



Greater Manchester
Neurorehabilitation & Integrated
Stroke Delivery Network

ANNUAL REPORT

2023-24

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Foreword



Dr Shivakumar Krishnamoorthy

Hospital Clinical Director

The past 12 months have absolutely flown by, and I continue to be impressed by how closely those involved in Greater Manchester's stroke and neurorehabilitation services work with each other. Our annual conference in March reminded me that we are fortunate to have such dedicated and passionate people working with us and I remain extremely grateful for their commitment in improving local care for our patients.

We remain a clinically driven network, allowing us to access the very best local expertise to help prioritise and inform our wide-ranging programme of service improvement. I'm very proud of our clinical leadership team and our collective achievements with all the teams, clinicians, patient groups and stakeholders which is reflected in detail within this report. Earlier in the year our Board agreed to update our leadership model so we can deliver our new strategy for 2024-26.

I would like to thank Tracy Walker for supporting me as the network's Community Clinical Director, and for her huge contribution over the years. Tracy stepped down in March 2024 after 8 years in the role, and I know that without her drive and enthusiasm we wouldn't have made such incredible progress in pioneering and implementing specialist community services. Our patients and their families have benefited from her vision, and our clinicians from her expertise and support. She will be missed but her legacy lives on.

I would also like to extend my gratitude to Clinical Leads Jenny Harrison (Inpatient Rehabilitation) and Louise Worswick (Nursing) who ended their tenures in March and December 2023 respectively. We also said goodbye to Fatema Mullamitha (Community Stroke) in May 2024 and Janice Mackenzie (Psychology) in June 2024 and will be advertising for new Leads in the Summer.

The environment around us is still in flux as the region's Integrated Care Partnership continues to bed in. However, I know that we will continue to adapt and grow to ensure our patients receive some of the best rated and most well-developed stroke and neurorehabilitation services in the country.

Nick Davis & Mike Carpenter

Patient & Carer Group Chairs



Nick reflected:

We merged the stroke and neurorehabilitation Patient and Carer Groups in January, and it has been an illuminating experience. Although members have different neurological conditions, we were able to highlight similar experiences and challenges; but at the same time also see the differences.

The meetings with everybody together have gone very well so far, and we have all learnt much from each other. We have many plans for the future including creating new working groups as well as looking at ways to get more people involved.



Mike reflected:

Having worked with the Patient and Carer Group for some time now, I have seen a lot of different perspectives highlighted in the projects that we have been involved with. Often, our members have been able to feed in direct lived experience of the services we are looking to enhance, but the thing that always stands out the most is when I hear one of the project leads say, *"that's a really good insight, we hadn't thought of that."*

As a patient (or carer) we can take for granted that those who are delivering these services take all eventualities into account - even if they have time to workshop an improvement - but it happens time and time again where a discussion with the group gives an initiative a push into (hopefully) the right direction.



1. Our continued evolution as a network

Since merging the Greater Manchester stroke and neurorehabilitation networks in late 2021, we have continued to develop and grow. Our belief that the specialties are stronger when they work together has proven to be correct, with many of our quality improvement projects encompassing both clinical areas. Our programme of work has benefited from focusing on the needs of patients and their carers/families, rather than neurological diagnoses, especially in rehabilitation and longer term support. This needs based, multi speciality approach to improving neurological care is fairly unique in the country, and we continue to emphasise its benefits in our work with NHS England (NHSE) and other regions.



Tracy Walker

In March 2024, Tracy Walker, our Community Clinical Director stepped down after 8 years in the role. Tracy has been hugely influential in the field of neurorehabilitation for many years, and was instrumental in shaping the Integrated Life After Stroke Service (ILASS) model that was incorporated into the national stroke model. Her passion and vision ensured that we implemented ILASS in all boroughs by 2022, a feat achieved nowhere else in the country as yet. Since merging networks, she has also led implementation of a similar specification for the other neurological conditions with a focus on data and measuring change.

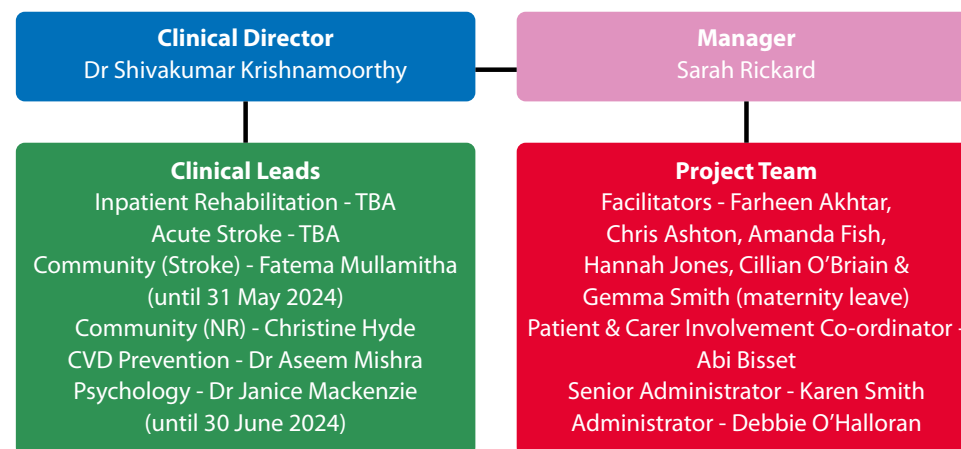
This year, we said goodbye to Louise Worswick (Nursing Clinical Lead) and also Jenny Harrison (Inpatient Rehabilitation Clinical Lead) as both reached the end of their tenures. Our Community Stroke Clinical Lead Fatema Mullamitha stepped down in May 2024, with Dr Janice Mackenzie (Psychology) ending her tenure in June 2024.



Louise Worswick



Jenny Harrison



Following these departures, in March 2024 our Board approved a refreshed clinical leadership and we will be appointing to roles in 2024. As part of the changes, our Hospital Clinical Director Dr Shivakumar Krishnamoorthy will continue as our sole Clinical Director and we plan to re appoint the Inpatient Rehabilitation and Community Stroke Clinical Leads whilst creating a new role to support Acute Stroke. We will also create new Clinical Associate roles that will tap into local expertise for specific projects or leadership of subgroups. Our approach will continue to focus on providing local clinicians with clinical leadership experience to support movement into more senior or advanced roles.

In September 2023, we were delighted to welcome Jackie McShane, Stepping Hill Hospital's Director of Operations, as the new Chair of our Board. She replaced Sue Toal who retired at the end of the month and we would like to extend our gratitude for her many years of service in this role.



During the past year, we have reviewed and clarified the different roles within the network team to help maximise our efficiency. Although there is some overlap with our clinically qualified Facilitators, in general our clinical leadership support:

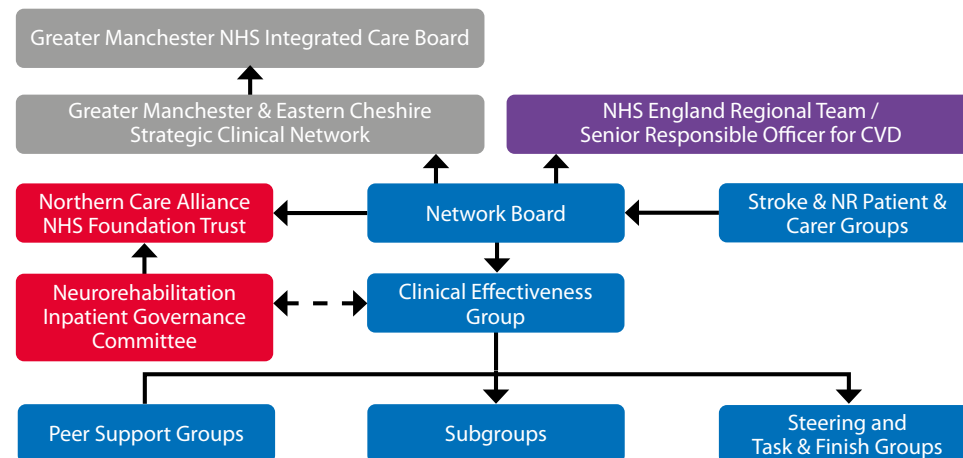
- Horizon scanning and engagement with other clinical leaders or relevant groups/forums to advise on best practice and the latest evidence base
- Providing expert clinical advice to:
 - Identify and prioritise projects with reference to emerging local/national clinical priorities
 - Support development and sign off of project plans and clinical aspects of project planning and approach

The network team

Our Facilitators manage and deliver projects in line with agreed plans using effective change and project management approaches. The team is supported by our Administrators who, amongst many other things, ensure meetings are well organised and our invoices paid.



