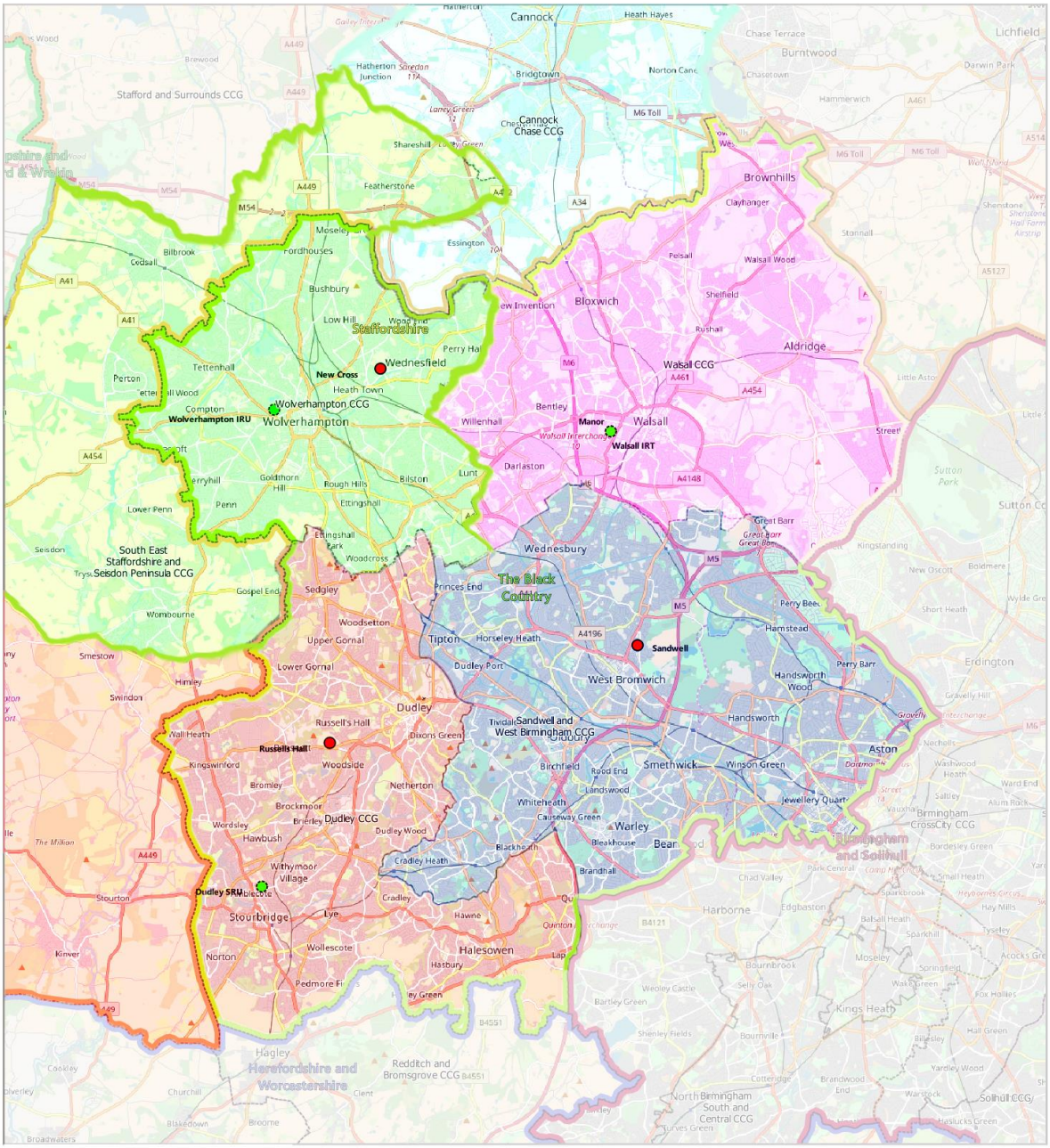
5.4.1 Figure 7: ESD, Rehabilitation and Community Teams in Birmingham & Solihull STP

The map below shows the geographical area of Birmingham & Solihull STP; the STP has a population of 1,164k with a stroke incidence of 1,516 in 2017/2018. The estimated stroke incidence is 1,553 in 2022/2023.



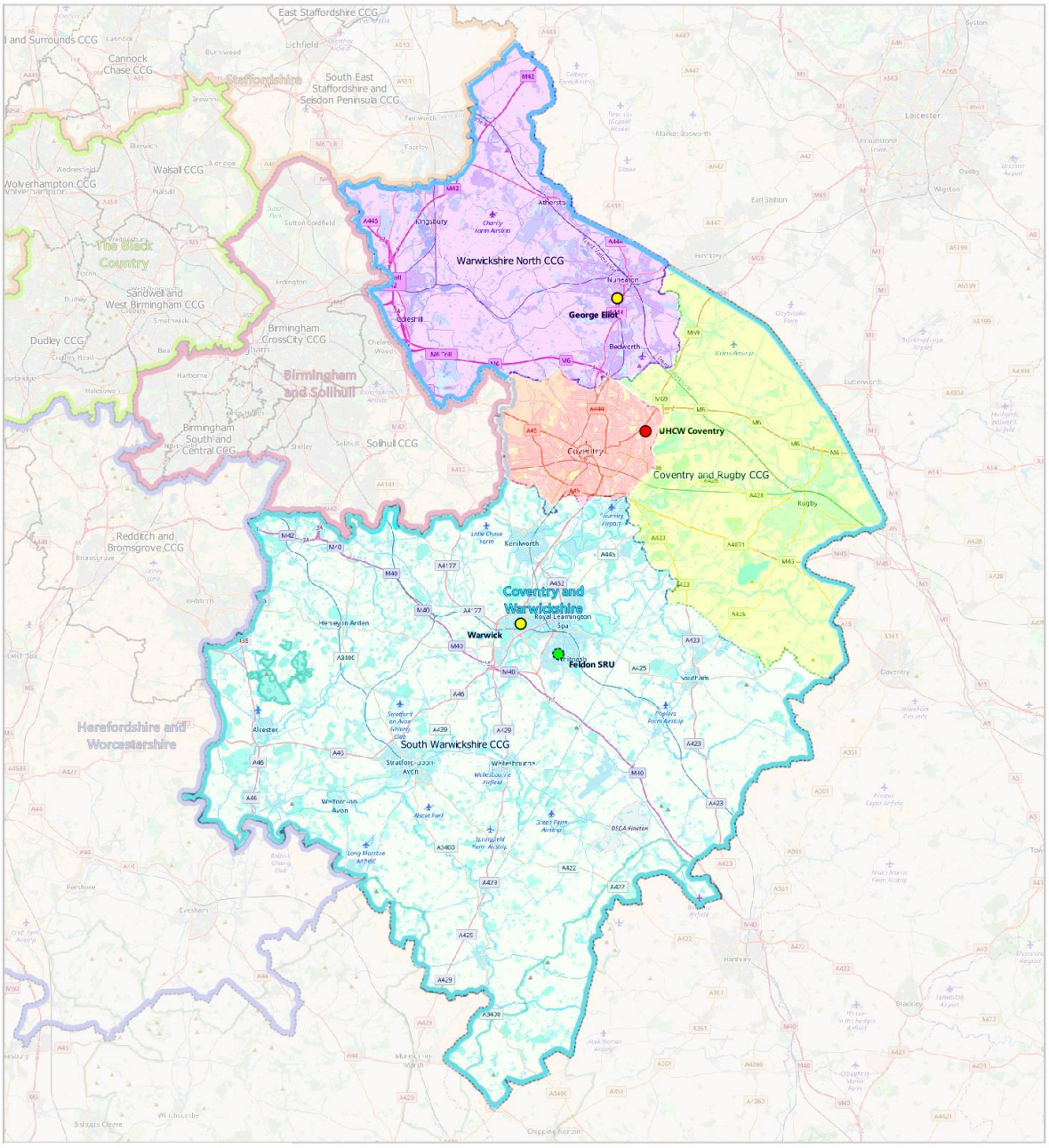
5.4.2 Figure 8: ESD, Rehabilitation and Community Teams in the Black Country & West Birmingham STP

The map below shows the geographical area of the Black Country & West Birmingham STP; the STP has a population of 1,348k with a stroke incidence of 1,839 in 2017/2018. The estimated stroke incidence is 1,906 in 2022/2023.



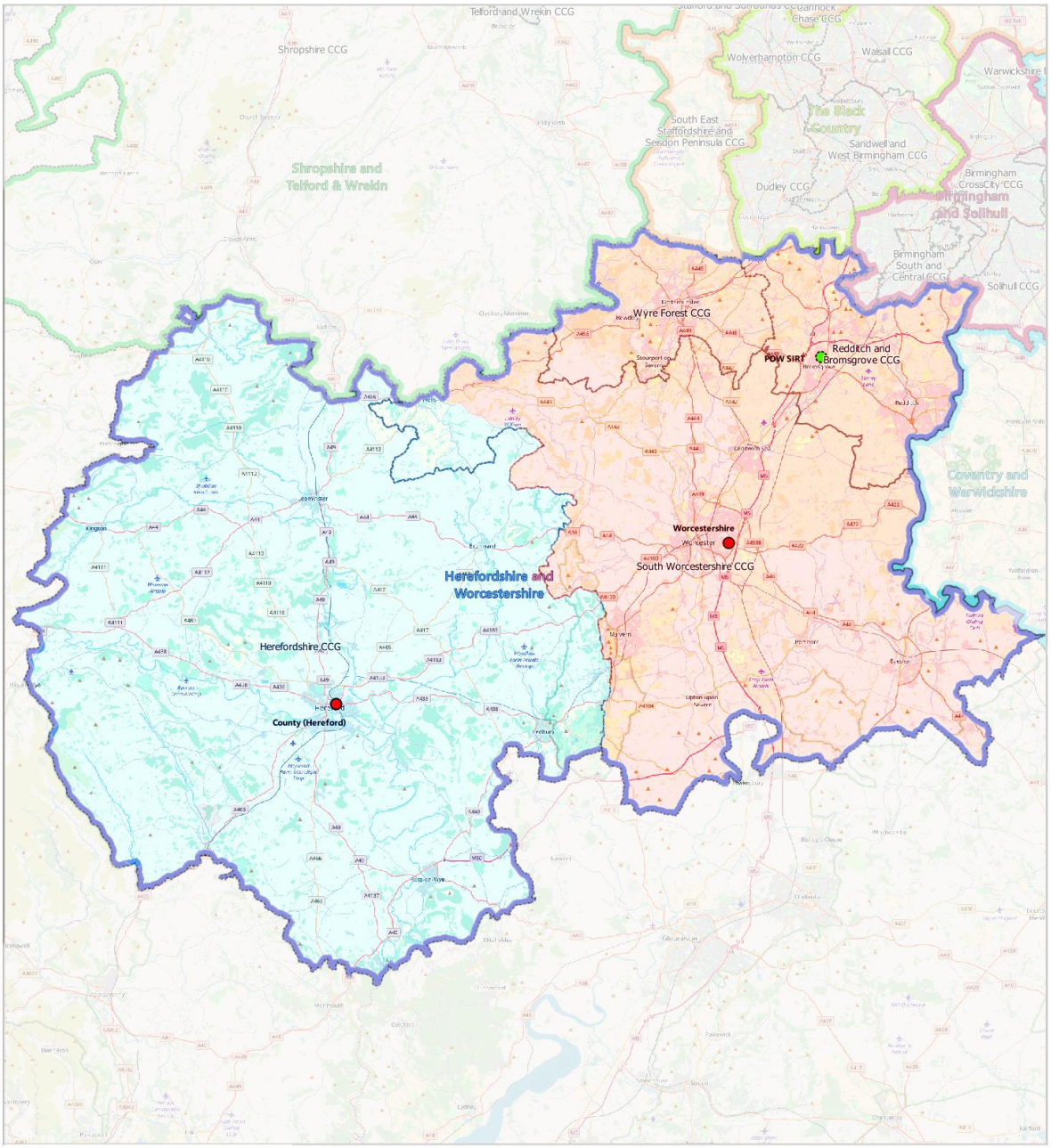
5.4.3 Figure 9: ESD, Rehabilitation and Community Teams in Coventry & Warwickshire STP

