Cumbria and Lancashire Telestroke Network

Governance Policy for Cumbria and Lancashire Telestroke Network

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This document represents a summary of accumulated knowledge, experience and documentation relating to Governance Issues for Telemedicine in Acute Stroke from stroke care networks and sites in England and Scotland

Thanks are due to the following for documents and advice contributed:

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1 INTRODUCTION

1.1 Purpose of document

To provide a cross-organisational governance framework to support the implementation and delivery of an out-of-hours telemedicine system in acute stroke across Lancashire and Cumbria; to enable assessment of people presenting with acute stroke by a remote specialist in stroke care, to determine eligibility for thrombolysis with alteplase (recombinant tissue plasminogen activator (rTPa)).

Telemedicine in acute stroke (Telestroke) may be used to provide effective 24 hour stroke specialist advice across networked sites working in collaboration across trusts using video and audio conferencing equipment.

1.2 Strategic context

Telestroke is a real-time audiovisual conferencing system that allows specialists in stroke care to assess patients remotely and to view their CT brain scan images. This enables the Decision Support Provider to advise the Patient Bedside Referrer on the patient's suitability for thrombolysis.

The implementation of a telemedicine system in acute stroke is supported by standards and quality markers contained in recent policy and guideline publications:

- The National Stroke Strategy (2007)[1] contains quality markers which require patients with a suspected stroke to be transferred to, and assessed at, a hyper-acute stroke service (service providing thrombolysis), available 24 hours.

- NICE Clinical Guideline 68[2]; Acute Stroke and Transient Ischaemic Attack (2008) recommends thrombolysis as a clinically and cost effective treatment for acute stroke.

- RCP National Clinical Guidelines for Stroke (2008)[3] reflects the NICE Guidance in acute stroke.

2 DEFINITIONS

2.1 Telemedicine

Telestroke systems consist of a digital network including a two-way video and audio conference facility, plus brain scan image transfer using a high speed-data transmission up to 2 Mb/s.

In acute stroke, the video camera captures real-time clinical images of the patient, enabling a remote consultant (Decision Support Provider) to undertake a remote presence consultation. In addition, brain scan image transfer, typically via Picture Archive and Communication System (PACS) and broadband technology, enables the Decision Support Provider to assess images on the same patient.

Local medical teams and clinicians with the patient employ specialised mobile Telecart, typically provided in A&E or acute stroke units.

2.2 Decision Support Provider

For the purpose of this document considering telemedicine in acute stroke, a Decision Support Provider is defined as a consultant with experience of acute stroke, who has demonstrable training, skills and experience in the procedures used to diagnose, treat and advise on the management of patients who will benefit from thrombolysis.

The competences necessary to support this have been described by national consensus – the Interprofessional ThrombolysisFramework[4] http://www.uclan.ac.uk/schools/school_of_nursing/nsnf/files/nsnf_new_exec_summary.pdf – and endorsed by the SITS-R (Safe Implementation of Thrombolysis Registry [5]) group.

The Professional Role Descriptors include the content from the National Workforce Competences for Thrombolysis and other Workforce Competences available from Skills for Health:

- S8 Administer thrombolytic treatment in acute ischaemic stroke: Diagnostician and overseeing administration of bolus.
- S9 Administer thrombolytic treatment in acute ischaemic stroke: Screening and initiating treatment, overseeing competency of treatment.
- S10 Monitoring following thrombolytic treatment in acute ischaemic stroke Monitoring and Managing up to 48 hours.

Clinicians with appropriate competences may include, but are not limited to: stroke physicians, emergency medicine physicians, neurologists and specialist practitioners. All clinicians will deliver their expertise in stroke thrombolysis in the context of an integrated comprehensive stroke service.

2.3 Governance

Governance is the framework of accountability to users, stakeholders and the wider community, within which organisations take decisions and lead and control their functions, to achieve their objectives (Audit Commission, 2003) [6].

2.4 Clinical Governance

Clinical governance is the system through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care, creating an environment in which clinical excellence will flourish. (Audit Commission, 2003) [6].

2.5 Information Governance

Information governance is a framework for handling information in a confidential and secure manner to appropriate ethical and quality standards.

2.6 Network

The Network is defined as the participating Acute Trust Providers within the Cardiac and Stroke Networks in Lancashire & Cumbria in addition to Southport & Formby District General Hospital.