The network team



Our team support delivery of a large programme of quality improvement projects via a number of subgroups that are overseen by our Board, with more clinical and governance matters dealt with at our Clinical Effectiveness Group. We also support a number of peer support groups for professionals including Dietitians and Community Nurses.

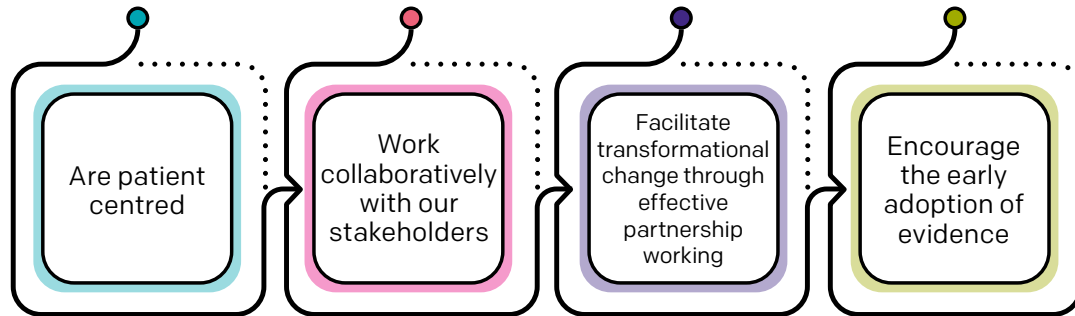
Subgroups

- Community Neurorehabilitation Forum
- HASU Forum
- Neurorehabilitation Inpatient & Community Forum
- Sector Forums
- Cardiovascular Disease Prevention Subgroup
- Rehabilitation Subgroup
- Workforce Development Subgroup



2. Our vision and strategy

Our purpose is to bring key stakeholders together to facilitate a collaborative approach to service improvement of stroke and community neurorehabilitation care. We aim to support the development of high quality local services to achieve the best outcomes and experience for our patients. We:



We actively engage with patients and carers to ensure their voices are heard, working closely with relevant voluntary sector organisations, and you will hear more about this later in the report.

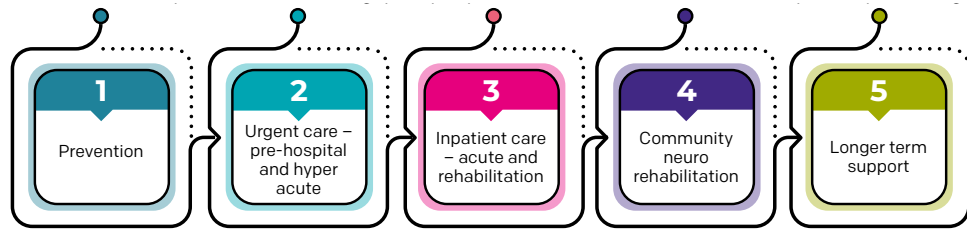
In March 2024, our Board approved a new strategy to take us through to 2026. It outlines how we will meet our aims and objectives by:

- Providing robust clinical and programme leadership and support
- Facilitating quality improvement of our local care pathways in line with the national service models and other relevant guidelines/policies
- Ensuring the patient and carer voice is heard in service development
- Supporting the transformation programme for inpatient neurorehabilitation services to ensure there is a whole pathway approach
- Supporting wider system initiatives to prevent cardiovascular disease (CVD)
- Ensuring full engagement with the Sentinel Stroke National Audit Programme (SSNAP) and support for performance management of our local services
- Leading workforce development initiatives to help manage system capacity and demand
- Horizon scanning and ensuring evidence based, innovative practice is at the heart of our services



3. Our progress during the year

The main focus of the network is delivering a clinically relevant, patient centred quality improvement programme for local stroke and neurorehabilitation pathways of care. Given the ongoing financial challenges in the Greater Manchester health and social care system, we have shifted our emphasis to supporting improvements that are cost neutral or require limited new resource. The “low hanging fruit” often centres on upskilling and training staff, improving communication and information sharing between teams and/or patients or adapting ways of work to improve efficiency.



Our portfolio of projects is diverse and covers the whole patient journey for stroke as well as community and longer-term support for neurorehabilitation. Where possible, we try and include both care settings and specialities and actively engage with the voluntary sector and stakeholders such as local authorities and other NHS services.

We are actively engaged with the Greater Manchester Integrated Care Partnership’s transformation of inpatient neurorehabilitation services which restarted in 2023 following the pandemic. During 2024/25, we will continue to support bolstering of our community neurorehabilitation teams, so that the programme can be fully realised. We are also supporting wider efforts to reinforce services provided by the Devonshire Intermediate Neurorehabilitation Unit (INRU) in Stockport, and help facilitate closer working between the inpatient services.

To ensure we prioritise change that really matter to patients, carers and their families, we involve members of our Patient and Carer Group in determining our strategy and direction.

	Prevention	Stroke Urgent Care	Stroke Acute Care	Rehabilitation	Longer Term Support
NATIONAL RECRUITMENT (STROKE)	Patient information and engagement is consistent throughout the single system via a patient passport Data and information are digital, interactive and accessible to all, across the whole system Systems are aligned across the full pathway with strong clinical and network leadership Modernised and upskilled workforce are recruited in line with system need				
	Improve detection, primary and secondary prevention	Effective, rapid pre-hospital pathway Increased availability of thrombectomy and thrombolysis	Clear transfer pathways Seven day nursing and therapy services	Comprehensive neurorehabilitation via a specialist multi-disciplinary team	Comprehensive rehabilitation and personalised care with support for as long as the persons needs it
GM/ISDN SYSTEM IMPROVEMENTS & DELIVERABLES	<ul style="list-style-type: none"> Support GM ICP CVD prevention programme Implement monitoring AF post stroke/TIA utilising technology in stroke units Improve quality of TIA clinics including developing 7 day services Standardise ESUS pathways Improve Sleep Apnea diagnosis and treatment Support referral for PFO closure Ensure screening for diabetes in clinics Education of professionals, especially in behavioural change 	<ul style="list-style-type: none"> Explore assessment tools and use of telemedicine in pre-hospital phase Update pre-hospital pathway and use of exclusions Review NWS transfers and response times and work to educate staff Monitor IVT rates and support improvement of access through changes in culture and practice at HASUs Support implementation of CT Perfusion at HASUs Monitor sustainability of model in light of emerging evidence 	<ul style="list-style-type: none"> Enhance discharge processes and engagement with social care Improve in reach into NR inpatient services Implement My Stroke document Implement Patient Pass referral system for stroke Optimise pathway for South Manchester stroke patients Support timely stroke repatriation and mitigations Improve stroke swallow screen and continence pathways Ensure basic care on wards including falls prevention 	<ul style="list-style-type: none"> Increase intensity and frequency of therapy Support improvement in psychology recruitment, staffing and practice Improve pathways in cardiac and facial rehabilitation, FND, neurogenic bladder and bowel, spasticity including splinting, NR paediatric transition, OOHCA, seating/wheelchairs, vestibular rehabilitation, visual impairment and vocational rehabilitation Work collaboratively to develop pathways in MND, MS and other NR conditions 	<ul style="list-style-type: none"> Pilot life after stroke model and develop pathways in North Manchester Roll out life after stroke pilot learning and toolkit in other GM localities Develop model for NR longer term support and pilot in localities
	Implement a step change in patient and carer involvement and continue to foster effective working relationships and collaboration with the voluntary sector Identify and reduce health inequalities across the care pathway Collect, analyse and report data to drive service improvements and performance Actively engage and involve local, regional and national stakeholders to encourage collaboration and sharing of best practice Support workforce development via training programmes for professionals, supporting retention and recruitment of staff, developing new roles and facilitating peer support groups Develop and deliver greater engagement and participation in research/innovation and implementation of evidenced based practice				

