

Northern Ireland Stroke Network Guidance for Stroke Service Management during the COVID-19 Pandemic

16th April 2020

Introduction

Stroke remains a medical emergency during the COVID-19 crisis. Stroke will continue to occur at the same or greater rate during the COVID-19 outbreak. Recent evidence from Wuhan, China suggests that 5% of patients admitted with COVID-19 will also have acute ischaemic stroke ⁽¹⁾. Acute stroke is much more likely than COVID-19 to cause death or permanent disability if not treated urgently. The combination of both conditions has a reported mortality of 38% ⁽¹⁾.

Patients with acute stroke symptoms (FAST +ve) should continue to call 999 and local Trusts should endeavour to maintain thrombolysis pathways. In addition, mechanical thrombectomy (MT) is a highly effective treatment for patients with large vessel occlusion (LVO) and this should continue to be delivered where feasible to do so. In the scenario that access to reperfusion therapies is reduced, it is important that treatment is offered where possible to those most likely to benefit. It is well established that stroke unit care followed by early supported discharge saves lives and reduces dependency. It is desirable that these interventions continue where possible, albeit with modifications to reduce usage of hospital beds and minimise face-to-face contact during rehabilitation.

NHS England has identified several key aspects of the stroke pathway, which should hold precedence during this time of considerable pressure ⁽²⁾:

- early senior assessment on admission (<1 hour)
- early appropriate cerebral imaging (<1 hour)

- rapid thrombolysis and referral for thrombectomy
- early reversal of anticoagulation and management of raised BP in patients with intracerebral haemorrhage (<1 hour)
- direct admission to stroke unit (<4 hours)
- early swallow screen (<4 hours)
- maintain stay on stroke unit for as long as patient benefitting from care.
- rapid discharge to Early Supported Discharge Services to minimise time spent in hospital.

It is recognised that delivery of even these basic components of stroke care will be highly challenging due to reduction in bed availability, staff sickness (or self-isolation for infection control), reduced access to other services (e.g. cardiac investigations, vascular surgery and intensive care support). The General Medical Council has recently published its recognition of the exceptional circumstances and provided reassurance that these will be taken into account in the event of any regulatory matters arising ⁽³⁾.

Hyperacute Care for Patients with Stroke Requiring Admission

Trusts should maintain a stroke thrombolysis service where possible. Recognising the pressures, it is important that patients most likely to benefit are prioritised for this intervention.

Consideration should be given to a range of options that deliver treatment safely, keep staff safe and ease pressures on emergency departments. These include:

- Extension of telemedicine services to include daytime as well as OOH
- Use additional forms of virtual communication (e.g. Facetime / WhatsApp) video for emergency assessments and ward rounds. NHS England advice ⁽²⁾ indicates that pre-existing GDPR clauses ⁽⁴⁾ offer flexibility in times of crisis, as laid out by NHSX ⁽⁵⁾
- Bypass emergency department (ED) for cases with clear stroke symptoms and no need for assessment in ED for thrombectomy etc. - this will require direct communication between ambulance service and stroke teams and will

facilitate rapid thrombolysis +/- thrombectomy whilst easing pressures on ED and reducing risks of COVID-19 transmission to both patients and staff.

- Where stroke teams are required to assess patients in ED this should normally be in an area where no Aerosol Generating Procedures (AGPs) are taking place. Appropriate PPE must be available and worn. If it is essential to assess someone in an area where AGPs may be taking place, consideration should be given to virtual assessment. If such an area is entered, full AGP-PPE must be available and worn and number of staff entering must be kept to a minimum.
- Patients with COVID-19 who also have features of acute stroke should be looked after in an area which best meets their clinical need, also taking into consideration the need for infection control. If their primary issue is respiratory, and they do not need specialist stroke input such as thrombolysis, then they should normally be managed in a COVID-19 area with input from the stroke team, preferably by remote access, as needed.
- Streamlined imaging protocols to reduce number of visits to imaging department. Consider CTA for patients with carotid territory symptoms, although availability of carotid endarterectomy is likely to be very limited.
- Regional collaboration to ensure continuity of service. Where individual stroke services have limited consultant cover, amalgamation of thrombolysis rotas should be considered.