3 CLINICAL QUALITY REQUIREMENTS

3.1 Service requirements

North Cumbria University Hospitals NHS Trust (NCUHT) has been appointed as the lead provider for the Telestroke Network. This document addresses the issues around clinical governance for individuals, organisations and for data storage. NCUHT will lead a process of audit to ensure that practice is in line with current national and local guidelines.

There are six trusts that make up the Telestroke Network that operate across eight sites:

Blackpool Teaching Hospitals NHS Foundation Trust
East Lancashire Hospitals NHS Trust
- Royal Blackburn Hospital

Lancashire Teaching Hospitals NHS Foundation Trust
- Royal Preston Hospital

North Cumbria University Hospitals NHS Trust:
- Cumberland Infirmary
- West Cumberland Hospital

Southport & Ormskirk Hospital NHS Trust
- Southport & Formby District General Hospital

University Hospitals of Morecambe Bay NHS Trust:
- Furness General Hospital
- Royal Lancaster Infirmary

The service will be delivered by clinicians with appropriate competences. Clinicians may include, but are not limited to, stroke physicians, emergency medicine physicians, neurologists and specialist practitioners. All clinicians will deliver their expertise in stroke thrombolysis in the context of an integrated comprehensive stroke service.

Telestroke is an out-of-hours service, which runs from 5.00 pm – 9.00 am on weekdays; and 24 hours at weekends and Bank Holidays.

Telestroke is a real-time audiovisual conferencing system that allows specialists in stroke care to remotely assess patients and to view their CT brain scan images across the Network sites. This enables the Decision Support Provider to advise the Patient Bedside Referrer on the patient's suitability for thrombolysis.

The service will provide the following:
- Coordination of a rota of identified on-call remote Decision Support Providers available at all specified operational hours.
- Technical capability to carry out audiovisual teleconferencing and remote access to CT brain scan images during operational hours.
- Access to specialist advice following the initial consultation, within operational hours, for the management of complications or other queries relating to patients treated with thrombolysis.
- A framework to monitor the quality of both the clinical and technical services, to include patient experiences and opinions, and to generate regular performance reports.
- An administrator facility to coordinate the rota, produce activity, performance and patient experience reports, and coordinate regular multidisciplinary outcome meetings and teaching updates.
- A mechanism, with clear and documented lines of accountability and timing, for the handover of information regarding patients treated via Telestroke from the Decision Support Provider to local stroke consultant and team.

3.2 Patient pathways

Patient pathways will vary between Network sites but, for the successful use of Telestroke, it is essential to ensure that all relevant national, local and Network standards (see below) are embedded within services and adhered to. All contributors to the clinical pathways need to fully understand what will happen, where and when.

3.3 Quality

3.3.1 Standards

Thrombolysis in acute ischaemic stroke must be delivered without delay, and telemedicine must safely and effectively support a time-constrained service.

Recent trial data demonstrate efficacy of alteplase for up to 4.5 hours after stroke onset, but the current product licence for alteplase extends to 3 hours after stroke onset. Telemedicine services will adhere to national quality standards. It was agreed (by clinical consensus from clinicians on the Telestroke Rota) for the purposes of Telestroke that Thrombolysis will be delivered up to 4.5 hours after stroke onset.

The National Stroke Strategy [1] Quality Marker 7 states that:

- All patients with suspected acute stroke are immediately transferred by ambulance to a receiving hospital providing hyper-acute stroke services (where a stroke triage system, expert clinical assessment, timely imaging and the ability to deliver intravenous thrombolysis are available throughout the 24-hour period).

The National Stroke Strategy[1] Quality Marker 8 states that:

- Patients with suspected stroke receive an immediate structured clinical assessment from the right people.
- Patients requiring brain imaging are scanned in the next available scan slot within usual working hours and within 60 minutes of request out of-hours with skilled radiological and clinical interpretation being available 24 hours a day.

The National Stroke Strategy[1] Quality Marker 9 includes the following statements:

- Hyper-acute stroke services provide, as a minimum, 24 hour access to brain imaging, expert interpretation and the opinion of a consultant stroke specialist and thrombolysis is given to those that would benefit.
- Specialist neuro-intensivist care including interventional neuroradiology/neurosurgery expertise is rapidly available
- Specialist nursing is available for monitoring of patients.