A summary of our work programme





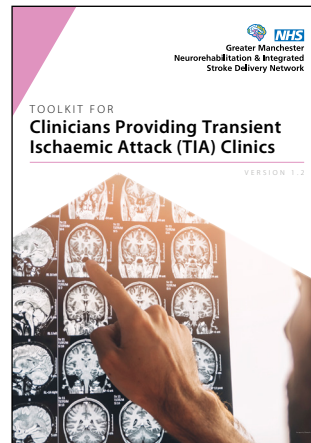
3.1 Stroke prevention

Following the pandemic and resulting increase in health inequalities, CVD prevention has become a national and regional priority, with a quarter of deaths now linked to cardiovascular poor health. Efforts are centred on early detection and treatment of Atrial Fibrillation (AF), high blood pressure (BP) and cholesterol, with better diagnosis and management of diabetes also a focus.

Our CVD Prevention Clinical Lead Dr Aseem Mishra (co-appointed with the Strategic Clinical Network's cardiac programme) continues to lead our efforts in this area. The Greater Manchester Integrated Care Partnership launched a Multiyear Prevention Plan in Spring 2024 which takes a comprehensive and whole system approach to prevention. We have played our part in supporting local initiatives often focused on primary care and population health, whilst managing our own projects targeted on reducing the risks of CVD in stroke survivors and following a Transient Ischaemic Attack (TIA).

We have established our own CVD Prevention Subgroup to oversee these projects:

- Implementing AF monitoring post stroke/TIA in our Hyper Acute Strokes Units (HASU)
- Improving the quality of TIA clinics and developing 7 day services
- Improving and standardising Embolic Stroke of Undetermined Source clinics
- Supporting timely diagnosis and treatment of Obstructive Sleep Apnoea
- Improving referral to the Patent Foramen Ovale closure service
- Educating professionals to help patients reduce their risk factors



In March, we launched a toolkit to support stroke unit teams in managing TIA. The document focuses on ensuring we make every contact count through more effective management of the clinical risk factors and also encourages staff to develop skills around sustained behavioural change to support healthier lifestyles such as exercise, alcohol consumption and diet. We will be developing a similar document for General Practice and you can download the toolkit and find out more about our TIA services [here](#).



Our community stroke nurses enjoyed finally meeting Dr Philip Lewis in person

It was fantastic for some of the nurses involved with our [Blood Pressure Monitoring@Home initiative](#) to finally meet the clinical expert Dr Philip Lewis in person. The team were attending the Greater Manchester & Eastern Cheshire Strategic Clinical Network's HeartOfTheMatter conference at the Etihad Stadium in September. The event brought together professionals from across the region to discuss how we can collaborate more effectively in preventing CVD.

Many of our teams get involved in promoting CVD prevention, with stroke staff at Bolton NHS Foundation Trust coming together with patients in October to take on a special walking challenge. Affectionately nicknamed the 'stroke warriors', ten stroke survivors took part in a sponsored walk on the track at Leverhulme Park. Family, friends and staff lined the track to cheer them on as they completed their individual target distances, which celebrated their determination to recover. More than £8,000 was raised for the Community Stroke Team.



Patients celebrated their recoveries to raise money for Bolton stroke services





3.2 Stroke urgent care (1 of 2)

Pre-hospital pathway

Being taken to the right hospital first time by ambulance is central to ensuring patients are diagnosed and treated quickly following a stroke. Our quality improvement work centres on robust and rapid clinical assessment by pre-hospital staff, timely ambulance conveyance to hospital and effective inter-hospital transfers.

In the past year we have undertaken a comprehensive review of the pathway which has only had minor amendments since it was launched in 2015. The revised pathway will be launched in July in collaboration with the North West Ambulance Service. We also hope to publish the final report of the pre-hospital triage pilot that we helped facilitate with Salford Royal Hospital in 2022/23.

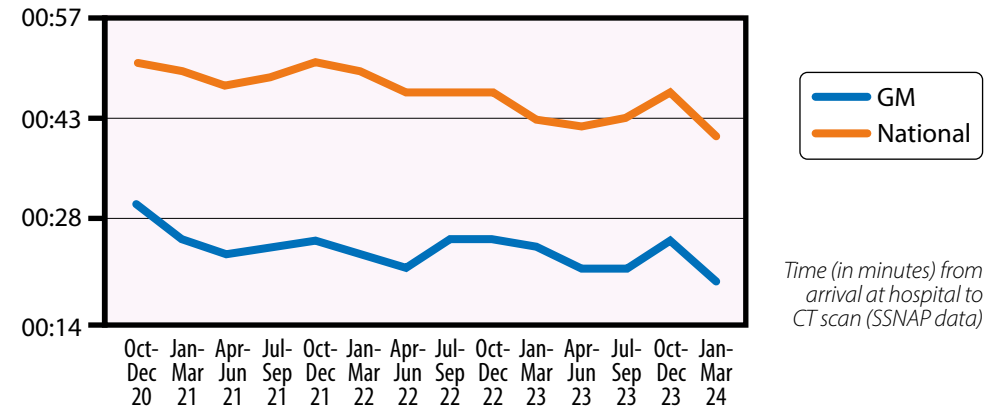


Hatzola provides ambulance services to people in Prestwich

Hatzola is the Hebrew word for save or rescue. In the UK there are seven Hatzola chapters with Greater Manchester's primarily covering the Prestwich and Broughton Park Jewish communities - although the service is open to people who are not Jewish. In May, our Facilitator and Paramedic Chris Ashton spent the morning training and educating their pre-hospital responders about stroke in general, recognition of stroke and the Greater Manchester care pathway. Chris commented:

This was a fantastic opportunity to help educate responders in more detail than they had previously been exposed to. It will help reduce time on scene for this community of patients and ensure the responders feel more educated to make informed timely decisions when trying to recognise a stroke

Hyperacute



Our hyper acute clinical pathway continues to ensure that our patients are provided with excellent care that saves lives and increases the chances of recovery. Data from SSNAP shows that the region continues to deliver urgent care that consistently tracks above the national average across most key elements. For example, our HASU hospital sites scan brains on arrival twice as fast as the rest of the country – averaging just over 20 minutes in 2023.

In May we audited our three hyper acute services against the staffing recommendations in the [National Clinical Guideline for Stroke \(2023\)](#). We found that no HASU offered 7 day access to therapeutic rehabilitation (all offer for assessment) or were staffed sufficiently for nursing or psychology, however, all complied with medical staffing recommendations. Therapy, dietetics and orthoptics were also understaffed in one or more HASU. Our audits help benchmark services and allow teams to develop business cases within their organisations to secure further funding for posts.



3.2 Stroke urgent care (2 of 2)



Our clinical summit for HASU staff was well attended in July

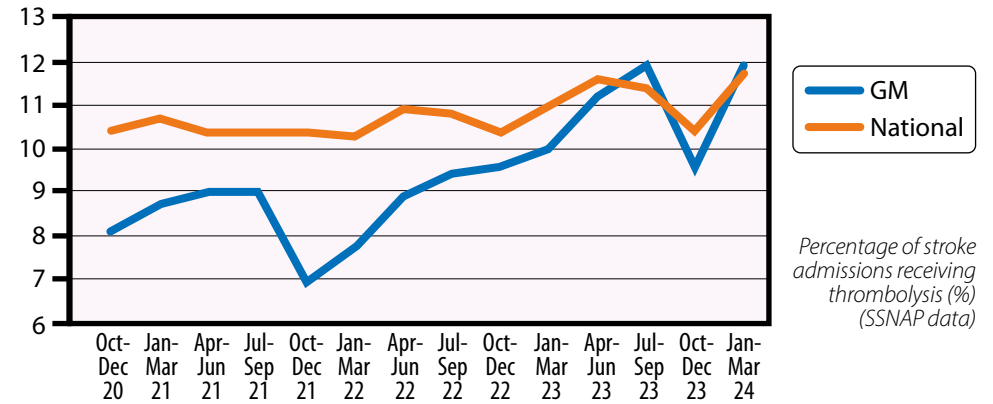
In July, the network hosted a clinical summit to explore how teams can work together to improve access and delivery of two time critical interventions: thrombolysis and thrombectomy. The event included stroke doctors, nurses, radiologists and managers from our three HASU sites who heard presentations from the national stroke team's Drs Deb Lowe and David Hargroves, local lead Dr Khalil Kawafi plus insights from a high performing service in Basingstoke.



