

# Transformation of stroke services in Kent and Medway

## Purpose of briefing

The purpose of this briefing is to update the Kent Health and Overview Scrutiny Committee (HOSC) on the transformation of stroke services in Kent and Medway.

## Background on the reconfiguration of acute stroke services

The Kent and Medway Stroke Review was commissioned in 2014 in response to concerns by Kent and Medway Clinical Commissioning Groups (CCGs) about the performance and sustainability of hospital stroke services across all units in Kent and Medway. The CCGs and hospital trusts were tasked with developing proposals to improve outcomes for patients, reducing deaths and disability.

The review recommended a model of care involving specialist stroke services consolidated at three hospitals, each with a hyper-acute stroke unit (HASU) and an acute stroke unit (ASU), to ensure rapid access to specialist staff, equipment, and imaging to improve quality and outcomes for patients.

HASUs enable patients to have rapid access to the right skills and equipment and be treated 24/7 on a dedicated stroke unit, staffed by specialist teams. Following a stroke, a patient will be taken directly to a HASU where they will receive dedicated expert care, including immediate assessment, access to a CT scan and clot-busting drugs (if appropriate) within 30 minutes of arrival at the hospital.

ASUs are for subsequent (after 72 hours) hospital care. These units offer ongoing specialist care with seven-day therapies services (physiotherapy, occupational therapy, speech and language therapy and dietetics input) and effective multi-disciplinary team (MDT) working.

Public consultation on the proposal was undertaken in 2018 and the decision to establish HASU/ASUs in Dartford, Maidstone and Ashford was made the following year. Following a review into the decision-making process, the Secretary of State granted approval to proceed in November 2021.

Since the NHS decision in 2019, there have been three emergency temporary changes to stroke services in Kent and Medway:

- Tunbridge Wells Hospital stroke service transferred to Maidstone Hospital in September 2019 due to staffing challenges.
- In April 2020, in response to Covid, East Kent Hospitals University Foundation Trust (EKHUFT) transferred its stroke services at William Harvey Hospital (WHH) and Queen Elizabeth the Queen Mother Hospital (QEQM) to the Kent and Canterbury Hospital (K&C). The stroke service remains at Canterbury at this time.
- Medway Hospital stroke service closed in July 2020 due to staffing challenges. The majority of stroke patients that would previously have gone to Medway Hospital are now going to Maidstone Hospital with a small number going to Darent Valley Hospital.

The programme will be delivered in two phases with Dartford and Maidstone going live in 2024 and East Kent as soon as the works are complete. Business cases for the associated works and staffing for Phase 1 were agreed by NHS Kent and Medway in January 2024.

## Progress to date

Details of the planned timescales for developing the three HASUs in Kent and Medway are shown in **Table 1**:

**Table 1: Timescales for developing the three HASUs**

Site	Works	Completion of capital works (as confirmed by Trusts)
<b>Dartford</b> Darent Valley Hospital (DVH)	Refurbishment of existing and additional space	June 2024
<b>Maidstone</b> Maidstone Hospital (MGH)	Refurbishment of existing and additional space	March 2024
<b>Ashford</b> William Harvey Hospital (WHH)	Extension and refurbishment	To be confirmed

The reconfiguration is being funded by the Kent and Medway health system from the capital allocation over a multi-year period. Monies to commence the capital works were released early to accelerate progress.

Phase 1 capital works are nearing completion at Dartford (June 2024) and Maidstone (end March 2024). The go-live dates for these units will be dependent on recruitment of the additional staff to deliver the new model of care. Posts will be filled from April 2024.

The East Kent scheme is being delivered as a second phase.

## Activity review

The original activity assumptions outlined in the outline business case (OBC) were agreed in December 2017. The consolidation of stroke services onto three sites through the temporary moves has provided the opportunity to evaluate the original activity assumptions.

In 2022 the Clinical Effectiveness Group (CEG) undertook a review of the clinical model and activity assumptions within the OBC to ensure they remain robust.