The telemedicine service must adhere to or exceed accepted guidelines for best practice, and have been developed in line with the following:

NICE Clinical Guideline 68 – Stroke[2] (2008) state:

- Access (within a specified maximum time frame) to a remote specialist in acute stroke care who is trained and experienced in the management of acute stroke via a telemedicine service.
- An assessment of the patient by the remote specialist using agreed documentation, protocols and policies.

- Real-time audiovisual conferencing, plus remote access to CT brain images, to enable the stroke specialist, working with other clinical practitioners local to the patient, to determine eligibility for thrombolysis.
- Local staff who are trained and experienced in both acute stroke care, and in the use of telemedicine.
- Assurance that the telemedicine facility, and its usage in the delivery of thrombolysis for eligible patients, is fully integrated within a comprehensive, effective and safe stroke service.

RCP National Clinical Guidelines for Stroke[3] (2008)

Royal College of Physicians' National Sentinel Audit standards[7] 2010

Performance standards of the telemedicine service will also support the:

- Vital Sign that report the proportion of people with stroke spending 90% of their inpatient stay on a specialist stroke unit.
- Best Practice Tariff in stroke, stipulating immediate admission to a fully-specified acute stroke unit.
- Tariff increment for timely brain imaging after acute stroke.

3.3.2 Administration standards

Records made by the Decision Support Provider during the Telestroke consultation must be sent by secure NHS Net email address to the receiving site, retrieved by person with designated access to the NHS Net account. It will then be signed by the Patient Bedside Referrer and be entered into the patient's health care records immediately or at least within 15-30 minutes. Date and time of entry will be recorded upon entry into patient health record by Patient Bedside Referrer

3.3.3 Monitoring process and outcomes

The treatment of people with thrombolysis will be evaluated and audited by registering patients on the Safe Implementation of Thrombolysis in Stroke Register (SITS-R) database. In addition process data will be recorded on Stroke Improvement National Audit Programme[8] (SINAP). A framework for the recording of the performance of the telemedicine technology will be made, to include a record of any episodes of technical failure of audiovisual connection or loss of digital brain image data.

The outcome of cases will be reported back to appropriate divisional and/or trust clinical governance committees on at least a quarterly basis as specified in the Telestroke service specification document. Any major complications or serious adverse incidents will be reported to the divisional director and trust clinical governance committee.

Clinical teams within the Network will meet at monthly intervals to review all cases treated through the telemedicine system, including those who are ultimately deemed to be ineligible for thrombolysis. This will enable performance review of both the processes at each site and the clinician's assessment.

Teams adopting the use of telemedicine in acute stroke will be aware of the new real-time online audit of the first 72 hours of process of stroke care – SINAP (Stroke Improvement National Audit Project[8]). Service performance data gathered through the Telestroke service will be in a format consistent with SINAP.

4 CLINICAL GOVERNANCE ISSUES

4.1 Patient consultation via telemedicine

GMC guidance would be the same as if the Decision Support Provider was face-to-face with the patient. The patient's privacy and dignity needs to be ensured.

Confidentiality of the consultation must be maintained. Obtaining informed consent for the treatment will be performed sympathetically, giving the patients and relatives reasonable time to ask questions.

The consultation will be in-line with GMC guidance in Good Medical Practice: the Duties of a Doctor (2006) (Appendix 1).

4.2 Patient confidentiality

The GMC guidance for recordings is published in 'Making and using video and audio recording for patients: guidance for doctors (2002)' and is set out below.

Basic principles

When making recordings you must take particular care to respect patients' autonomy and privacy since individuals may be identifiable, to those who know them, from minor details that you may overlook. The following general principles apply to most recordings although there are some exceptions, which are explained later in this guidance.

- Seek permission to make the recording and get consent for any use or disclosure.
- Give patients adequate information about the purpose of the recording when seeking their permission.
- Ensure that patients are under no pressure to give their permission for the recording to be made.
- Stop the recording if the patient asks you to, or if it is having an adverse effect on the consultation or treatment.
- Do not participate in any recording made against a patient's wishes.
- Ensure that the recording does not compromise patients' privacy and dignity.
- Do not use recordings for purposes outside the scope of the original consent for use, without obtaining further consent.
- Make appropriate secure arrangements for storage of recordings

On confidentiality the GMC advises:

37. Patients have a right to expect that information about them will be held in confidence by their doctors. You must treat information about patients as confidential, including after a patient has died. If you are considering disclosing confidential information without a patient's consent, you must follow the guidance in with *Confidentiality(2009)*