The Salford team delivers a 24/7 thrombectomy service

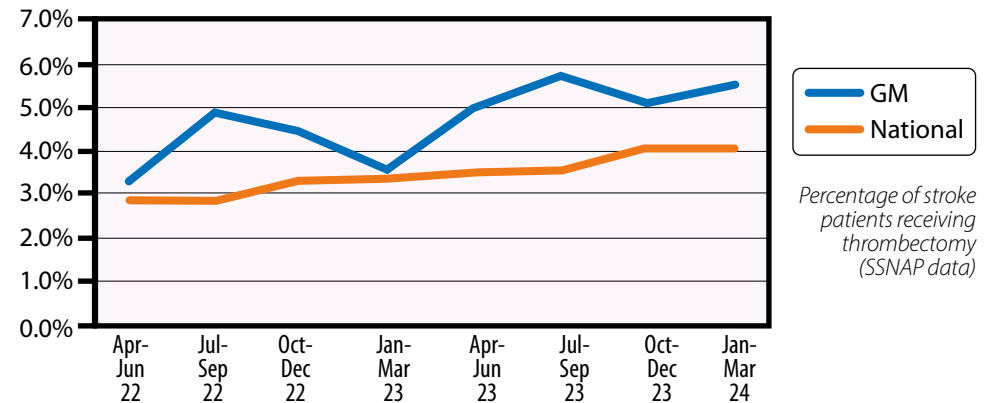
Following some great discussion, teams identified key areas of development including implementation of CT Perfusion imaging for both interventions. This will help identify more patients who would benefit and ensure we comply with the latest recommendations in the [National Clinical Guideline for Stroke \(2023\)](#). There was also significant discussion on working to change the culture in stroke teams to encourage a less risk averse attitude to giving thrombolysis. We now thrombolys

12% of patients, in line with the national average, with rates increasing over time.



Residents in Greater Manchester have had access to a 24/7 regional thrombectomy service since March 2022, with the number of procedures performed growing each year. 216 cases were carried out during 2023/24 or around 5% of total stroke admissions, and well above the national average of 3%. Work will continue in the coming years to ensure at least 10% of admissions receive the intervention as this would make the UK comparable with other similar countries.

In October, Salford Royal Hospital began piloting CT Perfusion for “wake up” stroke patients – a key requirement of the [National Optimal Stroke Imaging Pathway](#). During 2024, this imaging modality will be further rolled out to all HASUs and for a more extended time window during the day.





3.3 Stroke acute care (1 of 2)

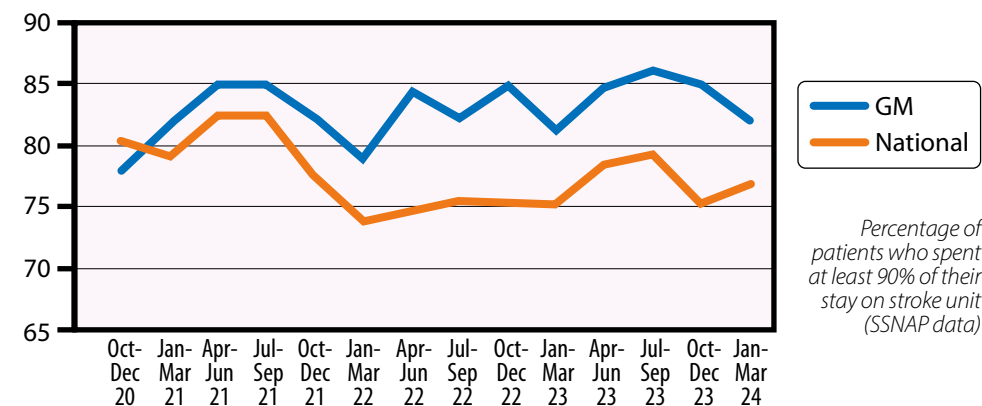
Our stroke units provide both acute care and also inpatient rehabilitation and all services meet most or all of the key elements of the [NHSE National Stroke Service Model](#). As with many other NHS services, the pandemic caused significant disruption to the region's stroke care although most have now recovered to providing pre pandemic levels of care."

Our stroke units have worked hard in the past two years to restore stroke services to pre pandemic levels. We have returned to having 6/9 stroke units rated as 'A' or 'B' on SSNAP during 2023/24 with our three HASUs rated 'A' in most reporting quarters.

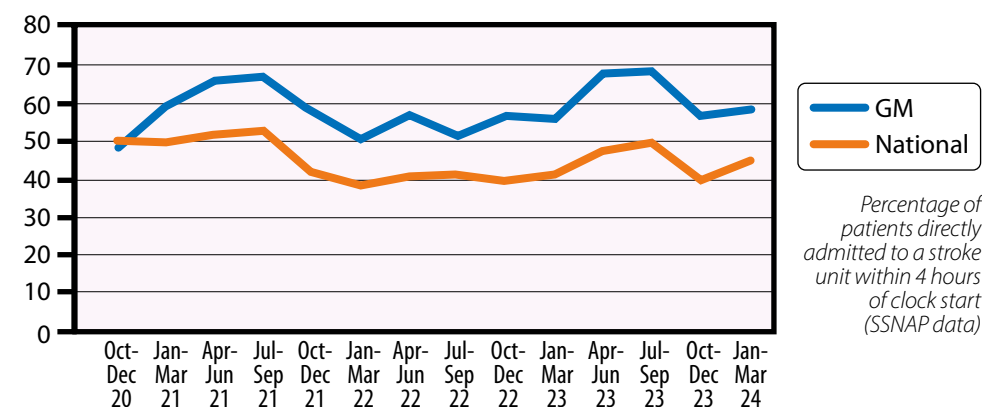
	Jan-Mar 2020	Apr-Jun 2020	Jul-Sep 2020	Oct-Dec 2020	Jan-Mar 2021	Apr-Jun 2021	Jul-Sep 2021	Oct-Dec 2021	Jan-Mar 2022	Apr-Jun 2022	Jul-Sep 2022	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023	Jul-Sep 2023	Oct-Dec 2023
Fairfield (HASU)	A	A	A	A	A	A	A	A	B	A	A	B	B	A	A	B
Salford (HASU)	A	A	A	A	B	A	B	B	A	A	A	A	A	B	A	A
Stepping Hill (HASU)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Trafford	A	B	B	B	A	A	B	A	B	B	B	B	B	B	C	B
MRI	B	B	B	C	D	B	C	D	C	D	D	C	B	B	B	C
Bolton	B	B	B	C	C	B	D	C	D	D	C	C	C	C	B	C
Wigan	B	X	C	X	D	C	D	C	D	C	D	D	D	D	D	D
Tameside	C	C	C	C	C	C	D	D	C	B	C	A	A	A	A	A

Overall rating of Greater Manchester stroke units (SSNAP team centred data)

For most of the key metrics for inpatient care, our units track well above the national average. For example, 10% more patients than national stay on a stroke ward for 90% of their admission, with a nearly 20% difference in how many are admitted within 4 hours of arrival at hospital. Both these measures are known to improve patient outcomes.