The map below shows the geographical area of Coventry & Warwickshire STP; the STP has a population of 910k with a stroke incidence of 1,324 in 2017/2018. The estimated stroke incidence is 1,438 in 2022/2023.



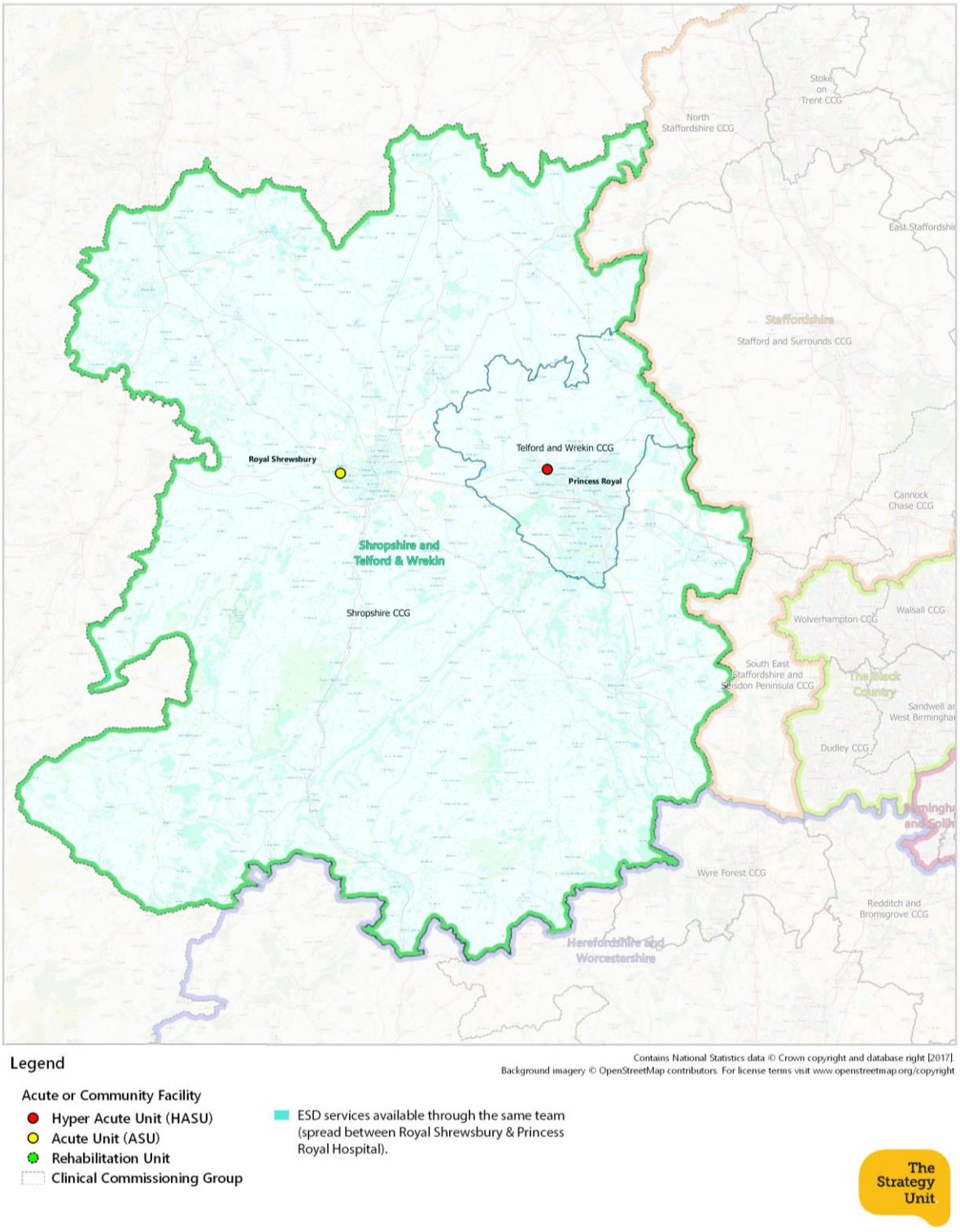
5.4.4 Figure 10: ESD, Rehabilitation and Community Teams in Hereford & Worcester STP

The map below shows the geographical area of Hereford & Worcester STP; the STP has a population of 773k with a stroke incidence of 1,314 in 2017/2018. The estimated stroke incidence is 1,471 in 2022/2023.



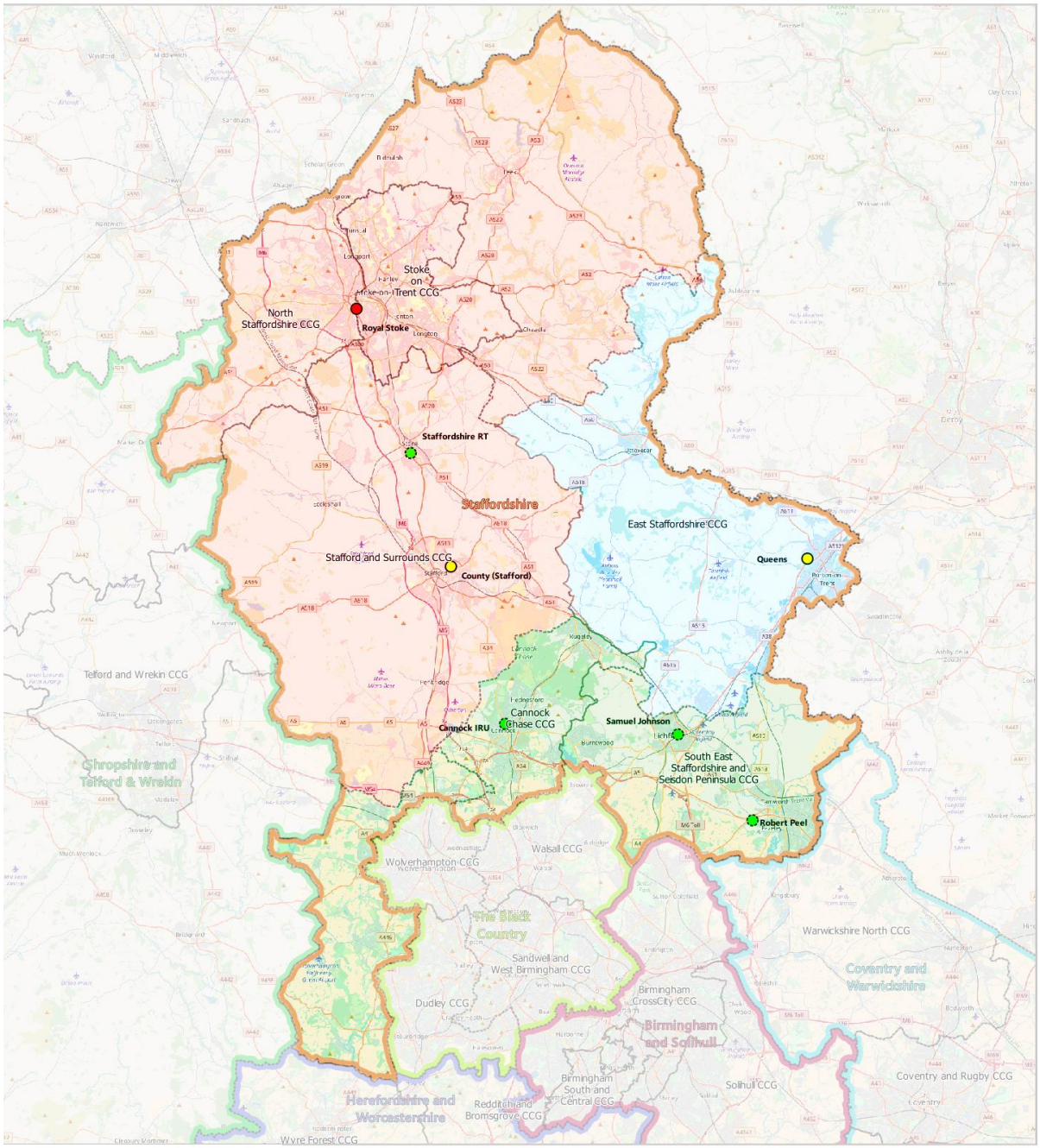
5.4.5 Figure 11: ESD, Rehabilitation and Community Teams in Shropshire, Telford & Wrekin STP

The map below shows the geographical area of Shropshire, Telford & Wrekin STP; the STP has a population of 486k with a stroke incidence of 874 in 2017/2018. The estimated stroke incidence is 932 in 2022/2023.



5.4.6 Figure 12: ESD, Rehabilitation and Community Teams in Stafford & Stoke on Trent STP

The map below shows the geographical area of Stafford & Stoke on Trent STP; the STP has a population of 1120k with a stroke incidence of 1,616 in 2017/2018. The estimated stroke incidence is 1,757 in 2022/2023.