The review considered the original assumptions around the proportion of activity which would flow from Medway to Dartford and Maidstone. It was apparent that the activity that transferred from Medway was higher than modelled. In addition, Maidstone had received a greater proportion of the activity than originally anticipated, with 85% of the activity transferring to Maidstone instead of the 80% assumed.

The review concluded that the three-year average activity used within the original modelling should be rolled forward to 2019-2021. In addition, it was agreed that the 2020 activity should be adjusted to reflect the national drop in stroke incidence during the start of the covid pandemic (11% from April to June 2020).

The 2019-2021 three-year average primary stroke activity at each of the three sites is detailed in **Table 2**.

**Table 2: Revised inpatient activity figures**

	Avg 2019-2021			
	DGT	EKHUFT	MTW	Total
Stroke activity	807	1,267	1,148	3,222
TIA	81	127	115	323
Mimics	186	291	264	741

## Bexley activity

The Kent and Medway catchment area will alter following the establishment of a HASU at Dartford as it will be quicker for Bexley patients to access the stroke service at DVH.

The 2022 activity review included updating the travel time analysis of the South East London area. A modelling exercise was undertaken to look at the shortest travel time from each Lower Super Output Area (LSOA<sup>1</sup>) in SE London to local HASUs. The sites reviewed were DVH in Dartford, Princess Royal University Hospital (PRUH) in Orpington and Kings College Hospital in Denmark Hill. The outcome of the updated travel time analysis was in line with the 2017 analysis.

It has been agreed that:

- The pathway for patients with a suspected stroke in Greenwich, Lewisham and Bromley remains unchanged, and patients from these populations will continue to be cared for at a London site
- Patients in Bexley currently treated at Kings College Hospital in Denmark Hill will continue to be treated at this site as it is hypothesised that the primary reason for these patients being treated there is not travel time
- 100% of Bexley patients currently seen in DVH and PRUH will be included in the scope for the Kent and Medway catchment area.

## Impact of the updated inpatient activity

The impact of the updated activity means that a further 13 beds are required across Kent and Medway than that previously agreed. The greatest impact on bed numbers is at MTW which has increased to 49 beds. Bed numbers at DGT remain the same following a reduction in the activity that will transfer from Bexley.

**Table 3: Impact of the updated bed model**

	DGT			MTW			EKHUFT			K&M		
	HASU	ASU	Total	HASU	ASU	Total	HASU	ASU	Total	HASU	ASU	Total
Activity refresh	10	24	34	14	35	49	15	39	54	39	98	137
Activity in OBC	10	24	34	11	27	38	15	37	52	36	88	124
Increase	0	0	0	3	8	11	0	2	2	3	10	13

<sup>1</sup> An LSOA is a geographical area. LSOAs were designed to improve the reporting of small area statistics in England and Wales. They have a minimum population of 1,000 and mean population of 1,500. Each postcode in the UK can be mapped to an LSOA.

## Impact on workforce

As part of the reconfiguration of acute stroke services in Kent and Medway, significant investment in the workforce has been agreed to support the new units. The model requires staffing 24 hours a day, seven days a week by a multidisciplinary team of medical, nursing and allied health professionals, as well as effective management and support teams.

In 2020, DGT and MTW received investment for the additional activity resulting from the withdrawal of the stroke service in Medway. The staffing gap to HASU levels at the two sites reduced as a result. There is a total gap of 81.76 whole time equivalents (wte) across the staff groups between the three providers (DGT 22.13wte, MTW 22.6wte and EKHUFT 37.27wte). The bulk of the posts required are registered nurses and therapists.

Each provider has developed detailed recruitment plans to fill the posts. Plans include employing 'grow your own' strategies' through career progression and development, local and international recruitment and collaborating with local universities.

## Phase 2: East Kent

Establishment of the unit in East Kent was scheduled for March 2026; however, the scheme is delayed, and this timeline is no longer achievable.