Percentage of patients who spent at least 90% of their stay on stroke unit (SSNAP data)



Percentage of patients directly admitted to a stroke unit within 4 hours of clock start (SSNAP data)





3.3 Stroke acute care (2 of 2)

The Stroke Association published a national pilot of Patient Reported Experience Measures conducted during 2022 that showed Greater Manchester stroke survivors and carers positively rate many different aspects of our acute stroke services more highly than the rest of the country, with the Stroke Association Recovery Service also valued highly. You can find out more [here](#).

We also audited our acute services in May last year and found similar variation to our hyper acute teams in terms of staffing levels for key professions. None of the teams are yet able to provide therapeutic intervention across 7 days of the week, and no unit met the staffing recommendations for therapy, psychology or orthoptics, with only three having sufficient dietetic support. However, most meet the requirements for medical cover and all but one for nursing.

We continue to support teams in their efforts to secure further funding for staff, with many of our projects focused on working differently or smarter to maximise existing staff time and resource.



Staff in Salford's Stroke Rehabilitation Unit held a bake sale to raise funds on the coronation weekend in May

Our acute based projects in the past year have been focused on:

- Reviewing Discharge to Assess pathways in Bury to ensure patients are discharged to the right bed and specialist support – work is ongoing in Stockport and Wigan with an NHSE funded pilot underway in North Manchester and Trafford (more in next section)
- Implementing My Stroke document (personalised information on discharge) in all stroke units
- Supporting implementation of a system called Patient Pass to enable online referral into Salford Royal HASU
- Optimising the inpatient pathway for stroke patients presenting at Wythenshawe Hospital
- Continuing to support timely stroke repatriation and safe/appropriate use of mitigation steps such as compulsory transfer of patients out of HASUs

Our stroke teams lead their own improvement activities using innovative and patient centred approaches to try and improve the experience and outcomes for their patients. For example, in September, members of the Fairfield General Hospital speech and language team delivered dysphagia training to staff on their stroke rehabilitation wards. It was a great way of sharing knowledge and ensure a multi-disciplinary approach to helping patients swallow after a stroke.



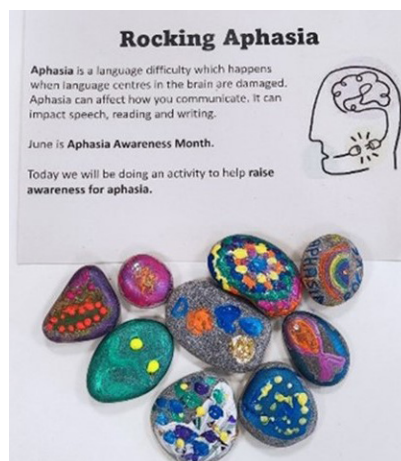
Fairfield General stroke staff were trained on dysphagia by their speech and language team in September



3.4 Inpatient neurorehabilitation

Despite no longer having specific responsibility for the inpatient neurorehabilitation care pathway in Greater Manchester, we remain inclusive and collaborative in our approach to service improvement due to the significant overlap with stroke and community care. Realisation of the region’s inpatient transformation programme restarted in 2023 and the network continues to contribute, especially regarding strengthening of our community services. More recently, we have started to assist stabilising services at the Devonshire INRU. We are also providing expertise to the national neurology transformation programme as we are significantly further ahead than the rest of England in the development and implementation of our community model of care.

Our four services continue to improve the experience of patients on their wards. In June, it was international aphasia awareness month and Trafford INRUs Speech and Language Therapists helped raise awareness with the wider team and patients by running different activities. The notice board in the entrance to the ward was updated with information about aphasia and the therapy team completed a quiz to put their knowledge to the test. To get the patients involved, the team promoted the #RockingAphasia campaign where each patient painted a rock to help raise awareness of the condition.



Trafford INRU helped promote aphasia in June

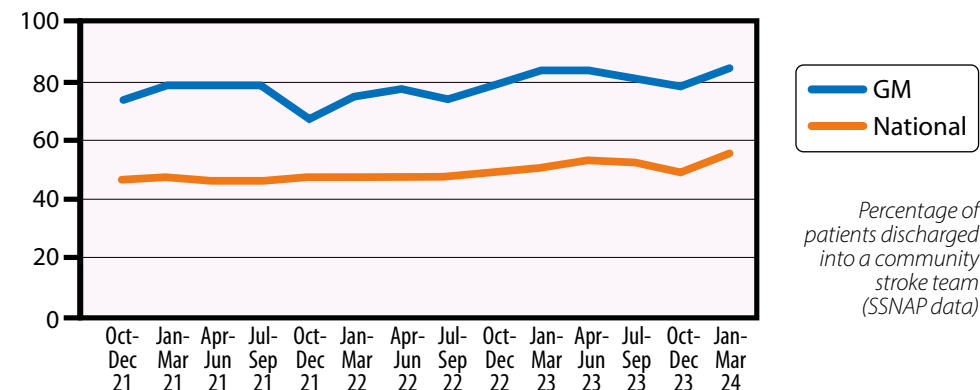
Our community teams have been working closely with local services to improve in reach to facilitate patients being discharged more quickly and safely from hospital. During 2023, we worked collaboratively with Trafford INRU exploring opportunities to share patient information with community teams prior to discharge. This led to a pilot with enhanced communication which has since become business as usual. Later in 2024, we will explore similar opportunities with the other INRUs and inpatient neurorehabilitation ward at Salford Royal Hospital.

3.5 Rehabilitation (1 of 4)

Our stroke units and INRUs provide inpatient rehabilitation, with locality-based neurologically specialist community teams supporting patients at home or in a care home. During 2022/23, we collaboratively updated both stroke and neurorehabilitation community models and associated key performance indicators and continued our performance monitoring of services via regular data collection and reporting as well as via peer review visits to teams.

During 2022/23, we collaboratively updated both stroke and neurorehabilitation community models and associated key performance indicators and continued our performance monitoring of services via regular data collection and reporting as well as via peer review visits to teams.

SSNAP data continues to show that over 80% of our stroke patients are discharged into a community stroke team, almost twice the national average.



Projects in this area are varied and where possible span inpatient and community as well as stroke and neurorehabilitation. Our key areas of focus have been:

- Increasing the intensity and frequency of therapy
- Improving care pathways including Functional Neurological Disorder, neurogenic bladder and bowel, spasticity including splinting, Out of Hospital Cardiac Arrest, seating/wheelchairs, visual impairment and vocational rehabilitation
- Working collaboratively to enhance care pathways in neurological conditions starting with Motor Neurone Disease (MND)
- Supporting improvements in psychological rehabilitation and emotional wellbeing





3.5 Rehabilitation (2 of 4)

The National Clinical Guideline for Stroke 2023 included new rehabilitation recommendations, with a clear expectation of a step change to significantly increase the intensity and frequency of therapy in hospital and community settings. We have developed a number of initiatives to help achieve these aims beyond improving staffing levels. One aspect of increasing the therapy provided is through use of technology and innovations. In May, we were excited to have Dr Kristen Hollands from Salford University deliver a virtual presentation on this topic to our teams entitled *“What is gold standard research and whose job it is to apply it? Adoption of novel interventions, technologies and evidence in stroke rehabilitation”*.



Vestibular rehabilitation helps improve balance which can be affected in those with neurological conditions. There is currently a varied picture across Greater Manchester, with a lack of clarity around pathway access and criteria to services. The network is facilitating a steering group to bring together all of the relevant services including neurorehabilitation, stroke, audiology, vestibular, falls, musculoskeletal to establish a model and map current regional provision. The group will also look to share best practice amongst services/professionals through a series of training and education events.

People with neurological conditions often require specialist seating due to their complex needs. Timely access to the appropriate wheelchair and seating is essential in order to prevent further complications/co-morbidities. We have helped develop a seating toolkit which includes information on North West seating companies, training courses, seating criteria and guidance, assessment documentation examples including Oxford Seating Proforma and pathway examples.