Legend

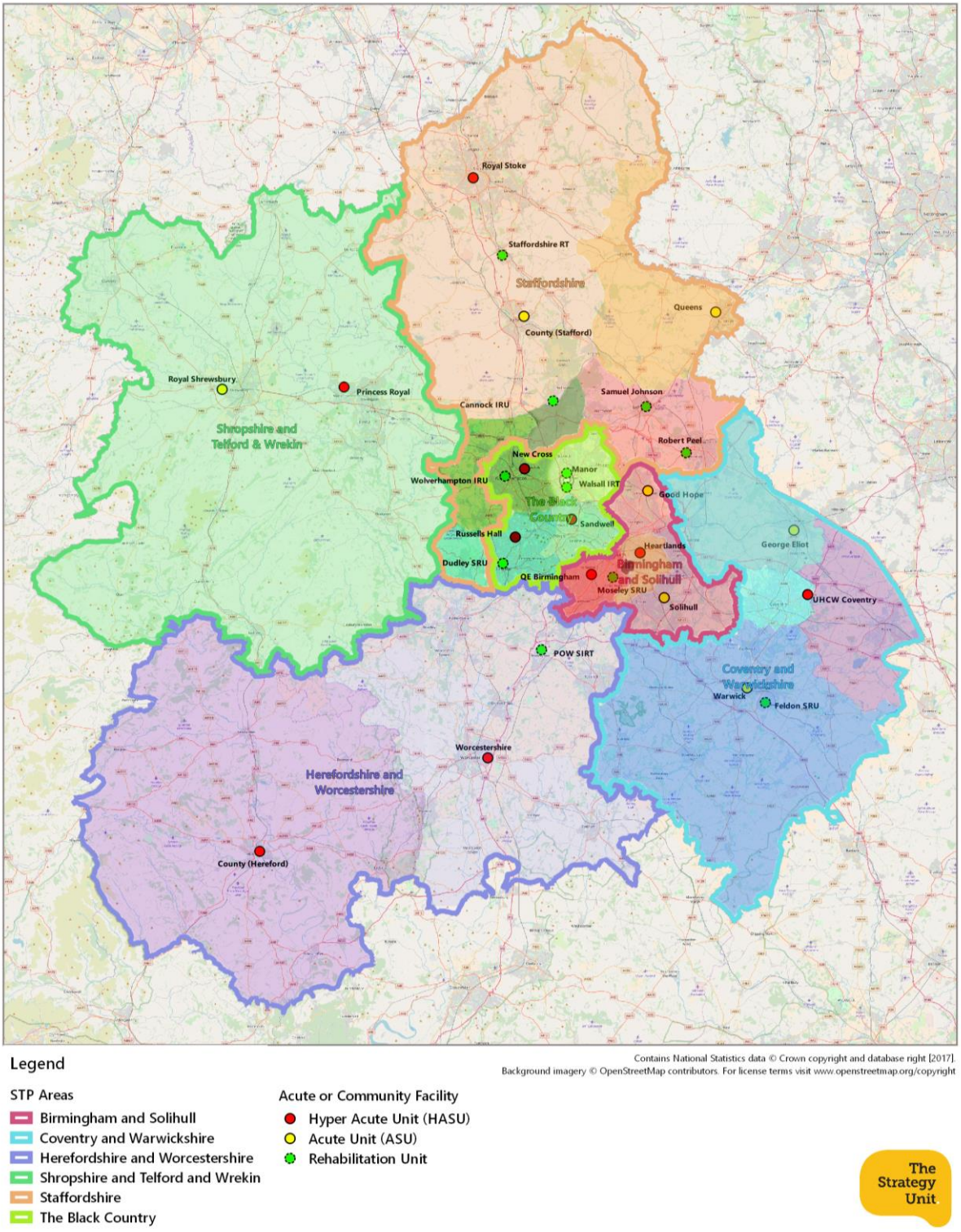
Acute or Community Facility
- Hyper Acute Unit (HASU)
- Acute Unit (ASU)
- Rehabilitation Unit
- Clinical Commissioning Group

ESD Services
- East Staffordshire ESD Community Stroke Team
- Royal Stoke Enhanced ESD
- Staffordshire

The Strategy Unit

5.4.7 Figure 13: ESD, Rehabilitation and Community Service Provision in the West Midlands

The West Midlands has a population of 5.8 million with a total stroke incidence of 8,483 in 2017/2018. The estimated stroke incidence for the region is 9,057 in 2022/2023.



6 Scope

This document should be read by all commissioning and clinical staff responsible for the management of services for stroke patients in an Early Supported Discharge or rehabilitation role. This document would be beneficial for use in primary care, community support, local authority, third sector charities and voluntary services that will all have contact with stroke patients after discharge.

This document applies equally to staff in a permanent, temporary, voluntary or contractor role acting for or on behalf of any local stroke unit, trust, CCG or community trust.

7 Methodology

ESD, stroke outreach, community rehabilitation, inpatient bedded rehabilitation units and community stroke team members were nominated from each Hyper-Acute Stroke Unit (HASU) clinical lead for stroke to participate in the West Midlands ESD & Rehabilitation Working Group supported by the West Midlands Cardiovascular (WM CVD) Clinical Network.

Core specialist professions included:

- Occupational therapy
- Physiotherapy
- Speech and language therapy
- Dietitian
- Psychology
- Stroke medicine
- Stroke nurse
- Social services

The WM CVD Clinical Network team and project lead (a local Stroke Consultant and Service Clinical Lead) invited all nominated colleagues from each STP area to take part in the programme of work and conducted regional meetings exploring the

following: ESD, community beds, community stroke teams, 6-month follow-up and long term follow-up.
Within the regional meetings colleagues from each profession and STP were nominated to participate in a core task and finish group.

The West Midlands CVD network aims to produce supporting documents for commissioners based on this work and provide regional recommendations to enable effective and sustainable commissioning of 7 day services for ESD and rehabilitation for stroke patients.

7.1 Patient and Public Involvement

The Stroke Association reviewed and approved this document in December 2018 on behalf of stroke patients, their families and their carer's.

8 Rationale and Benefits

8.1 Early Supported Discharge (ESD)

There is a large body of evidence to support ESD after stroke, suggesting that this approach can deliver positive clinical outcomes whilst improving quality of life, without adverse effects (Langhorne and Baylan 2017, Fisher *et al.* 2016 & 2011).

The key aims of ESD are:

- To provide rehabilitation in the patient's home environment at an intensity equivalent to national standards (45 minutes of each required therapy per day where the patient can tolerate this (NICE 2016))
- To reduce the risk of re-admission into hospital for stroke related problems.
- To increase patient independence
- To improve quality of life for the patient.
- To support the patient, carers and family

Although ESD is an accepted and a widely implemented approach to stroke rehabilitation, not all patients can be cared for on an ESD pathway or are not on a stroke specific ESD pathway. NICE Quality Standards for Stroke were updated in 2016 to include the recommendation that ESD is offered to patients where the MDT

agree if it is suitable and can be delivered safely. The decision to offer ESD should be made by collaborative discussion between the patient and family, and core members of the MDT (NICE 2016).

The criteria for patient suitability for treatment by an ESD team are widely published. Patients should be considered for ESD if they are able to transfer from bed to chair independently or with assistance, as long as a safe and secure environment can be provided (NICE 2013). Patients meeting these criteria are commonly referred to as having “mild to moderate” stroke symptoms.

Benefits of an ESD service as part of a **stroke care pathway;**

For commissioners:

- ESD can expedite discharge from hospital; “*ESD in a multidisciplinary setting is beneficial for patients with mild to moderate stroke and is a likely cause of the significant reduction in length of stay in stroke units in these patients*” (Action on Stroke, 2018)
- ESD improves patient flow
- ESD improves performance against key measures in SSNAP
- Monitory savings

For patients and carer’s

- Improved patient experience from acute to community services
- Improved outcomes for stroke survivors
- Benefits of patients being treated at home with no increase in carer stress (Langhorne & Baylan, 2017)
- ESD can avoid potential complications of prolonged hospital stays

For primary care

- ESD can work closely with community teams and alongside third sector charities
- ESD can provide GPs with a community link to a stroke specialist team

A well-resourced ESD can lead on the initiation and provision of secondary prevention interventions such as exercise, smoking cessation, safe alcohol intake, managing other diet related conditions and maintaining a good nutritional intake to support rehabilitation.

8.2 Enhanced ESD (EESD)

Standard ESD has become routine practice to varying degrees across the UK. The expectation is that 40% of patients with stroke can be managed through such a service. In the West Midlands approximately 38% patients currently receive ESD (SSNAP Annual Report 2017-2018).

SSNAP reports, anecdotal evidence and clinical experts are suggestive that the percentage of patients who could be safely discharged with ESD could increase with some enhancements to the service model. This increase could be achieved by accepting a more dependent cohort of patients (an enhanced cohort) into ESD services. These patients could be considered to have “moderate to severe” stroke symptoms.

The predicted benefits of Enhanced Early Supported Discharge are:

- Patients with higher levels of dependency could be discharged from the acute hospital setting sooner, avoiding the potential complications of a long hospital stay.
- Patients and families could still receive high intensity rehabilitation programs to that provided in hospital.
- Patients would not necessarily achieve a discharge as early as those on an ESD pathway, but would potentially achieve a shorter length of stay than in current practice.
- Reduce pressure on in-patient rehabilitation beds, improving patient flow and increased bed capacity
- Improve performance against key measures in SSNAP
- Clinical outcomes could be equal to or better than hospital based care due to provision of rehabilitation in the patient’s familiar environment.

Unlike ESD, the model for EESD is as yet untested. EESD would need to be provided by a fully coordinated team. This team would need to have higher levels of expertise in order to manage the increased level of complexity, and be resourced to meet the care and rehabilitation needs of highly dependent patients.