Good Medical Practice published by GMC[9] 2006

Recordings of emergency treatment and of unconscious patients

1) If recordings are to be used only for training or clinical audit, you may record patients who need emergency treatment but cannot give their permission for the recording to be made. You do not need a relative's agreement before starting the recording but must stop it if a relative objects. Before these recordings are used, however, the patient's consent must be obtained or, if the patient has died, a relative must agree to it.
2) When no recording has been planned, but a record of an unexpected development would make a valuable educational tool, you may record patients undergoing treatment. If you cannot get permission at the time because, for example, the patient is anaesthetised, you must ensure the patient is later told about the recording and gives consent to its use.
3) With recordings made in these circumstances, you must follow patients' instructions about erasure or storage. The only exception is if you think you need to disclose the recording because of the advice in the GMC booklet [9]Confidentiality (2009) for example to protect the patient or others from risk of death or serious harm.
4) Hospital policy on recording the treatment of unconscious patients will be adequately publicised, for example through notices in waiting areas.

Making and using visual and audio recordings of patients - guidance for doctors
May 2002 (Appendix 1)

4.3 Patient consent

7. You must seek permission to make any recording for the assessment or treatment of patients, other than those recordings listed in paragraphs 5 & 6 above. You should explain that a recording will be made, and why. You need only give an oral explanation. You should record in the medical notes that the patient has given permission. GMC Confidentiality (2009)

Oral explanation for the use of telemedicine in acute stroke will be sought and documented by the Patient Bedside Referrer in each case. In particular, the patient and family/carers will be made clearly aware that a Decision Support Provider will be consulted. If the Decision Support Provider is not employed by the Trust where the patient is located, this will also be made clear.

An assessment checklist will require the practitioner to document if verbal consent has been obtained. Ideally, a written summary of information of the Telestroke process will be given to patients and/or their families/carers, (see Appendix 2) who will then be asked for verbal consent.

Many patients with acute stroke have a communication impairment, or cognitive or attention deficits, which may render fully informed consent difficult to obtain. In such a situation, the doctor must work with those close to the patient and with other members of the healthcare team. The doctor must take into account any views or preferences expressed by the patient and must follow the law on decision-making when a patient lacks capacity will be assumed. Family and carer involvement is important where an individual cannot provide consent. In the absence of capacity to provide consent, the local physician in consultation with the Decision Support Provider will make the decision to act in the best interests of the patient, but will ensure full documentation of this decision. GMC Consent guidance (2008): Partnership Patients and Doctors making Decisions together

The video-consultation will be automatically recorded but for the purposes of training and research (secondary purposes), then patients will be asked for their express written consent as soon as practicable following the stroke. Signed consent from the patient for the use of telemedicine consultation is not required. If a patient declines consent for training and education then any recorded material will be stored as a Medical record and labelled consent for education and training not given. The GMC guidance for making and using video and audio recording for patients is contained in Guidance for Doctors (2002):

Recordings made for the training or assessment of doctors, audit, research or medico-legal reasons

1) You must obtain permission to make and consent to use any recording made for reasons other than the patient's treatment or assessment.
2) Before the recording, you must ensure that patients:
    a. Understand the purpose of the recording, who will be allowed to see it - including names if they are known - the circumstances in which it will be shown, whether copies will be made, the arrangements for storage and how long the recording will be kept.
    b. Understand that withholding permission for the recording to be made, or withdrawing permission during the recording, will not affect the quality of care they receive.
    c. Are given time to read explanatory material and to consider the implications of giving their written permission. Forms and explanatory material will not imply that permission is expected. They will be written in language that is easily understood. If necessary, translations will be provided.
3) After the recording, you must ensure that:
    a. Patients are asked if they want to vary or withdraw their consent to the use of the recording.
    b. Recordings are used only for the purpose for which patients have given consent.
    c. Patients are given the chance, if they wish, to see the recording in the form in which it will be shown.
    d. Recordings are given the same level of protection as medical records against improper disclosure.
    e. If a patient withdraws or fails to confirm consent for the use of the recording, any recorded material will be stored as a Medical record and labelled consent for education and training not given.