In-patient Rehabilitation

Bed capacity for inpatient rehabilitation is likely to be significantly diminished. In addition, the risks of acquiring COVID-19 infection whilst in hospital add to the usual hazards of hospitalisation, particularly for older people. After initial hyperacute management, arrangements should be made to facilitate discharge if at all feasible. This should be the focus of the entire team, including therapist and social worker. A range of measures should be adopted including:

- Discussion with therapy teams to redefine 'safe discharge'
- Engage family support to provide care (may require training, which should be done virtually if possible)

- Only patients who have no potential to be cared for at home should continue with inpatient rehabilitation. In such cases relocation to alternative facility (e.g. PNH) should be considered.
- Early referral to ESD team to support discharge (see below).

Early Supported Discharge

The ESD and Community Stroke teams will have a pivotal role in supporting discharge and coordinating follow-up. Teams will need to take on an increased number of cases, but with very different levels of input compared to before. Therapists should encourage and support ‘therapy-at home’ by remote means if possible. Face-to-face contact in the patient’s home should only be undertaken after local risk assessment. Important considerations are as follows:

- Development of rehabilitation models using telemedicine
- Training of volunteers/ carers to support simple, but appropriate interventions
- Virtual rehabilitation MDT’s
- Rehabilitation classes using video-conferencing.
- Follow-up of outstanding result and provision of a link with hospital team
- Linkage with Voluntary sector and networking to access other sources of virtual support.

Review Appointments

It is very unlikely that hospital based teams will be able to provide routine review appointments at 6 weeks and 6 months. Where there is a specific need for medical review, this will be by telephone or videoconferencing. Some patients may require further diagnostic tests. These should only be arranged if essential. Others should be postponed or cancelled.

As above, ESD and community stroke teams will provide support to many patients on discharge and will provide a link to hospital based stroke services, if specific stroke-related issues arise.

TIA and Minor Stroke

Teams will seek to avoid admission of patients with TIA or minor stroke. All referrals should be screened by telephone triage followed by clinical assessment of those thought to have TIA. As far as possible this will be done by virtual assessment. Referrers should check appropriate bloods, blood pressure and ECG so that this information is available to stroke team. Specialist investigations will be streamlined to those considered essential and likely to change management. Routine carotid imaging for patients with carotid territory TIA may not be available and may not change management as carotid endarterectomy in a timely fashion is unlikely to be an option, unless in those deemed at exceptionally high risk. Every patient should obtain an ECG but further AF screening may not be a realistic option, given staff availability and the need to minimize hospital-based face-to-face contact.

Prescription and delivery of secondary preventative medicines will be essential. In the absence of routinely available carotid endarterectomy, optimal medical therapy should be used. Although not evidence based, it may be reasonable to consider dual antiplatelet therapy for a period of between 3 weeks and 3 months in high-risk cases.

Recognition of Exceptional Circumstances

This document provides agreed local guidance to optimise stroke care provision in the current healthcare crisis. It does not reflect normal standards of care. As the crisis deepens, treatment may become more limited and it may not even be possible to offer treatment as described above.

It is important that this is acknowledged and referenced in individual patient's records. For example **“During the current COVID-19 pandemic, the normal treatment guidelines cannot be followed and the patient will be managed by best pathway available, as per locally agreed guidance”**

Collaboration

The stroke community in Northern Ireland will work collaboratively with colleagues across the Island of Ireland and the rest of UK to provide the best stroke care that is

possible through this difficult time. The Stroke Association and Northern Ireland Chest Heart and Stroke (NICHS) have developed a joint community programme for the COVID-19 duration. A consolidated referral form and single point email address have been developed with referrals also accepted by telephone.

Reference is made to relevant publications from NHS England ⁽²⁾ and the Republic of Ireland ⁽⁶⁾ which we have drawn upon, in preparation of this document.

References

- (1) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3550025
- (2) https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C033-Specialty-guide_-Stroke-and-coronavirus-v1-24March_.pdf
- (3) www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus
- (4) https://edpb.europa.eu/news/news/2020/statement-edpb-chair-processing-personal-data-context-covid-19-outbreak_en
- (5) <https://www.nhsx.nhs.uk/key-information-and-tools/information-governance-guidance>
- (6) <https://hse.drsteevenslibrary.ie/Covid19V2/stroke>