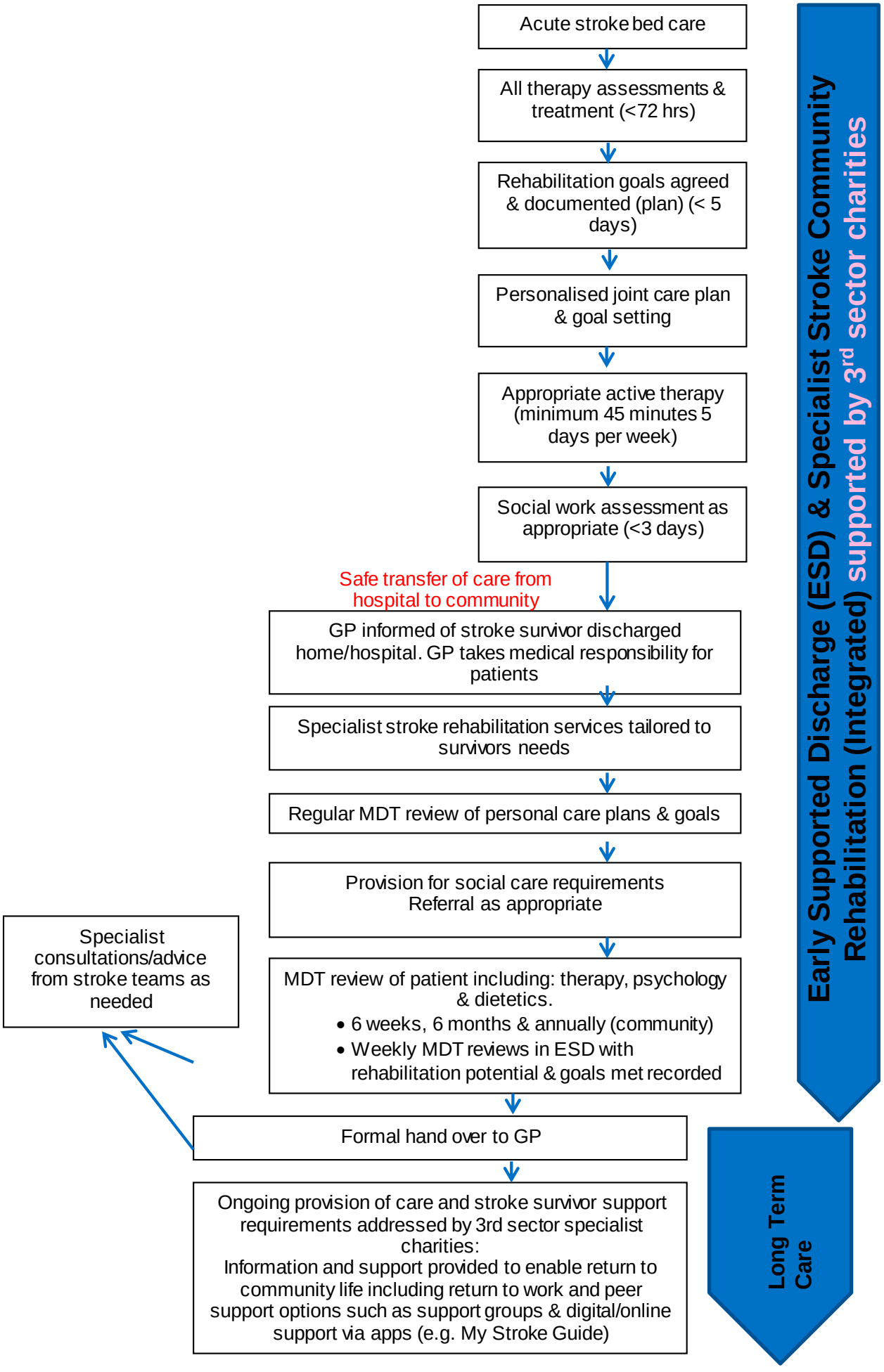
Where Enhanced Early Supported Discharge services are developed and commissioned, participation in SSNAP should be mandated in order to provide an evaluation mechanism.

9 Regional Pathway & Standards

The West Midlands Cardiovascular (CVD) Clinical Network has worked collaboratively with the West Midlands ESD & Rehabilitation Working Group to develop and agree gold standard stroke care in the West Midlands.

The flow chart below describes how a regionally agreed pathway could be implemented. Using the National Stroke Care Pathway (Stroke Services: Guidance for STP's on recommended standards for Acute Stroke Services, 2016), the West Midlands ESD & Rehabilitation Core Working Group and project lead developed the regional pathway as shown in section 9.1. This pathway was subsequently reviewed, amended and approved by the West Midlands ESD & Rehabilitation Working Group, followed by the Stroke Association, NHS England, the West Midland Stroke Expert Advisory Group and the West Midlands Stroke STP Programme Board.

9.1 Regional Pathway



9.2 Regional Standard ESD

The table below contains the regional standard ESD service standards recommended by the WM CVD Clinical Network and developed by the West Midlands ESD & Rehabilitation Core Working Group to achieve gold standard stroke care. Regional standards were based on NICE Quality Standard [QS2], The Royal College of Physicians (RCP) National Clinical Guidance for Stroke (5th Edition; 2016), the NHS England Midlands and East Stroke Service Specification (2012), alongside the experience and expertise of specialist clinicians in stroke care rehabilitation. The standards were subsequently reviewed by the West Midlands ESD & Rehabilitation Working Group.

Service Standards for Standard ESD[1,2]	
Definition	Early Supported Discharge (ESD): Early supported discharge is rapid access to intense rehabilitation and community based assessment by a stroke specialist core MDT. It enables patients with stroke to leave hospital sooner, and receive the same quality and quantity of rehabilitation that would be provided in hospital. ESD should meet RCP guidelines[2] whilst allowing flexibility for individual patients' clinical needs.
Workforce* ***WTEs are based on RCP guidelines plus regional clinical opinion from the West Midlands ESD & Rehabilitation Working Group. This includes face-to-face clinical and non-clinical time.***	Core MDT to consist of (per 100 caseload per year/WTE[3]) with a designated clinical lead: • consultant physicians (0.1) • nurses (1.2) • physiotherapists (1) • occupational therapists (1-1.5) • speech and language therapists (0.4) • dietitians (0.2) • clinical psychologists/neuropsychologists (0.5) • rehabilitation assistants (2-2.5) • social workers (0.5) • dedicated administrative support (1) *This will need to be localised to meet geographical requirements such as widespread rural populations.* *Where a single member of a profession or less than 1 WTE is required the post will need to be embedded within a whole stroke pathway in order to maintain clinical competencies and governance (clinical supervision, training, peer support and case review for example).In regards to rehabilitation assistants the skill mix and competencies should be locally agreed. For example 1WTE B4 & 1.5WTE B2-3. Having a higher banded assistant could enhance patient access to rehabilitation.*

Patient cohort	ESD will accept confirmed stroke patients from any location, with identified rehabilitation goals that will benefit from therapy. Patients accessing ESD are mild to moderate in stroke severity and dependency: Teams need to use a stratification based on severity such as NIHSS, Bartel. Modified Rankin (MRS) or NEADL for example. Teams could consider using a scale to stratify patients locally or agree local clinical criteria. They may complete their rehabilitation programme within their time with an ESD team or require long term support and follow up Some patients will require ongoing rehabilitation at completion of ESD and will require referral onwards Patients requiring only 1 core MDT should not be prevented from accessing ESD
Pathway and timelines	ESD will take confirmed stroke patients **from day 0 up to 6 weeks post-stroke**. Rapid access to packages of care or care home placement is required to achieve early safe discharge. ESD services should work towards an average LOS of 6 weeks within the ESD team, to prevent hand-over of care to CST for patients who are within days of completing their rehabilitation. After a period of 6 weeks, all patients should have equal and timely access to CST for continued rehabilitation where required to ensure an equity of intensity. All patients should have a clear plan for 6 week stroke medical follow up, and 6 month stroke follow up in place with flexibility to meet individual patient needs. A plan should be in place to hand over care to the patient's GP within a locally agreed timeframe.
Therapy	Patients **should be offered** 45 minutes per day, per therapy discipline, 5 days per week [2] for up to 6 weeks from the start of ESD input (or medically stable in exceptional circumstances) if clinically indicated. Therapy provision should meet professional standards therefore could be delivered by a supervised non-registered team member following assessment by a registered therapist.
Service provision	7 days a week
% Caseload	National guidance of 40%[2] with conditions: 1. Any start point (day 0), until 6 weeks post stroke. 2. Accepting referrals from any part of the stroke pathway (HASU, ASU, RSU, community, ED, TIA clinic) 3. Accepting referrals from a thrombectomy pathway (from a Comprehensive Stroke Unit)
ESD Criteria	1. Clinical or radiological diagnosis of stroke 2. Transfer independently or with assistance of 1 +/- equipment requiring one person to use 3. Clinically stable and fit for discharge, or needs can be met by GP and/ or advice from HASU/ ASU

	4. Continence management plan (including overnight plan) 5. Medication management plan 6. Nutrition and hydration management plan to optimise rehabilitation potential managed by dietetics 7. Skin care management plan 8. Mental health screen/mood and emotion screen completed in order to plan safe discharge 9. Cognition and communication screen/ assessment in order to plan safe discharge 10. All patients should have access to ESD if they meet the criteria regardless of their permanent address 11. Social needs – patient and carer needs to be assessed, and care package in place prior to discharge to ESD 12. ESD pathway to be discussed with the patient and patients' family/ carer. Benefits and any disadvantages to be discussed prior to discharge 13. Discharge destination safe for provision of rehabilitation (space for equipment, safe for workforce to attend)
Clinical Delivery Model	A Qualified/Registered ESD team member to assess & treat patients within 24 hours as per RCP guidelines[2]
Ratio of staff (therapy)	Qualified/registered: 70% Un-qualified/non-registered: 30%
Estates	ESD to be able to provide: • equipment at home (Staff to have access to 7 day buffer stock for equipment) • gym or rehab facilities where required • access into the community, • transport (volunteer drivers/contracts for example) where required • accommodation for ESD team to be based together for effective team working In order to support the function of ESD, IT infrastructure needs to be reviewed.
Key Performance Indicators (KPI's)	1. Completion of SSNAP 2. Clinical impairment outcome measure 3. Patient satisfaction outcome measure 4. Quality of Life outcome measure 5. Carers support/experience
Guidelines	NICE Quality Standard [QS2][1] Royal College of Physicians (RCP) 2016 National Clinical Guidance for Stroke (5th Edition)[2] NHS England Midlands and East Stroke Service Specification (2012)[3]

9.3 Regional Enhanced ESD

The table below contains the regional Enhanced ESD service standards recommended by the WM CVD Clinical Network and developed by the West Midlands ESD & Rehabilitation Core Working Group to achieve gold standard stroke care for stroke patients with a higher level of dependency. Regional standards were based on NICE Quality Standard [QS2], The Royal College of Physicians (RCP) National Clinical Guidance for Stroke (5th Edition; 2016), the NHS England Midlands and East Stroke Service Specification (2012), alongside the experience and expertise of specialist clinicians in stroke care rehabilitation including a clinical lead who has developed and initiated an enhanced ESD pilot in their local STP. The standards were subsequently reviewed by the West Midlands ESD & Rehabilitation Working Group.