N.B. All Telestroke consultations will be recorded, and held at a central location. The use of of the recorded consultation will only be used for secondary purposes with the patients express consent, if the patient declines consent then the rota administrator at NCUHT needs to be informed of this decision, and the recorded consultation will be kept as a patient record only and labelled with consent for education and training not given.

4.4 Responsibilities of relevant staff groups

The roles and responsibilities, and required training, of all relevant staff along the acute stroke care pathway in relation to telemedicine are listed below. The precise pathway, and hence the groups of staff involved, will vary from site to site. The following is provided as an illustration of the relevant stages at one site.
North West Ambulance Service (NWAS) and Scottish Ambulance Service (SAS) are included in the pre-hospital governance arrangements.

Patient pathway	Responsibility	Clinical governance issues for healthcare professionals
Pre-hospital care	NWAS/SAS	• Paramedics screen patients with FAST test • All paramedics appropriately trained.
Hospital pre-alert and cascade	NWAS/SAS and A&E staff	• Paramedics pre-alert A&E staff by telephone or radio. • Criteria for pre-alert all suspected stroke patients.

Arrival at A&E	A&E Receptionist A&E/triage nurse A&E Coordinator Shift Leader	• Trained in FAST assessment for patients who self present • Alert triage nurse of FAST +ve patients • Remote consultation documentation to be retrieved and put into the patients health care records from secure NHS Net email address • A&E undertakes initial monitoring observations, inc Blood Sugar • A&E recognises stroke by using the ROSIER validated stroke screening tool (See Operational Policy Appendix 1, p 7), • A&E alerts other relevant staff (e.g. A&E middle grade or medical SPR). • Coordinates relevant investigations • A&E informs Bed Manager of potential stroke thrombolysis patient • Undertakes a joint handover of patient which includes a full set of observations to ensure validity • Observations repeated every 15 minutes • Daily check of telemedicine equipment to ensure it is in good working order. Any faults have been reported to the Helpdesk, documented and followed up. • Ensure there are at least five sets of thrombolysis documentation packs available • Ensure there are at least 2 Doses of Alteplase medication available in the A&E drug cupboard. (4 x 50mgs Vials) • Thrombolysis equipment is available (syringe driver/pump) • All A&E staff to be appropriately trained.
Assessment of patient for thrombolysis	Patient Bedside Referrer	• Follow agreed protocol, ensuring all initial assessments in thrombolysis pathway document have been fully completed. • Confirms likely diagnosis of stroke • Confirms time of onset or time last seen completely well • Completes inclusion and exclusion criteria for thrombolysis for acute ischaemic stroke • Communicates with patient and family to get further information re medical background and medication. • Request CT scan ensuring timely response (60 minutes). • Contacts the “On-Call” Decision Support Provider, and initiates the Telecart consultation • Following CT scan, fully completes clinical assessments included in the thrombolysis pathway document . • Validated scale of physical impairment in acute stroke NIHSS used and recorded. • Prescription & delivery of TPA (Alteplase) • Remote consultation documentation to be retrieved

	A&E clinical lead	from A&E receptionist completed and put into the patient's health care records as soon as possible, (within 30 mins of transmission), all entries must be dated and timed • Ensure request card written for 24hour post thrombolysis repeat CT scan. • All relevant medical staff appropriately trained.
CT scanning of patient	On-call radiographer to perform scan PACS Manager Radiology Manager	• Emergency CT scanning for thrombolysis performed by radiology team of the hospital where stroke patient is admitted, using non-contrast CT scanning as standard technique. It needs to be completed as soon as possible or within 60 minutes as per National Guidelines • Agreement for Decision Support Provider to access images via PACS at each Trust. • All relevant Radiographers and Radiologists familiar with thrombolysis protocol.
Interpretation of CT scan	Decision Support Provider to interpret scan	• Agreement that CT head scans will be interpreted by the Decision Support Provider. The On call Radiologist may be contacted for advice and second opinion if required. • Pre-agreed format for interpreting of scans in acute stroke recommended (validated scaling system e.g. ASPECTS) • Capacity restrictions prevent immediate interpretation of CT by Neuroradiologist. Acute interpretation will be made by stroke physician/neurologist (who have undertaken training/assessment). This does not provide a substitute for interpretation by radiology but is deemed to be in the best interest of patient management so as not to delay treatment. Responsibility for this process will reside with the individual organisations. • A written report is to be formulated by the on-call Radiologist and inserted into the patient's healthcare records within 24 hours. **If advice is sought a verbal report is sufficient**.
Communicating decision to thrombolyse using telemedicine	Decision Support Provider	• Decision to thrombolyse or not, will be fully documented with the reasons behind the decision on the joint decision making form. It will then be transferred via secure NHS emailing system to the Patient Bedside Referrer. • If email is not possible, for contingency purposes, documentation will be done through immediate or deferred fax or writing in patient's notes. • Verbal consent obtained were appropriate • On weekends and Bank Holidays CT head scans of patients thrombolysed the previous day are to be reviewed by the local team.