We have continued to work with stroke and neurorehabilitation teams in supporting further development of vocational rehabilitation (VR) services. In the last year we have helped develop a VR toolkit as well as increasing links with outside organisations (voluntary sector and job centres). A North West VR Steering Group has been exploring service delivery models for specialist level VR and a Community of Practice has been established as a quarterly forum for clinicians to meet and share resources, knowledge and skills through discussion of complex cases. A confidence rating scale was completed by attendees at the VR Community of Practice. It showed a 13% increase in clinician confidence in delivering VR interventions over the last year highlighting the benefits and importance of facilitating opportunities for clinicians to meet and discuss complex interventions such as VR.

During the last year we have also launched an updated stroke driving pathway, with information shared on our website and with teams. In 2024, we will finalise a similar version for patients affected by other neurological conditions, with both pieces of work discussed in detail at our Patient and Care Groups.

Since July, the network has been part of a successful pathway improvement collaboration with the Salford Royal MND Care Centre, local community services who support patients and the MND Association (who have funded the partnership). Specific work led by Specialist Dietitian Cristina Federico has been carried out in parallel to improve nutritional care.



We helped organise MND training for teams in 2023 and also 2024





3.5 Rehabilitation (3 of 4)

In October, we helped host a practical training session for local clinicians covering topics including the MND care pathway, psychological care, nutrition, respiratory, communication, advanced care planning as well as the patient and carer experience. A further face to face event was held in Spring 2024 as part of a wider training programme to increase access and provide opportunities for MND professionals to network together. Both training events were rated as Excellent/Good by all attendees with the opportunity to network with other MND professionals identified as a key benefit of the training.

In addition, the network has continued to facilitate a biannual MND Steering Group and has supported even greater MND stakeholder engagement over the last year improving the quality and productiveness of discussions and decision making related to care in the region. Further development of the [MND Toolkit](#) on our website has seen more resources added over the last year ensuring that all clinicians in Greater Manchester has access to a library of resources and webinars to help support and improve their provision of MND care.

The collaboration plans to submit a further funding application to the MND Association to continue the project in 2025/26 with a focus on psychological support and emotional wellbeing.



Stakeholders including those with lived experience met to explore areas for improvement in MS care

Following on the success of the partnership approach in MND, we have started bringing stakeholders together to discuss how to improve local care for those living with Multiple Sclerosis (MS). We estimate there could be many thousands of Greater Manchester residents needing support for this progressive disease and we must do better in joining up healthcare and other services. Work will commence in full later in the year, and we will share the learning on improving care for other neurological conditions.

Our Clinical Lead for Psychology Dr Janice Mackenzie has continued to support improvements in emotional wellbeing and cognition in hospital and community stroke and neurorehabilitation teams. In the past year she has supported the recruitment and retention of Psychologists, upskilling non-specialist staff, harmonising clinical practice amongst professionals and encouraging innovative ways of working. We also undertook a detailed scoping of both inpatient and community stroke and neurorehabilitation psychological services and support which has been used to help standardise and improve clinical practice between teams and identify gaps in services.



Over 80 clinicians attended our Acceptance and Commitment Therapy (ACT) Training events

In April, the networks Acceptance and Commitment (ACT) Training project got under way with a two-day workshop. The project aims to increase the knowledge and confidence of clinicians when helping patients manage difficult thoughts and feelings in a more flexible way and move towards what is important to them as this can be a barrier to rehabilitation. The feedback for the training was very positive and attendees are also being supported in using their new skills via clinical supervision / consultation from a qualified Psychologist. A top-up training day was held in November and attendees' evaluation is being analysed so it can be published to demonstrate the impacts of the project more widely.





3.5 Rehabilitation (4 of 4)

In July, our Facilitator Farheen Akhtar developed a patient story highlighting how cultural awareness by clinical staff can positively impact a patient's recovery. Ebrahim is from a minority ethnic background and his story demonstrated how different perspectives or values can be overlooked or poorly understood by clinical teams. Our video demonstrates how culture may form an important part of identity that may inform therapeutic goals. Ebrahim's main goal was to be able to pray again as his ability had been greatly impacted by cognitive problems following his stroke. The video has been viewed over 480 times and was used by our West Yorkshire counterparts to help raise awareness of health inequalities.



Ebrahim shared his story of how his rehabilitations goals were shaped to reflect his Muslim faith

In May, we were delighted to attend Trafford Community Stroke & Neurorehabilitation Teams celebration of work to bring together the three teams who previously treated the borough's stroke and neurorehabilitation patients. This was the culmination of 7 years of hard work, initially instigated by the network when it developed its community models, that has resulted in transformation of services into a more patient centred, efficient model of care.



We were part of celebrations by Trafford Community Stroke & Neurorehabilitation Team in May

The NHSE stroke programme supports the development of community services via the Stroke Quality Improvement Rehabilitation (SQulRe) programme which funded six Greater Manchester projects in late 2022, plus a further one in October 2023. The pilots run for a year and provide proof of concept to try and secure further funding for the longer term. Our projects are:

- New Stroke Association Recovery Services for Bury and South Manchester – completed March 2024
- Dedicated social worker support in North Manchester and also Trafford community teams – due to complete in 2024
- Upper limb rehabilitation using the CAREN machine at the BASIC charity in Salford – completed March 2024
- Greater Manchester wide support for aphasia by the charity Speakeasy – completed January 2024
- Health coaching in Bolton community stroke team – due to complete in 2024
- A new visual impairment pathway for patients treated at Stepping Hill Hospital HASU – due to complete in 2025

The projects that have now finished have reported many positive impacts for patients, although only one (Trafford) has been able to secure longer term funding to continue so far. We are hoping to launch the visual impairment pathway in mid 2024 with findings released in 2025 once complete.



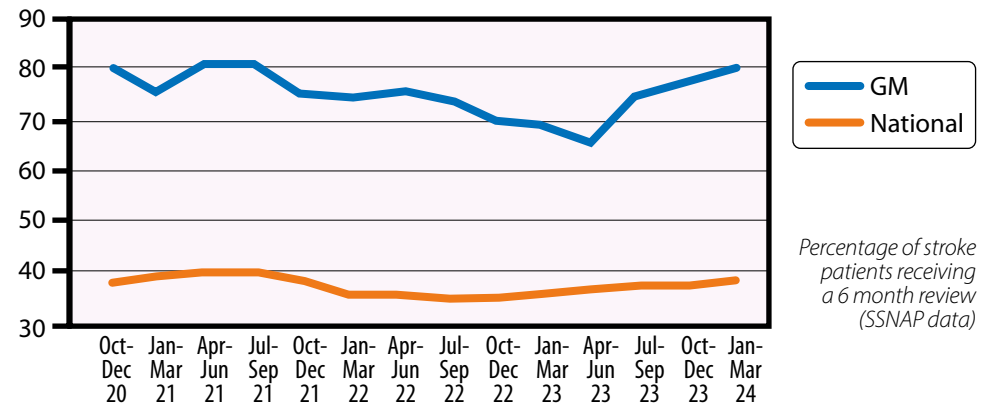
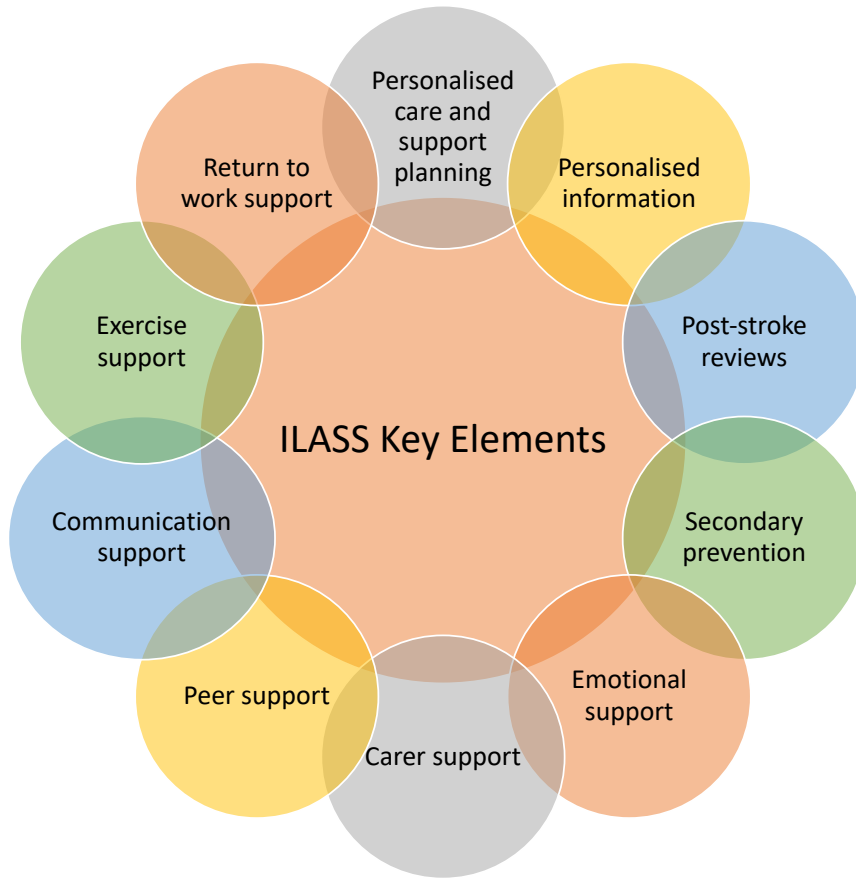
Social Worker Lizzy has joined the Trafford Community Stroke & Neurorehabilitation Team