Service Standards for Enhanced ESD[1,2]	
Definition	Enhanced Early Supported Discharge (EESD): Enhanced Early supported discharge is rapid access to **highly specialised** intense rehabilitation and community based assessment by a stroke specialist core MDT. It enables patients with stroke to leave hospital sooner, and receive the same quality and quantity of rehabilitation that would be provided in hospital. EESD should meet RCP guidelines[2] whilst allowing flexibility for individual patients' clinical needs.
Workforce* ****WTEs are based on RCP guidelines plus regional clinical opinion from the West Midlands ESD & Rehabilitation Working Group. This includes face-to-face clinical and non-clinical time.***	There are no national guidelines for staffing numbers required to provide EESD. The regional group recommend that EESD is provided as a bolt on service to standard ESD. As patients in EESD are more likely to require at least 2 therapists or staff members per visit, the regional group give the following recommendation for EESD: Core EESD MDT to consist of (per 100 caseload per year/WTE[3])* with a designated clinical lead: • consultant physicians (0.2) • nurses (0-2.4) • physiotherapists (2) • occupational therapists (2-2.5) • speech and language therapists (0.8) • Dietitians (0.4) • clinical psychologists (0-1) • rehabilitation assistants (2-4) • social workers (1) • dedicated administrative support (1)

	Workforce for EESD should have clear leadership for each profession and contain experienced staff. For clinical psychology this is usually a band 8A or above. There needs to be at least one band 7 nurse or AHP per EESD team. For speech and language therapy, dysphagia competence is essential; this is usually a band 6 or above.**Teams need to agree their model for delivery locally to meet geographical requirements such as widespread rural populations; these numbers are a guide. Local teams may need to consider impact on existing neuro and community teams. Carers should be integrated with EESD.* *Where a single member of a profession or less than 1 WTE is required the post will need to be embedded within a whole stroke pathway in order to maintain clinical competencies and governance (clinical supervision, training, peer support and case review for example).* *In regards to rehabilitation assistants the skill mix and competencies should be locally agreed; having a higher banded assistant could enhance patient access to rehabilitation.*
Patient cohort	EESD will accept confirmed stroke patients from any location, with identified rehabilitation goals that will benefit from therapy. Patients suitable for EESD are likely to be more complex in nature compared to standard ESD: Higher stroke severity Higher dependency Require 2 or more staff to rehabilitate or deliver care tasks Require increased access to specialist equipment *Teams need to use a stratification based on severity such as NIHSS, Bartel. Modified Rankin (MRS) or NEADL for example – Teams could consider using a scale to stratify patients locally – (clinical picture)* May be at higher risk of complications and therefore require access to a range of specialist staff in addition to EESD. For eg district nurses, nutrition nurses, continence specialists Are more likely to require ongoing rehabilitation at the end of the 6 week EESD period Are more likely to require referrals to specialist services to meet their complex needs
Pathway timelines	EESD will take confirmed stroke patients **from day 0 up to 6 weeks post-stroke**. Rapid access to packages of care or care home placement is required to achieve early safe discharge. EESD services should work towards an average LOS of 6 weeks within the EESD team, to prevent hand-over of care to CST for patients who are within days of completing their rehabilitation After a period of 6 weeks, all patients should have equal and timely access to CST for continued rehabilitation where required to ensure an equity of intensity. All patients should have a clear plan for 6 week stroke medical follow up, and 6 month stroke follow up in place with

	flexibility to meet individual patient needs. A plan should be in place to hand over care to the patient's GP within a locally agreed timeframe.
Therapy	Patients should be offered 45 minutes per day per therapy, 5 days per week discipline[2] for up to 6 weeks if clinically indicated
Service provision	7 days a week
% Caseload	National guidance of 40%[2] with conditions: 1. Any start point (day 0), until 6 weeks post stroke 2. Accepting referrals from any part of the stroke pathway (HASU, ASU, RSU, community) 3. Accepting referrals from a thrombectomy pathway (from a Comprehensive Stroke Unit) PLUS 20% bolt on to ESD(to treat 10% of the caseload) however CST MUST be fully funded and supported to allow for 60%
EESD Criteria	1. Clinical diagnosis of stroke 2. Transfer assistance of ≤ 2 +/- equipment, a trained carer may be the second person where appropriate 3. Clinically stable and fit for discharge, or needs can be met by GP and/ or advice from HASU/ ASU 4. Continence management plan (including overnight plan) 5. Medication management plan 6. Nutrition and hydration management plan to optimise rehabilitation potential managed by dietetics including daily care and ongoing review of enteral feeding routes to be determined by locally agreed policies (PEG, RIG, NGT) 7. Skin care management plan 8. Mental health screen/mood and emotion screen assessment completed in order to plan safe discharge 9. Cognition and communication screen/ assessment in order to plan safe discharge 10. NH/EAB/ D2A beds patients in D2A or EAB should have access to EESD if they meet the criteria regardless of their permanent address 11. Social needs – patient and carer needs to be assessed, and care package in place prior to discharge to EESD 12. EESD pathway to be discussed with the patient and patients' family/ carer. Benefits and any disadvantages to be discussed prior to discharge 13. Discharge destination safe for provision of rehabilitation (space for equipment, safe for workforce to attend) 14. Night time management plan (Band 7 on call)

Clinical Delivery Model	A Qualified/Registered team member to assess & treat patients within 24 hours as per RCP guidelines[2]
Ratio of staff (therapy)	Qualified/registered: 60% Un-qualified/non-registered: 40%
Estates	EESD to be able to provide: • equipment at home (Staff to have access to 7 day buffer stock for equipment) • gym or rehab facilities where required • access into the community, • transport (volunteer drivers/contracts for example) • accommodation for EESD team to be based together for effective team working In order to support the function of EESD, IT infrastructure needs to be reviewed.
Key Performance Indicators (KPI's)	1. Completion of SSNAP mandatory 2. Clinical impairment outcome measure 3. Patient satisfaction outcome measure 4. Quality of Life outcome measure 5. Carers support/experience EESD is a new relatively untested pathway. Relationships between teams, shared education, best practice, and experience need to be built in order to see the required outcomes. A lead in time of 9-12 months is recommended in order to see improvements in SSNAP reports.
Guidelines	NICE Quality Standard [QS2][1] Royal College of Physicians (RCP) 2016 National Clinical Guidance for Stroke (5th Edition)[2] NHS England Midlands and East Stroke Service Specification (2012)[3]

10 Long Term Care/Follow-Up

National standards (Guidance for STP's on recommended standards for Acute Stroke Services, 2016) state that following 6 weeks of ESD or EESD, patients requiring on-going stroke support should be discharged into Community Stroke Teams (CST) with no delay. Those patients who have not accessed ESD/EESD should have immediate access to specialist Community Stroke Teams (CST); for example those patients who required an in-patient stay greater than 6 weeks. Currently not all areas of the West Midlands have immediate access to CST.

CST is an interdisciplinary team based together who set and work on shared goals with the patients and family, building on work done within a bedded unit or ESD/EESD and embedding rehab into life at home or in the community.

The input should be:

- Patient centred
- Will provide therapy for those showing gains and achievement of goals as a result of this intervention
- For as long as a patient is benefitting
- Focused on living life after stroke, all be it differently and focusing on a patient's roles, priorities and quality of life
- Empowering a person to self-manage where possible
- Empowering a person to seek tertiary on going peer and community support

Key needs

- Able to see new referrals within 72 hours
- Meet RCP and NICE standards
- Meet Mid and East CST service specification
- Be stroke specialist (workforce, training, caseload stroke specific)
- Accept referrals from ASU, RSU, ESD and EESD
- Be flexible in LOS in order to meet patients individual needs
- KPIs should allow for intensity of rehab to be stepped down as appropriate
- Should prepare the patient for therapy to end by signposting to long term support

- Should link within stroke pathway to specialist services required, to 6 month follow up and third sector/community support (including peer support)
- A plan should be in place to hand over care to the patient's GP within a locally agreed timeframe.

11 Risks and Interdependencies

11.1 Table 3: Risks

The table below outlines risks that may be observed or found by stroke specialist clinicians in their day to day working role or local organisations. The following mitigations have been devised as a guide to assist in risk management.

Risk	Mitigation
Higher re-admission rates could be observed in the EESD group due to the high level of complexity	Pathway should include a mechanism for immediate acute stroke advice in order to support admission avoidance. Example: Wolverhampton prevention pathway: - Medical input contributes to an avoidance of re-admissions. Rapid intervention team (B7/8a AMPs under a stroke physician or rehabilitation consultant triages patients for medical review)
Re-admission with a medical or surgical condition can lead to patients dropping off the stroke pathway	Re-referral to E/ESD needs to be in place, and a local mechanism for tracking patients who are re-admitted agreed
HASU and ASU workforce are reluctant to refer to EESD pathway due to lack of experience of EESD	Plan lead in time of 1 year for team to be fully functional. Education and joint working across pathway required
Recruitment and retention: lack of availability of appropriately trained and skilled staff	Local recruitment drives should be optimised. The development of regional training should be reviewed. Local issues to be logged on risk registered and flagged to senior managers within their respective trusts/organisations. Consider incentivising posts to help retention (training programme/training posts).
Patients discharged with EESD may not be offered treatment equal to those in hospital. Examples are VTE prevention (IPC) and FEAS	There is a need to ensure all interventions are available to all patients regardless of where they are being treated
CST carries the burden of most complex long-term patients. Possibility of burnout within teams	Shared teams, rotational posts and split posts should be considered

In regard to ESD and EESD, patients being discharged earlier than the average length of stay may incur care home costs or care package costs earlier, therefore increasing the financial burden	Local agreement should be in place to ensure equity of provision. There is a need to ensure that patients with higher dependency needs are not disadvantaged financially by ESD or EESD.
Patients and families find it difficult to manage high intensity rehabilitation in the home environment	Education on stroke pathway and inclusion of patient and carer in care planning. Support from appropriate agencies such as the Stroke Association could be sought.
Patients decline ESD service input and leave hospital but later decide they need specialist input	The acute team responsible for the patient should notify their GP of a high-risk discharge and inform of routes to refer into the service.

11.2 Pathway interdependencies

In order to increase the percentage of stroke patient cohorts who are able to be discharged earlier, there is a need for a whole pathway view of stroke.
The working group recommends that a whole pathway view is undertaken, and that Early Supported Discharge and Enhanced Early Supported Discharge are not commissioned in isolation from Hyper Acute Stroke Units, Acute Stroke Units, Community Stroke Units, Rehabilitation Stroke Units, Community Stroke Teams and long term follow up services.

Some stroke services are commissioned together with services that provide rehabilitation to other clinical specialities where existing services provide rehabilitation to stroke but are part of a wider team providing treatment to other patient groups e.g. neurology. Re-designing services to establish Early Supported Discharge/Enhanced Early Supported Discharge should not disadvantage or impact co-existing services.
Other local considerations may include:

- Where re-allocation of in-patient rehabilitation resources will compromise the safety and function of small community hospitals
- Location of ESD/EESD teams may be important in terms of provision of acute medical support.

- Where existing contracts will be negatively impacted by the development of ESD/EESD
- Venus Thrombosis Embolism (VTE) prevention: For all patients in hospital receiving intermittent pneumatic compression (IPC) VTE prevention should be considered as part of the discharge plan for standard and enhanced ESD patients. An alternative to IPC should be considered on an individual patient basis and guided by local policy.

ESD and CST services should ensure patients, carers and families access the appropriate support and advice working collaboratively with patient and carer support services.

12 Non-ESD Pathways

Patients who are not suitable for ESD or EESD should follow non-ESD/EESD pathways.