Immediate post-thrombolysis care	Medical on call Team	• Patient transferred to acute stroke unit bed (or locally agreed appropriately staffed area) to receive stroke specialist multidisciplinary care. • During out-of-hours period, the patient will be under the care of the medical consultant on-call at the hospital where thrombolysis has taken place; who can contact the Decision Support Provider for advice. • Medical on-call team to manage all aspects of post-thrombolysis care. • Protocols for post thrombolysis care will be available along with management of complications guidance within the stroke thrombolysis pathway document (Operational Policy, Appendix 4)
Post-thrombolysis care - the next day	Stroke consultant and their team	• The stroke patient will remain under the care of the admitting physician until taken over by the local stroke physician the next working day. • Patients should be reviewed for neurological change; global change (better, no change, worse) should be recorded • CT head scans should be repeated approximately 24 hours after the thrombolysis commenced. If patient thrombolysed after midnight scan should be performed in 1st available slot within next day normal working hours. • The local team will be informed of the results by the local Radiologist of the Day.
Network wide	Everyone	• All patients to be entered into SITS-ISTR database [5] • Clinical governance meetings to be held at each trust • Network wide monthly Telestroke audit meetings to be held.
Trust Responsibilities	Trust Managers	• Hyper-acute stroke specific bed must be available to accept stroke thrombolysis patients at all times • Staff with appropriate skills and competences must be available to deliver required care.

4.5 Roles and responsibilities of Decision Support Providers giving remote opinion via telemedicine on patients ***within*** their own trust

The role of the Decision Support Provider is to advise the Patient Bedside Referrer on the best management of the patient, when their advice is sought. The Decision Support Provider is accountable for the advice that is given.

Responsibility for the care of the patient remains that of the local Patient Bedside Referrer, or other designated specialist team (e.g. acute stroke unit staff), until taken over by the local stroke physician.

A Decision Support Provider who is giving an opinion for a patient within their trust will be able to provide evidence to demonstrate that they:

- Are trained in stroke thrombolysis, and receive training updates.
- Are regularly involved in the provision of both day-time and out of hours thrombolysis for acute stroke (consideration will be needed to locally determine minimal levels of activity to maintain skills)
- Are trained in the use of the telemedicine equipment.
- Are able to perform an NIHSS stroke assessment.
- Attend regular multidisciplinary thrombolysis outcome review meetings.
- Attended a Stroke Thrombolysis Masterclass (or approved equivalent) and have refresher training on an annual basis.
- Attended training in interpretation of CT head scans (e.g. ASTRACAT training) and have refresher training on an annual basis.

A Decision Support Provider will possess the skills to undertake the following tasks:

- Reviewing clinical information provided about the patient.
- Reviewing time of onset/time last seen well.
- Assessing and conversing with patient via video-link.
- Reviewing physiological parameters.
- Reviewing inclusion and exclusion criteria for I.V thrombolysis
- Reviewing medication.
- Reviewing CT imaging.
- Explaining to patient and/or family the risks and benefits of thrombolysis if appropriate.
- Assisting the Patient Bedside Referrer in obtaining informed consent.
- Advising the Patient Bedside Referrer as to whether thrombolysis is appropriate or not.
- Providing guidance on any other issue relevant to the care of the person with acute stroke who has been thrombolysed.
- Completing the joint remote decision-making checklist stating the information on which the decision was made and the reasoning behind the decision.
- Ensuring a copy of the joint remote decision-making checklist is forwarded to the local trust electronically for inclusion in the patient's notes.

Additional work undertaken by consultants in providing a remote opinion via telemedicine will be reflected in their job plan. This will need to be negotiated with their employing Trust. Additional remuneration for out of hours on-call work will be calculated on the basis of frequency; intensity and actual work (see BMA and NHS employers' guidance).