In December 2023, the ICB Acute Stroke Reconfiguration Steering Group agreed to undertake a gateway review of the Phase 2 programme to gain assurance on the delivery of the East Kent scheme. The gateway review formed a formal governance step focussed on the project management of the scheme. The review was undertaken based on information provided by EKHUFT.

### **The objectives of the review were:**

- To review the current delivery strategy
- To ascertain the funding requirement and affordability of the scheme
- To ensure the scheme remains value for money.

### **Outcome of the gateway review**

The group concluded that there had not been sufficient progress to be assured on the development of the East Kent scheme. In the absence of confirmed solution, confirmed costs for the programme and no confirmed timeline for delivery of the works, the group could not recommend funding early recruitment to HASU/ASU staffing levels at this stage.

Simultaneous recruitment across all three units had been agreed by the Joint Committee of CCGs in 2019 to mitigate the risks of the phased implementation of the programme. The ICB continues to be committed to the development of the East Kent HASU but is unable to provide any additional funding until further assurance on the delivery of the scheme is received.

### Next steps

A recovery plan is now required to support delivery of the East Kent scheme to meet the conditions of the gateway review. The ICB will work with EKHUFT to address the key challenges and develop the plan. Current works on the scheme will cease until the recovery plan is agreed.

Feedback on the outcome of the gateway review has been shared by the ICB with EKHUFT to support development of the recovery plan. Details of the plan, including a revised timeline for go-live of the unit will be provided to members of HOSC once EKHUFT have provided sufficient plans to pass the gateway.

### Sentinel Stroke National Audit Programme (SSNAP)

Data is collected on individual trust performance by the Sentinel Stroke National Audit Programme (SSNAP), which is a national healthcare quality improvement programme based at King’s College London. SSNAP measures the quality and organisation of stroke care in the NHS and is the single source of stroke data in England.

Data from Stroke Sentinel National Audit Programme (SSNAP) in **Table 4** demonstrates the improvement across provider organisations following the temporary consolidation of services. Further improvements are anticipated following the implementation of the three HASUs.

**Table 4: SSNAP ratings pre and post consolidation of stroke units**

Hospital	Dec 16 Mar 17	April Jul 17	Aug Nov 17	Dec17 Mar 18	Apr Jun 18	Jul Sep 18	Oct Dec 18	Jan Mar 19	Apr Jun 19	Jul Sep 19	Oct Dec 19	Jan Mar 20	April Jun 20	Jul Sep 20	Oct Dec 20	Jan Mar 21	April Jun 21	Jul Sep 21	Oct Dec 21	Jan Mar 22	April Jun 22	Jul Sep 22	Oct Dec 22	Jan Mar 23	April Jun 23	Jul Sept 23
DVH	D	D	D	E	D	D	D	D	C	D	D	D		C			D	C	B	B	B	B	C	C	B	B
QEQM	D	C	D	D	D	D	D	D	D	C	D	D														
WHH	C	B	B	B	B	C	C	D	D	C	D	D														
K&C														A			A	A	A	B	B	B	A	A	A	A
MGH	A	A	B	B	B	B	A	A	B	B	C	D		A			A	A	B	B	B	A	B	A	A	A
TWH	C	C	C	C	C	B	C	B	C	C																
MMH	D	D	D	E	E	E	E	D	D	D	E	E														

Temporary emergency service transfer  
 Clinical audit was suspended for the duration of this quarter.

The ISDN is focused on making continual improvement across all aspects of the stroke pathway. Positively, there has already been improvement in SSNAP ratings related to the consolidation of the workforce onto three sites and the standardisation processes

in the acute part of the pathway. Scores reduced over the winter period due to operational pressures but have since increased.