Patients who are not suitable for ESD or EESD include:

- Patients who do not have any therapy needs but should have access to emotional support, information, signposting and resources to help them adjust to life after stroke.
- Palliative/End of Life care
- Environment unsuitable,
- Safety issues that prevent discharge (medical, physical, emotional, social and psychological)
- Patient choice
- Care needs that cannot be met at home
- Patients who require a slower stream approach
- Patients who are highly complex and require a specialist rehab bed

Patients in this cohort could go to:

- A rehabilitation bed (level 1-2)
- Remain in an ASU
- A care home bed without therapy

- Specialist home
- Their own home but at risk (no therapy accepted but referral to community support/ third sector for access to emotional support, information etc.)

13 Specialist pathways

Patients with highly complex needs after stroke will require access to non-stroke specific but highly specialist services. A stroke pathway should be designed to ensure there are clear access routes and pathways of care. The following may be required, this list is not exhaustive:

- Spasticity management
- Specialist seating
- Splinting and orthotics
- FES
- Return to work/work retention
- Mental health services
- Medical services – diabetes management, cardiovascular
- Neuro-ophthalmologist
- Neuro-psychology
- Pharmacy
- Support for carers

14 Education and Training

All staff should undertake and maintain regular stroke specific training and core competencies. For example, Stroke Training and Awareness Resources (STARS), Stroke Specific Education Framework (SSEF) or other local models should be implemented and evidenced.

Patient and carers should be signposted to local services to support them with any training needs.

14.1 The Stroke Association

The Stroke Association has over 30 years of experience working with stroke survivors and carers giving them a good understanding of an individual's needs and what a good quality of life means for them. The Stroke Association support stroke survivors and carers to identify their needs and the outcomes that matter to them and they tell them that recovery after stroke becomes less overwhelming with their support.

The Stroke Association's trained and skilled coordinators support people through the ups and downs of their individual recovery journey to help them rebuild their lives. Their services are based on a holistic model of wellbeing and quality of life in the stroke recovery context, and an outcomes framework co-produced with stroke survivors and carers. Individuals tell the Stroke Association that they value their holistic approach; the way they listen; the accessible way they explain things; the continuity of their support; the way they proactively encourage and support progress; and the way they draw on experience to help people better understand their situation and manage their recovery.

The Stroke Association has a range of packages that can be funded in a specific area to support the long term needs of stroke survivors and their families including;

- Stroke Recovery Service
- Emotional Support
- Communication Support
- Post Stroke Reviews (including 6 Month Reviews)

Further information, resources and support for patients and carers can be found on the Stroke Association website: https://www.stroke.org.uk/

14.1.1 Table 4: Stroke Association Services Provided in the West Midlands

The table below shows the services that are currently provided in each STP area in the West Midlands. The Stroke Association has a range of packages that can be funded in a specific area to support the long term needs of stroke survivors.

STP	Area	Stroke Association Services			
		Stroke Recovery Service (SRS)	Post Stroke Review including 6 Month Reviews	Emotional Support	Communication Support
Birmingham & Solihull	North Birmingham	Yes	Yes *(For approx. 300-400 strokes; Not QE as they complete them)*	No	Yes *(included in SRS model)*
	South Birmingham	Yes (combined with above)	No	No	Yes *(included in SRS model)*
Black Country & West Birmingham	Dudley	No	No	No	No
	Wolverhampton & Seisdon Peninsula	No	No	No	No
	Sandwell & West	Yes	Yes	No	No
Coventry & Warwickshire	Coventry & Rugby	Yes *(not Rugby)*	Yes *(not Rugby)*	No	No
	North Warwickshire	Yes	No	No	No
	South Warwickshire	No	No	No	No
Herefordshire & Worcestershire	Hereford	No	No	No	No
	Worcester	Yes	No	No	Yes *(included in SRS model)*
Shropshire, Telford & Wrekin	Telford	No	Yes	No	No
	Shropshire	Yes	No	No	No
Staffordshire & Stoke on Trent	Stoke	Yes	No	No	No
	North Staffordshire	Yes	No	No	No
	South Staffordshire	No	No	No	No

15 Regional Recommendations

The West Midlands CVD Clinical Network and West Midlands ESD & Rehabilitation Working Group make **6 key regional recommendations** as follows;

1. Equitable funding of standard ESD and CST

All standard ESD and community stroke rehabilitation teams to be sufficiently staffed to enable safe 7 day service provision; Commissioning bodies should ensure standard ESD is available to all patients who meet the criteria as outlined in this document. Patient and public involvement should be included as part of any review or development of services.

2. Whole Pathway Commissioning

The working group recommends that a whole pathway view is undertaken, and that ESD and EESD are not commissioned in isolation from HASU, ASU, CSU, RSU, CST and long term follow up services. This is supported by the National Stroke Programme and National Director for Stroke, which/who takes a whole pathway approach.

3. Community follow-up

Whilst under the care of a stroke specific team or stroke rehabilitation team patients should be re-assessed in the community on a regular basis as per their clinical need by a stroke specialist, have therapeutic care plans and access to therapists.

Following discharge from rehabilitation services stroke patients should have the opportunity for regular review, advice and support with the option of re-referral to stroke specific therapy if clinically appropriate; this could be provided by a range of NHS or third sector providers.

4. Step down services

6 weeks before patients leave the ESD service; it is recommended that where there is a clinical need, patients should then enter Community Stroke Team (CST) /Step down Services without any delay.

5. Discharge to Assess (D2A)

The D2A pathway or other similar pathways could be inappropriate for stroke patients as they may prevent continuity and fragment the stroke care pathway. The pathway for ESD should not run alongside D2A/other similar pathways unless the full stroke pathway can be provided without disadvantaging patients, carer's and families.

6. Primary care and community support

Direct access or Telemedicine for GPs and rehabilitation teams; this would allow contact with a designated stroke physician (for example, a rehabilitation consultant).

16 Next Steps

In order to support the aforementioned system-wide issues and ensure improvement plans are initiated, the West Midlands CVD Clinical Network will support teams, STPs and CCGs to achieve equitable and sustainable 7 day services across the region. Standard ESD gap analysis will feed into STP level reports and local recommendations/improvement plans.

The network intends to facilitate training and annual ESD & rehabilitation events to share best practice, knowledge, and quality improvement; working in collaboration with Health Education England and Local Authorities to establish a learning network as requested by the working group.

The WM CVD Clinical network will perform 'deep dive' assessments into rehabilitation teams and regular reviews to support the continuous improvement cycle.

Teams are advised to use this regional guidance to support local discussions to improve access to 7 day services.

17 Appendices

17.1 References & Resources

Action Plan for Stroke in Europe 2018 – 2030 (2018) *online: https://actionplan.eso-stroke.org/*

Chouliara N *et al.,* (2014): Implementing evidence-based stroke Early Supported Discharge services: a qualitative study of challenges, facilitators and impact. *Clinical Rehabilitation, 28 (4), 370-377*

Cobley CS *et al.,* (2013): A qualitative study exploring patients' and carers' experiences of Early Supported Discharge services after stroke. *Clinical Rehabilitation, 27 (8), 750 – 757*

Fisher RJ *et al.,* (2011): A consensus on stroke – Early Supported Discharge. *Stroke, 42, 1392-1397*

Fisher RJ *et al.,* (2016): Is Stroke Early Supported Discharge still effective in practice? A prospective comparative study. *Clinical Rehabilitation, 30 (3), 268-276*

Langhorne P & Baylan S (2017): Early supported discharge services for people with acute stroke (Review). *Cochrane Database of Systematic Reviews.*

London Strategic Clinical Networks http://www.londonscn.nhs.uk/wp-content/uploads/2015/06/str-service-spec-esd-062015.pdf

National Stroke Care Pathway (Professor Tony Rudd) *online: https://www.strokeaudit.org/SupportFiles/Documents/miscellaneous/Stroke-Services-Guidance-for-STPs-on-recommended-s.aspx*

NHS Long Term Plan (2019) *online: https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf*

NHS Midlands & East (2012): Stroke Services Specification *online: https://www.england.nhs.uk/mids-east/wp-content/uploads/sites/7/2018/03/final-stroke-spec.pdf*

NHS East Midlands Cardiovascular Network (2012/2013): Early Supported Discharge Service Specification *online: https://www.england.nhs.uk/mids-east/wp-content/uploads/sites/7/2018/03/stroke-early-supported-discharge-specification.pdf*

NICE (2013): Stroke Rehabilitation in Adults; Clinical Guideline CG162 *online:* https://www.nice.org.uk/guidance/cg162

NICE (2016): Stroke in Adults; Quality Standard QS2 *online: https://www.nice.org.uk/guidance/qs2*

SSNAP: https://www.strokeaudit.org/Documents/National/PostAcuteOrg/2015/2015-PAOrgNationalEAVPhase2.aspx

Stroke Association (2015): Current, future and avoidable costs of stroke in the UK: Executive summary Part 2: Societal costs of stroke in the next 20 years and potential returns from increased spending on research *online: https://www.stroke.org.uk/sites/default/files/costs_of_stroke_in_the_uk_report_-executive_summary_part_2.pdf*

Stroke Association (2016): A New Era for Stroke *online: https://www.stroke.org.uk/sites/default/files/anefs_report_web.pdf*

Stroke Association (2018): State of the Nation *online: https://www.stroke.org.uk/resources/state-nation-stroke-statistics*

NHS
West Midlands
Clinical Networks

Terms of Reference

NHS England West Midlands ESD & Rehabilitation Working Group

Supporting the delivery of the Stroke STP Working Group & Stroke Expert Advisory Group work programme

Document management

Document filename: NHSE Stroke West Midlands Review Group - Terms of reference			
Directorate / programme	Medical	**Project**	NHSE West Midlands ESD & Rehabilitation Working Group
Document reference			
Programme manager	Victoria Millward	**Status**	DRAFT
Owner	Carron Sinter	**Version**	0.1
Author	Sarah Rogers	**Version issue date**	[Publish Date]

Revision history

Version	Date	Summary of changes
0.1		

Reviewers

This document must be reviewed by the following people:

Reviewer name	Title/responsibility	Date	Version
Carron Sintler	Project Lead	28/06/2018	0.1
Victoria Millward	Head of CVD Clinical Network WM	28/06/2018	0.1
Dr Sissi Ispoglou	Clinical Lead stroke physician	28/06/2018	0.1
NHSE West Midlands ESD & Rehabilitation Working Group		28/06/2018	0.1

Approved by

This document must be approved by the following people:

Name	Signature	Title	Date	Version
Dr Sissi Ispoglou		Clinical Lead		
Dr Kiran Patel		Medical Director NHSE WM		
Stroke EAG				

Document control

The controlled copy of this document is maintained by NHS England. Any copies of this document held outside of that area, in whatever format (e.g. paper, email attachment), are considered to have passed out of control and should be checked for currency and validity.