3.6 Longer term support

Access to long term support maximises the chance of recovery after an acquired brain injury and guarantees specialist care is available when needed for progressive and more degenerative neurological conditions.

The NHS and other agencies such as the voluntary sector, local authorities and private/ independent providers can all potentially contribute to longer term support although services can be disjointed and confusing for patients to access.



We currently have two workstreams exploring this important area of care. The life after stroke project is helping to implement the NHS England Integrated Life After Stroke Support (ILASS) model in all Greater Manchester boroughs. North Manchester has now completed a pilot that was run during 2022/23 and we will be extending the learning to roll out in other areas during 2024.

The other parallel project is developing a model for other neurological conditions as one doesn't exist nationally, with a pilot in a borough planned. Our Patient and Carer Group have been heavily involved in both initiatives, with members using their lived experience to prioritise the key elements of support required.



The region continues to provide 6 month reviews post stroke at twice the national average, with over 70% of people receiving an assessment to check their ongoing needs.

All but two localities fund the Stroke Association's Recovery Service, with the outliers (Bury and South Manchester) receiving funding to establish this service in 2023 via the NHSE Catalyst programme although unfortunately both ceased after 12 months in early 2024 when the funding came to an end. We continue to support the re-establishment of this important service to ensure Bury and South Manchester patients are not disadvantaged.



4. Patient and carer involvement

In 2023, we created a new involvement co-ordinator role to take us to the next level and better enshrine the voices of those with lived experience in everything we do. The initial foundations were built by Deb Drinkall who left the role in December, but such is her passion that she joined our Patient and Carer Group and continues to contribute. We were delighted to appoint Abi Bisset as her successor in January, and she has continued to grow our programme of work.



Our stroke and neurorehabilitation groups merged in January

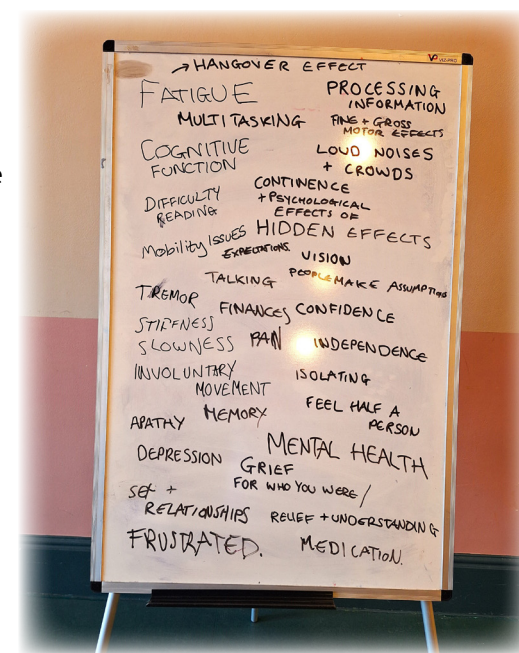
At the start of 2024, and following consultation with members, we merged our stroke and neurorehabilitation Patient and Carer Groups into a single forum and recruited some additional members. Our two fantastic Chairs (Nick Davis and Mike Carpenter) continue to expertly lead the group and have helped ensure a smooth evolution. We have also moved venues to ensure the meeting space is fully accessible for all our members' needs.

We aim to involve patients and carers so that:

- Patients are **Empowered** to have a greater say in the way involvement happens and how their lived experience is used in service improvement
- We are **Equipped** to work to better/best practice involvement methods, that involve patients and carers in the right way and at the right time
- We **Build Capacity** so that we can sustain, develop and evolve our patient involvement offer in the future

In March 2024, we held a session to explore what impacted members most and used the outcomes to influence our programme of projects. Many of the issues they identified have already been addressed or projects are underway, however, a few had not been considered and will be included as priorities in the coming year.

The merged group is already being well utilised in their scheduled meetings and via different formats in between. In 2024, we will continue to work with the group to increase their influence and we will also be developing guidance and resources to help teams across Greater Manchester to involve patients and carers in projects.



Members of the group shared the main impacts of their neurological condition in May



5. Training and education

Supporting workforce development is crucial in ensuring professionals are equipped with the knowledge, skills and resources to allow them to provide high-quality care for patients. It can also help improve recruitment and retention of healthcare staff which remains a challenge at a local and national level.

In March, our Board approved a workforce development strategy to help us shape this area in the future and our approach will include:

- Focus on workforce - supply, recruitment and retention of professionals
- Working differently - new roles and ways of working including strengthening leadership

Our strategy encompasses a range of focused workstreams including embedding more advanced practice and support worker type roles in our services as well as developing competencies in professions such as nursing. We also facilitate a number of peer support groups for different clinical professions to encourage networking and sharing of best practice amongst local staff.



Attendees at our introductory study day hosted at Trafford General in November learnt about how vision can be affected after a stroke

Since 2016, we have facilitated a comprehensive programme of training and education that moved online during the pandemic but has now evolved into a mix of face to face and webinar based events. Our programme consists of regular introductory level training days aimed at new starters in stroke as well as a diverse portfolio of educational opportunities for more experienced staff.

All of our online content is hosted on our YouTube channel which now has around 450 subscribers and features over 100 educational videos that have been viewed more than 28,000 times since we launched. Our website has a substantial training section including 27 E-learning packages developed by local clinicians.

Key achievements in 2023 were:

- **6** online webinars and **9** face to face training events including our annual conference which was also live streamed on YouTube
- Our YouTube videos were viewed **9,931** times for over **1,400** minutes and we gained **130** new subscribers to the channel
- Our most popular video recorded in 2023 was "Ebrahim's story – Understanding different cultures in supporting neurorehabilitation" with **441** views

We also asked for more detailed feedback and examples of how people had used the learning in their clinical practice. One clinician commented about an event they attended:

Excellent quality course, great venue, accessible parking and lovely food. Thank you to all at the network for your continued hard work and support for teams. Thank you for your support and drive to enhance Stroke rehab services for the benefit of services and patients.

You can read the full report about our training programme [here](#).



Our annual conference was attended by over 150 people and also live streamed



6. Research and innovation

One of the highlights of the year is our annual conference, which we held jointly between stroke and neurorehabilitation in March. This year's event was hosted at the AJ Bell Stadium in Eccles with a [live stream](#) on YouTube. The meeting was attended by over 150 people and featured keynote speaker Professor Avril Drummond who delivered an engaging and thought provoking presentation on fatigue. The day also offered a wide variety of both charitable and commercial exhibitors and plenty of breaks giving attendees the chance to catch up with colleagues and learn more about services and products. Our poster competition featured our largest ever number of entries, which necessitated having two judging teams per category for the first time.