**Table 5: SSNAP key indicators July – Sept 2023**

Indicator	National	Kent & Medway	DGT	EKHUFT	MTW
% of patients scanned within 1 hours of clock start	59.3	76.1	66.2	95.6	70.1
Median time between clock start and scan (hours:mins)	0:43	0:24	0:41	0:15	0:31
% of patients directly admitted to a stroke unit within 4 hours of clock start	49.5	71.3	49.2	84.9	79.8
% of all stroke patients given thrombolysis (all stroke types)	11.4	13.0	15.4	14.3	12.5
% of patients who were thrombolysed within 1 hour of clock start	61.0	73.0	60.0	80.6	72.7
% of patients assessed by a stroke specialist consultant physician within 24h of clock start	84.0	91.4	92.3	98.8	96.2

### SSNAP review

The SSNAP dataset is being revised to better reflect updated clinical standards (National Clinical Guideline for Stroke April 2023, and NICE guidelines October 2023). Changes to SSNAP included separating the inpatient, community and six-month assessment datasets to reflect the differences in care delivered in these periods. These changes will provide clearer and more appropriate community indicators, enabling further improvement opportunities.

The changes will come into effect from July 2024, with the first report published in December 2024. Scoring on the new measures will not start until July 2025 to give teams time to adapt to the new dataset.

At a national level, discussions are ongoing with stroke service providers across the country regarding the development of a reporting mechanism to enable a pathway view. This would enable the ability to assess the impact of the pre-hospital pathway

on outcomes. Work is also ongoing nationally to ensure the reporting of outcomes by locality as well as by provider.

### **Clinical improvements in East Kent:**

The stroke team is committed to delivering further improvements in stroke care and improving outcomes along with patient and carer experience. The temporary consolidation of services on one site ahead of the move to WHH has contributed to the significant improvements in processes of care and outcomes in East Kent, such as:

- Significant reduction in door to scan times. Nationally only 59.36% of patients are scanned within an hour, compared to 95.6% at EKHUFT, with a median scan time of 15 minutes compared to 43 minutes nationally (SSNAP July – Sept 2023).
- Significant reduction in adjusted mortality. This is now the lowest in the South East and second lowest nationally.
- EKHUFT, in partnership with SECamb, developed telemedicine triage of patients by the stroke medical team prior to the patient being conveyed to hospital. The result of the triage is that the patient is directed to the most appropriate care pathway, such as the Stroke Unit, Emergency Department, TIA clinic or follow up by GP without need for hospital attendance.
- New assessment and triage arrangements within the UTC at K&C has resulted in an improvement in door to needle time for thrombolysis in ischemic stroke. The median time is 41 minutes from clock start to thrombolysis compared to 53 minutes nationally (SSNAP July – Sept 2023).

The planned move to WHH will build on these improvements further by ensuring compliance with the national standards and align with the DMBC recommendations i.e. co-located with an Emergency Department.

### **Kent and Medway Integrated Stroke Delivery Network (ISDN)**

The ISDN was established in Kent and Medway in 2021 following the introduction of the National Stroke Service Model (2021). The aim of the ISDN is to bring people and organisations together to deliver the best possible care for their population. ISDNs include providers and commissioners of services across the whole stroke pathway. ISDNs are responsible for designing and delivering optimal stroke pathways, which will ensure that more people who experience a stroke receive high-quality specialist care, from pre-hospital, through to ESD, community specialist stroke-skilled rehabilitation and life after stroke.

### **Key ambitions**

- Best practice personalised stroke pathways configured and managed from pre-hospital care onward, including ambulance, thrombectomy, ESD and six-month reviews, and then building to cover the entire pathway from prevention through to life after stroke.
- A flexible, future-proofed competency-based stroke workforce, supported by a skills and capabilities framework and toolkit.
- A comprehensive dataset that meets the needs of clinicians, commissioners and patients in capturing care quality and outcomes.