Outline Terms of Reference

NHSE West Midlands ESD & Rehabilitation Working Group

1. Background

Early supported discharge (ESD) and rehabilitation are vital parts of the stroke care pathway that enable patients to increase their independence and function through access to various specialist therapeutic interventions, Currently in the West Midlands there is inequitable care and variable access to services both in the acute and community sectors.

2. Purpose

The West Midlands ESD & Rehabilitation working group will act as an expert consultative body for the provision of ESD pathways and a strategy for increasing the percentage of patients discharged with ESD. It will advise on wider system issues regarding the provisions of community services for the stroke population of the region.

3. Governance

The West Midlands ESD & Rehabilitation Working Group will be managed and supported by NHS England (West Midlands) CVD Clinical Network on behalf of the West Midlands STPs. The Clinical Lead will report to the Stroke Expert Advisory Group (EAG) and Stroke STP Review Group.

4. Membership

- The core membership of the West Midlands ESD & Rehabilitation Working Group will comprise of:
    - Carron Sintler - Project Lead
    - Dr Sissi Ispoglou - Clinical lead
    - Sarah Rogers - Project Manager & Project Support
    - Core specialist professions from each STP.
        - Occupational therapy
        - Physiotherapy
        - Speech and language therapy
        - Dietitian
        - Psychology
        - Stroke medicine
        - Stroke Nurse
        - Social services

Other professional groups such as pharmacy, ophthalmology and general practice, for example, will be approached where expert opinions are required.

Quoracy to be determined

5. Deputies

By agreement of the Chair.

6. Voting Members

All members as described in the Membership above.

7. Frequency of Meetings

The West Midlands ESD & Rehabilitation Working Group will meet at a frequency required by the programme of work defined at the outset. Initially the group will meet face-to-face on a monthly to bi-monthly basis with fortnightly virtual meetings if required.

At least 6 weeks advance notice shall be provided when organising meetings in order to enable clinicians to reschedule clinical commitments and attend.

Urgent matters arising between meetings: In the event of an urgent matter arising between meetings that cannot wait for resolution until the next scheduled meeting the Chair in consultation with the CVD Clinical Network will convene a virtual or real meeting with at least 2 other members to take such action as is necessary.

8. Core Activities

Primary objectives to deliver the aforementioned purpose of the work group include:-

- Development of a proposed model of ESD across the West Midlands
- Proposed pathway for rehabilitation & community pathways across the West Midlands (STP specific)
- Produce a good practice model for increasing ESD
  Proposed pathways for non-ESD patients, for example, severe or highly complex patients requiring in-patient rehabilitation, or end of life care

9. Communication

Upon request it is expected that the membership, remit and minutes of the group will be shared with the STP group, Stroke EAG, NHSE DCO team and hence Regional Office of NHS England and any constituent organisations.

10. Conflict of Interests

All conflict of interests (pecuniary and non-pecuniary) must be declared and notified to the Chair in advance of any meetings. Members will be asked to withdraw by the Chair from any items that involve a conflict of interest.

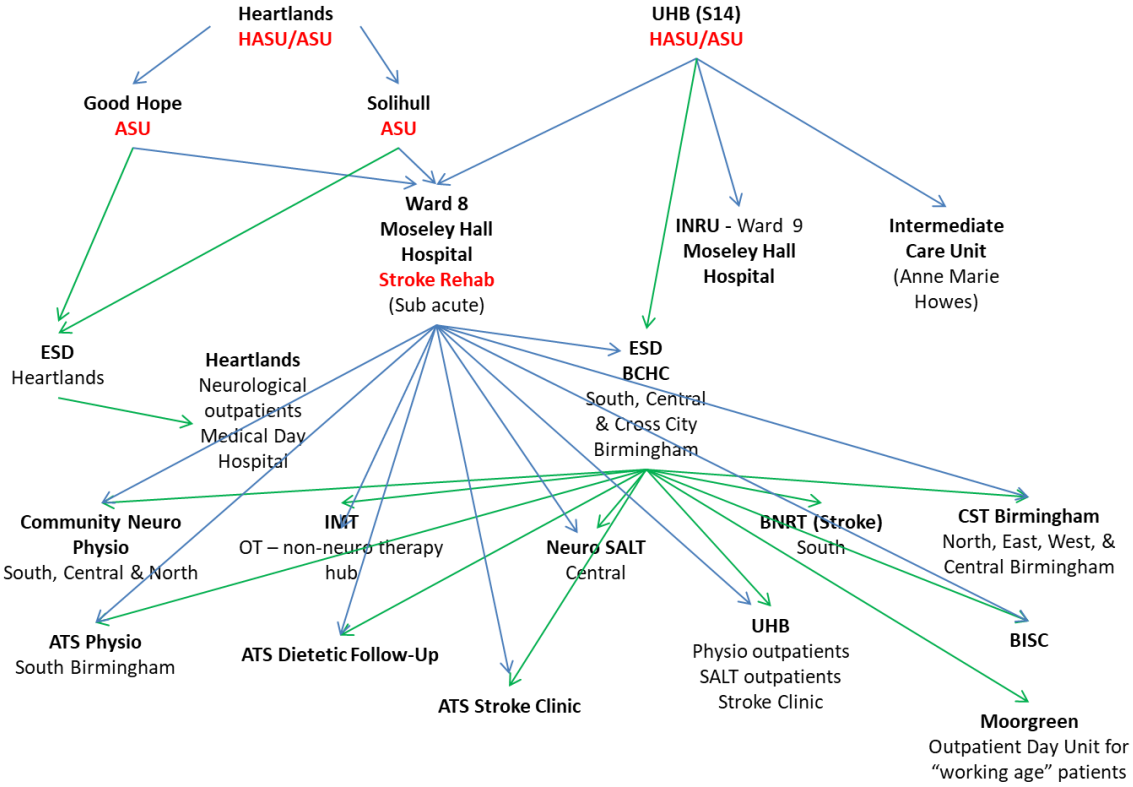
11. Review

These terms of reference will be reviewed annually or sooner if required.

Membership of the group will be reviewed and appointed to annually in line with these Terms of reference

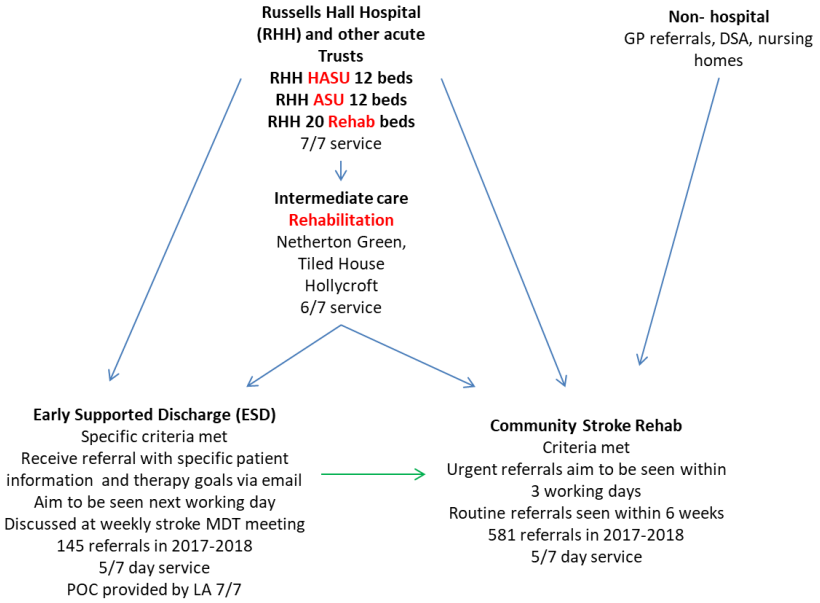
17.3 Referral Pathways in the West Midlands (2018)