The climax of the event was the presentation of the Tyrrell and Chadwick Awards for outstanding contribution to stroke and neurorehabilitation care respectively. The former was awarded to Dr Khalil Kawafi, stroke clinical lead at Fairfield General Hospital, former Strategic Clinical Director lead for stroke and passionate champion of the region's stroke pathway.

The Chadwick Award was presented to Harriet Allen, Trafford Community Stroke & Neurorehabilitation Clinical Lead/ Service Manager who has supported a number of network initiatives over the years. We also presented a special achievement award to our Community Director Tracy Walker who stepped down at the end of March after over 8 years in the role.



Dr Khalil Kawafi (who attended with his wife Eva) was presented with the Tyrrell Award at our conference

In November we held a collaborative event to explore increasing our local teams' involvement and participation in research. The key themes that emerged were:

- Encourage participation in National Institute for Health and Care Research (NIHR) portfolio research
- Build research cultures in clinical teams
- Embed research within the network
- Develop clinical academic careers
- Influence local researchers and their priorities
- Improve patient, carer and the public's awareness of research

Further meetings have been held since to explore these themes. Follow up actions include ensuring we promote research more in our bulletins and developing webpages to help better signpost people to research in 2024.

Another action was to improve links with our [local NIHR Clinical Research Network \(CRN\)](#) so that our teams, especially those in community or in the voluntary sector, participate in more NIHR portfolio research.

When a study looking for potential recruitment sites is received by the CRN, the local information pack including all essential documents will be forwarded to Trust Research & Innovation departments who will cascade through their organisation. We have encouraged teams to link in with their local offices so they can be sent relevant study details.



Stroke survivor Wendy shared her experience of getting involved in research at our R&I event in November



7. Looking to the future

We continue to promote the uptake of technology in clinical practice, which has been a particular focus for our increasing intensity and frequency of therapy workstream. Companies and academics regularly present at our Rehabilitation Subgroup, giving teams the opportunity to see new products and innovations.

In November, Manchester Royal Infirmary stroke team were visited by Clevertouch who make Interactive Touch Screens. The session demonstrated how the technology assists rehabilitation by providing greater applications of multisensory technology for post-stroke cognitive deficits including attention, memory, executive functions, visuospatial skills and global cognitive functioning.



The Clevertouch team demonstrate how stroke teams can use touch screen technology to maximise rehabilitation

It has been another very successful year, with great engagement from our teams across the network – thank you for your continued support and passion!

Our clinical leadership model has served us well, and we look forward to reaping the rewards of changes to be made later in 2024 as existing post holders move on. The network team continue to facilitate a wide portfolio of projects with the year's highlights including: developing a TIA toolkit, enhancement of vocational rehabilitation, seating and driving pathways, piloting and developing longer term support models as well as improving discharge from hospital. We also made great strides in emotional wellbeing for patients and their families as well as focusing on better support for Clinical Psychologists. Our training and education programme remains unrivalled in its breadth and depth, and our first joint annual conference helped celebrate the fantastic work of the last 12 months with the teams that make it happen.

When we appointed a new Patient and Carer Involvement Co-ordinator in 2023, we hoped that the role would take us to the next level and we haven't been disappointed! The merging of the two groups into a single, more cohesive forum has been hugely successful – a result of excellent leadership by our Chairs Nick and Mike, supported by our new post. We look forward to further progress this year to make sure we hear the patient voice in what we do as a network.

Our strength as a combined stroke and neurorehabilitation network ensures that services in both specialties continue to improve, despite the ongoing challenges faced in health and social care. Data from SSNAP and the Stroke Association PREMs pilot demonstrated that Greater Manchester leads the way nationally in delivering high quality stroke services that improve patient experience and outcomes.

We are regularly approached to share our improvement "magic" by other areas in the UK, as well as by national organisations such as NHSE. These conversations highlight that by working together as a network and with a shared purpose, we are more easily able to pioneer new models of care and develop holistic pathways that focus on patient need.

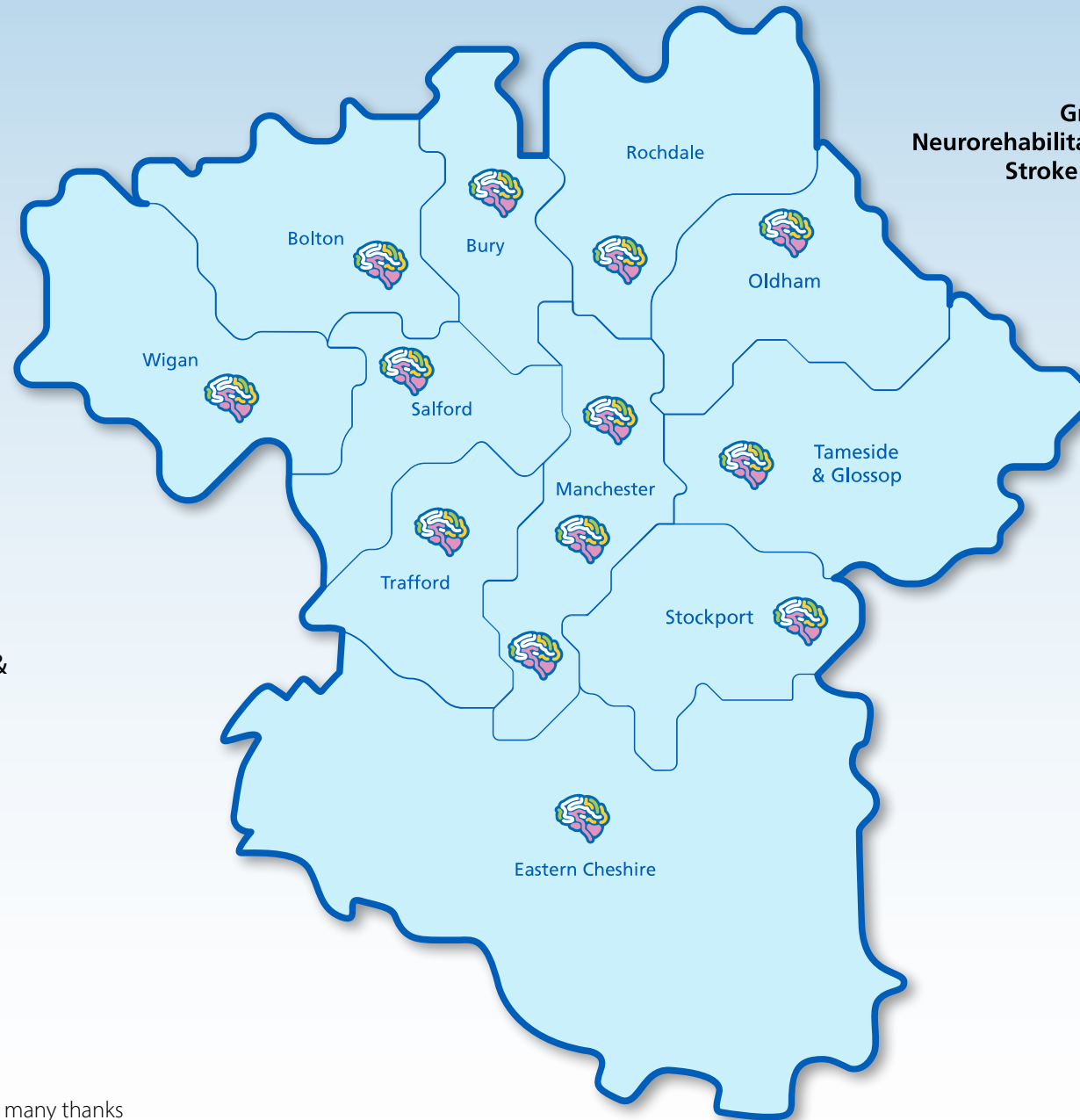
We are proud that Greater Manchester's stroke and neurorehabilitation care pathways are the most advanced and well developed in the country - a testament to the teams who provide support, both in the NHS and other sectors such as charities. Our new network strategy will ensure we keep focused on what matters to patients and their families and provides a blueprint for continued improvement for the next few years.




Our region





Greater Manchester
Neurorehabilitation & Integrated
Stroke Delivery Network



Find out more:

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