The ISDN has recently refreshed its infrastructure to reflect the maturing needs of the network. New clinical leadership has been appointed and the network is now led by Dr Peter Maskell, Medical Director of West Kent Health and Care Partnership (HCP). The new infrastructure removes duplication, creates clear programmes of work linked to the network's priorities and strengthens the patient voice through the Carer and Patient Advisory Group (CPAG). The revised infrastructure is currently being rolled out and has received a positive response.

## **ISDN programme of work**

### **Transient ischaemic attack (TIA) seven-day services**

The development of seven-day TIA services is an ISDN priority. Scoping work has recently begun to identify the workforce and diagnostic capacity and investment that will be required. This will determine the timeline of the improvement work as there is likely to be workforce constraints. The ISDN will build upon the workforce plan associated with the HASU/ASU reconfiguration. There will also be interdependencies and potential opportunities associated with the development of the Community Diagnostic Centres across Kent and Medway.

### **Early supported discharge (ESD) and rehabilitation**

As a result of the emergency temporary changes to the acute stroke services detailed earlier in this paper, the existing ESD and community rehabilitation service providers also had to adapt a range of their pathways and service configurations to support those changes. Our community providers and partners are working hard to meet the recently published National Clinical Guidelines for Stroke (April 2023). It is clear there is variation in service delivery and funding across acute and community settings. The recent updated guidance provides benchmarking information to support systems to commission and configure services to consistently better meet patient needs. There are workforce gaps to be addressed but there is also poor-quality data linked to how current services are configured. This includes shortcomings associated with the ESD and community rehabilitation elements of the national SSNAP database.

The ISDN has established a workstream to focus on ESD and community rehabilitation services across Kent and Medway. The group is currently undertaking a gap analysis across the current service delivery in comparison to the recent guidance requirements. It is likely the improvement plan will be phased to take account of the current financial constraints in the system as well as the workforce challenges.

The network plans to present this phased improvement plan to the ICB and the Integrated Care System (ICS) partners in Q1 of 2024/25. This plan will include ensuring the ICB and ICS are aware of the full costs and resource implications associated with meeting the new guidance. There is no indication that further national funding will be provided to deliver the new guidance. As a result, the improvement plan will include a phased and prioritised approach over a number of years. This improvement approach will also make best use of opportunities associated with digital developments as well as ensuring innovative approaches to addressing workforce gaps.

### **Stroke Quality Improvement for Rehabilitation (SQuiRE) catalyst projects: Time to Care and vocational rehabilitation**

Following successful expression of interest (EOI) applications over the past 18 months, Kent and Medway has been awarded two allocations to test change within local ESD and community rehabilitation services.

The Time to Care catalyst project aims to embed consistent data administration support and validation processes into each community stroke team. The investment will fund a data analytics and data quality improvement manager to develop a timely and accurate system-wide standardised dataset. This dataset will inform community provider processes to improve data compliance and quality (including SSNAP and national ISDN key performance indicators) and deliver efficiencies. In addition, clinicians within the community will be freed up to concentrate on care delivery.

The recruitment of the data analytics and data quality improvement manager is to commence in April. The relevant community providers are preparing this now.

The vocational rehab project sets out to deliver a timely, structured vocational rehabilitation service to stroke survivors of working age in Medway and Swale. The project is anticipated to start in March 2024 and will run for 12 months. The final report on the outcomes of the project will be completed March 2025. The project team will establish links with employers in the local area who may be able to assist with return-to-work programmes, run a six week return to work programme to improve work related skills and improve current knowledge and confidence of staff within stroke services in delivering vocational rehab.

The team has successfully recruited to occupational therapist (OT) post for commencement in April 2024.

## **Life After Stroke**

The ISDN is working with the Stroke Association on a potential test for change project, focussed on equitable access to life after stroke support. The model of support will reach people across Kent who have had a stroke diagnosis, and provide equitable access to a stroke key worker, within the six-month follow-up post-stroke review for those affected by stroke.

All those recently affected by stroke will be proactively contacted to start a personalised support journey and will have access to 1:1 support from a stroke key worker.