17.3.1 Birmingham & Solihull STP

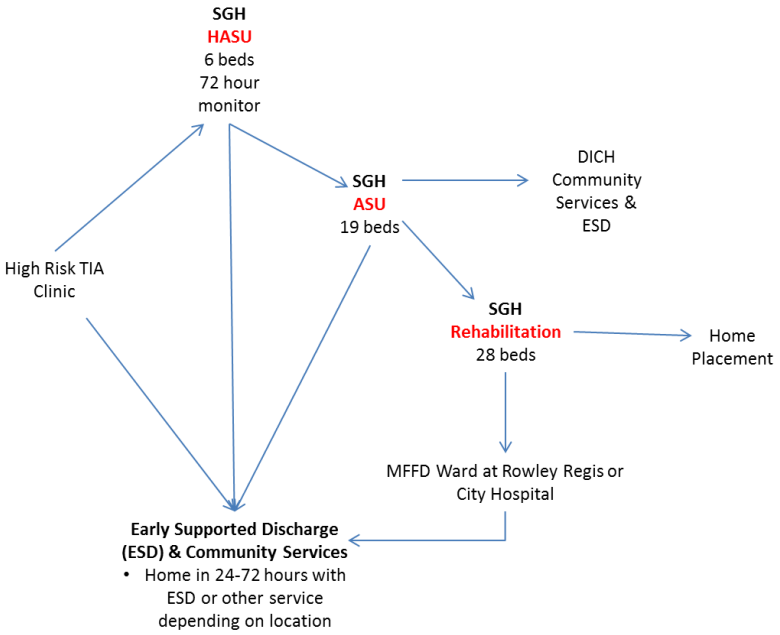


17.3.2 The Black Country & West Birmingham STP

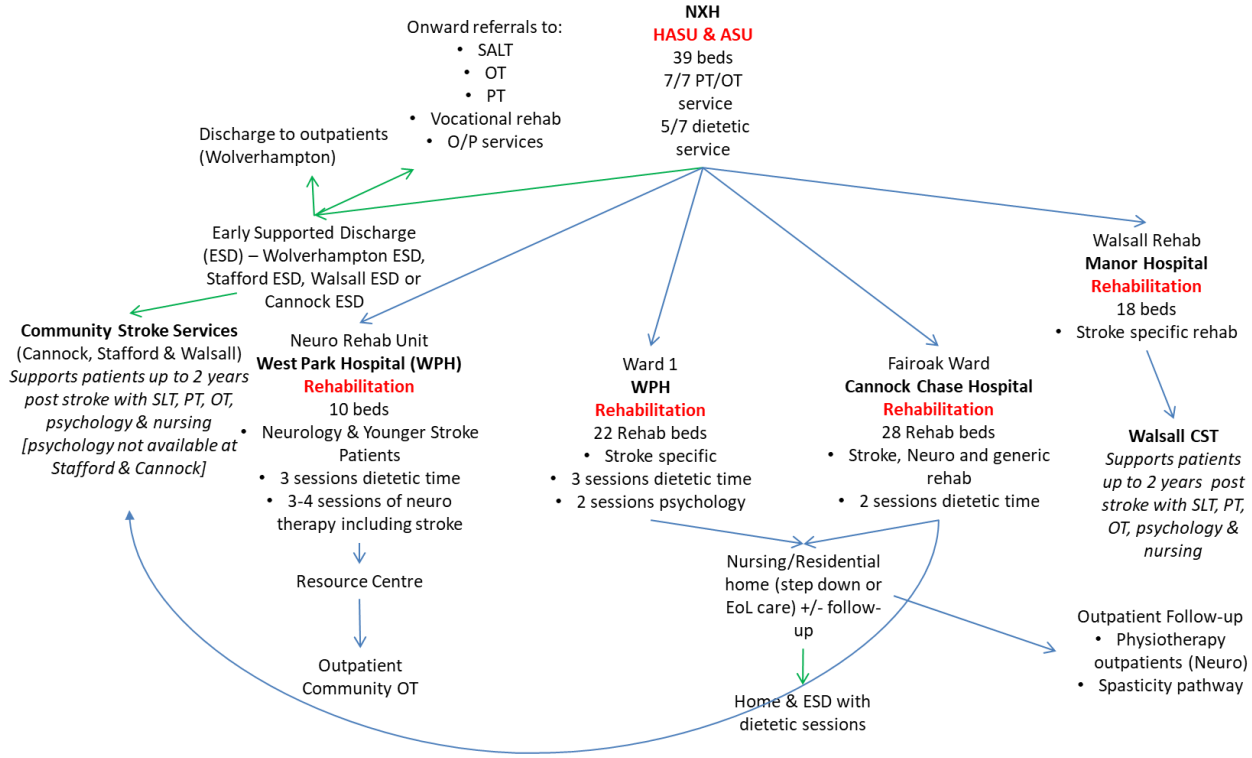
Pathway for Dudley Group Foundation Trust ESD and Community Stroke Rehab within Dudley Rehabilitation Service (2018)



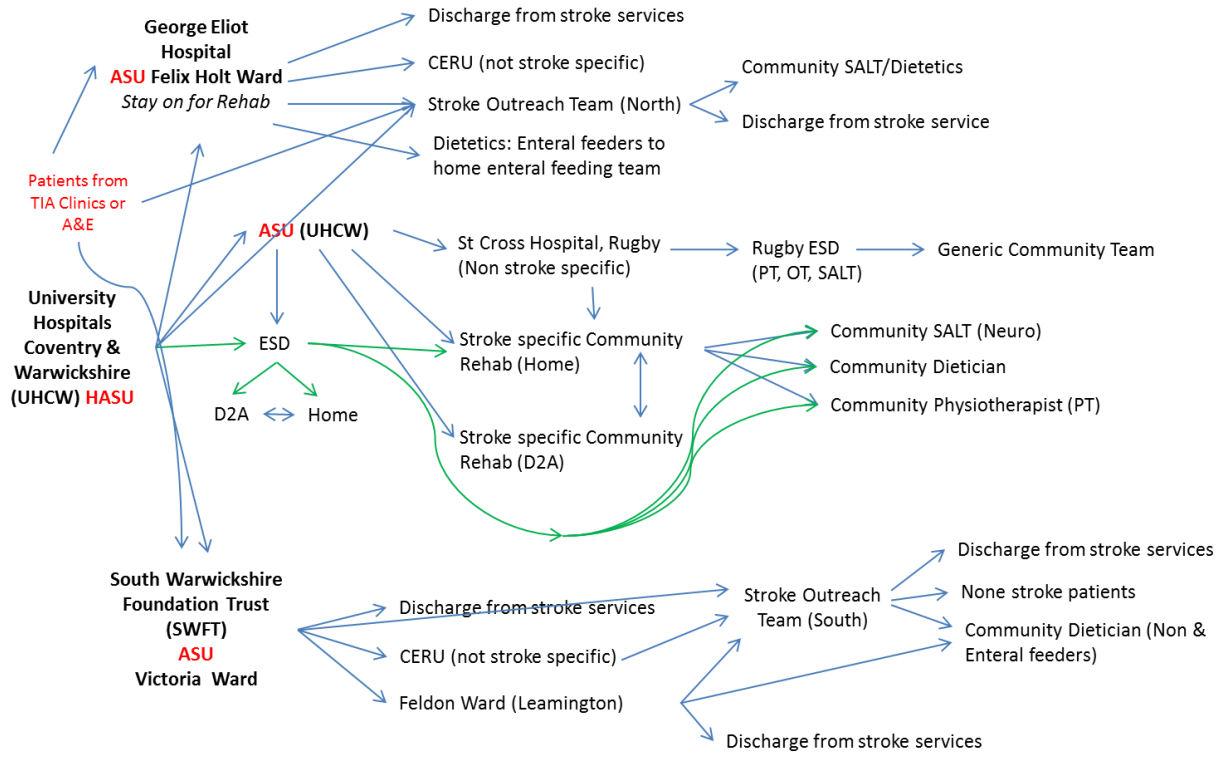
Pathway for Sandwell General Hospital (SGH; 2018)



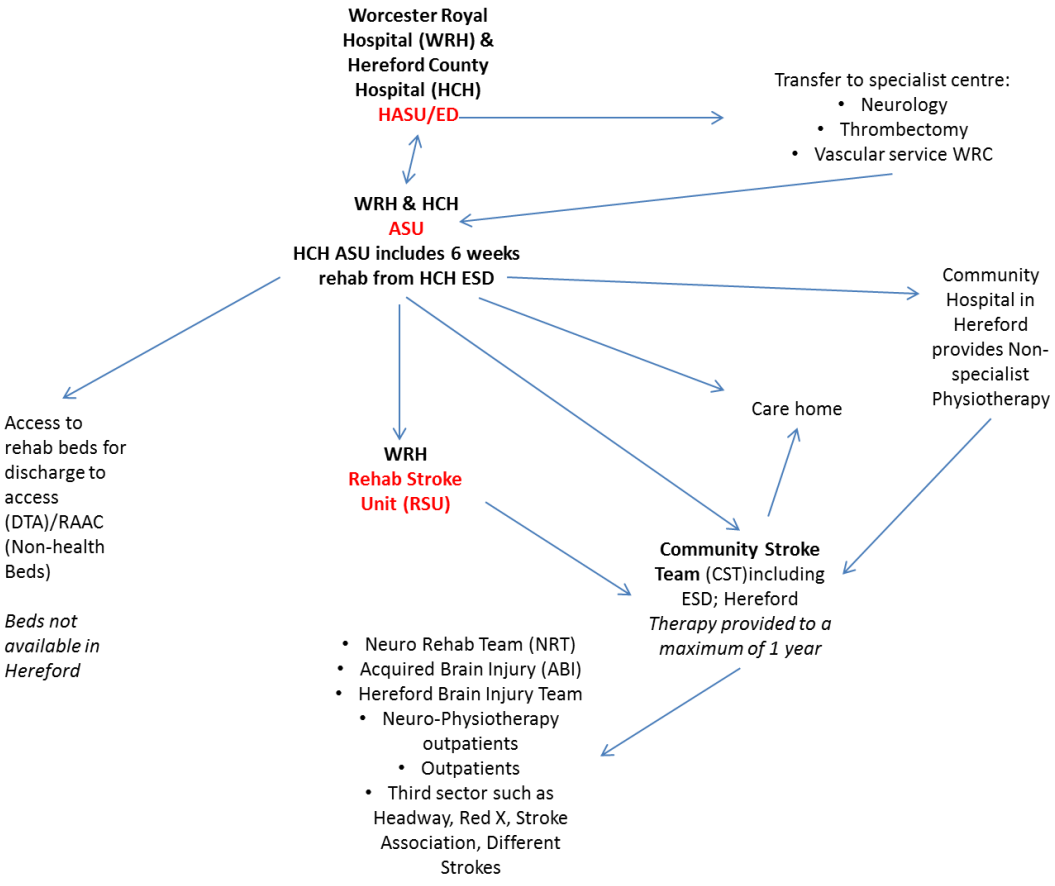
Pathway for Wolverhampton & Seisdon Peninsula ESD Team (2018)



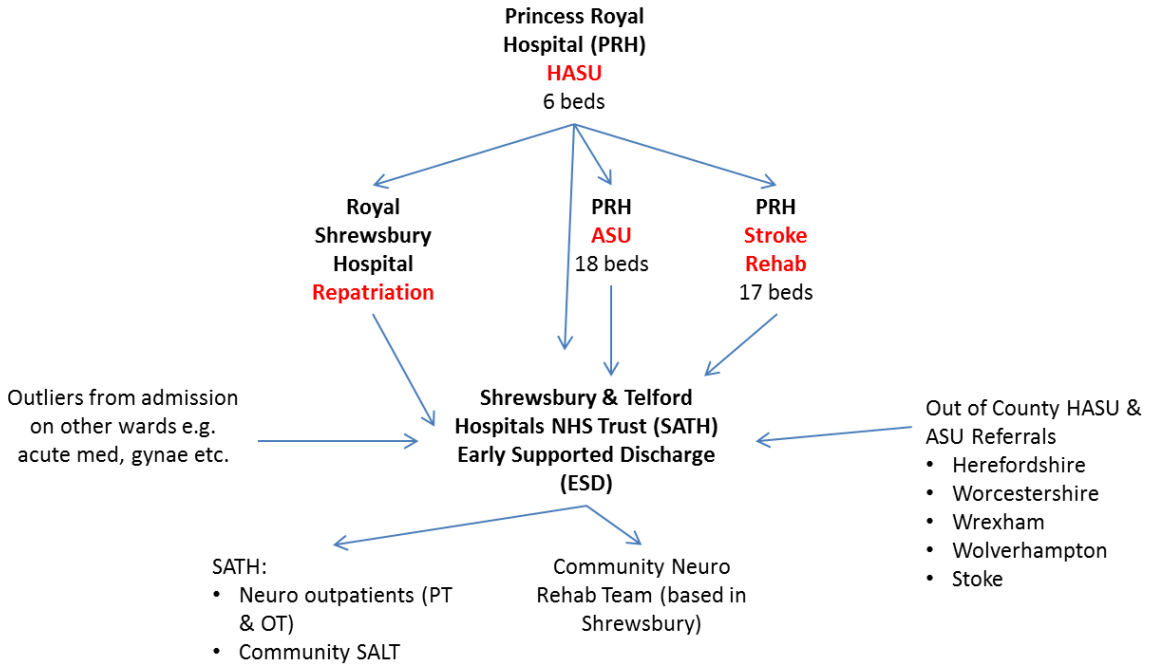
17.3.3 Coventry & Warwickshire STP



17.3.4 Hereford & Worcester STP



17.3.5 Shropshire, Telford & Wrekin STP



17.3.6 Staffordshire and Stoke on Trent STP