Consultants need to be able to respond to a call within 15 minutes of telephone request It is the consultants responsibility to remain contactable and available to respond during the on-call period. Consultants should note that the Private Broadband connection is only guaranteed from the cart to their own residence. Failure to respond will be the consultants responsibility.

4.6 Roles and responsibilities of Decision Support Providers giving remote opinion via telemedicine on patients ***between*** trusts

The role of the Decision Support Provider is to advise the Patient Bedside Referrer in another trust on the best management of the patient. The Decision Support Provider is accountable for the advice that is given. The Decision Support Provider will hold a full or honorary contract with *one* of the trusts participating in the Cumbria & Lancashire Telestroke Network, but is not required to hold an honorary contract with *each* of the participating trusts.

Responsibility for the care of the patient remains that of the Patient Bedside Referrer, or other designated specialist team (e.g. acute stroke unit staff), at the hospital trust where the patient is receiving treatment.

A Decision Support Provider who is giving an opinion for a patient in another trust will be able to provide evidence to demonstrate that they:

- Are trained in stroke thrombolysis, and receive training updates.
- Are employed by, or hold an honorary contract with, one of the participating trusts within the Cumbria & Lancashire Telestroke Network.
- Are regularly involved in the provision of both day-time and out of hours thrombolysis for acute stroke (consideration will be needed to locally determine minimal levels of activity to maintain skills).
- Are trained in the use of the telemedicine equipment.
- Are able to perform an NIHSS stroke assessment.
- Attend regular multidisciplinary thrombolysis outcome review meetings.
- Attended a Stroke Thrombolysis Masterclass (or approved equivalent) and have refresher training on an annual basis
- Attended training in interpretation of CT head scans and have refresher training on an annual basis

A Decision Support Provider will possess the skills to undertake the following tasks:

- Reviewing clinical information provided about the patient.
- Reviewing time of onset/time last seen well.
- Assessing and conversing with patient via video-link.
- Reviewing physiological parameters.
- Reviewing inclusion and exclusion criteria.
- Reviewing medication.
- Reviewing CT imaging.
- Explaining to patient and/or family the risks and benefits of thrombolysis if appropriate.
- Assisting the Patient Bedside Referrer in obtaining informed consent.
- Advising the Patient Bedside Referrer as to whether thrombolysis is appropriate or not.
- Providing guidance on any other issue relevant to care of the person with acute stroke.
- Completing the joint remote decision-making checklist stating the information on which the decision was made and the reasoning behind the decision.
- Ensuring a copy of the joint remote decision-making checklist is forwarded to the local trust electronically for inclusion in the patient's notes.

Consultants need to be able to respond to a call within 15 minutes of telephone request It is the consultants responsibility to remain contactable and available to respond during the on-call period. Consultants should note that the Private Broadband connection is only guaranteed from the cart to their own residence. Failure to respond will be the consultants responsibility.

4.7 Roles and responsibilities of clinicians seeking remote opinion

The Patient Bedside Referrer requesting advice from the Decision Support Provider would usually be a middle grade doctor or Consultant in Emergency Medicine or Acute Medicine. The On call medical consultant will be responsible for the patients care until they are taken over by the local stroke physician.

The Patient Bedside Referrer is responsible for undertaking the following appropriate training:

- Completing approved stroke assessment training e.g. Med Stat training and or on-line NIHSS training
- Completing: an approved thrombolysis training course, a Network training day, Masterclass on-line (Beginners Module only) and in-house training provided by Stroke Physicians e.g. STAT training

The Patient Bedside Referrer is responsible for:

- The patient's initial care and review.
- Making the initial assessment of a patient with suspected stroke as per protocol
- Ensuring the patient is weighed or if this is not possible providing an estimate of weight, either from the patient or carer recall. (Best guess is a last resort)
- Organising blood tests as per protocol
- Organising CT head scan usually within 30 minutes of the patient's arrival.
- Contacting the Decision Support Provider following procedure in Telestroke protocol.
- Providing the Decision Support Provider with a detailed assessment of the patient in order to enable both clinicians to complete the approved checklist.
- Recording clearly the decision to thrombolyse, or not to thrombolyse and the reasons for that decision.
- Obtaining and recording informed consent
- Checking the dose and prescribing the rTPa
- Monitoring patient according to stroke protocols
- Reviewing of the patient
- Organising the follow up CT head scan if stroke physician not available that day.

4.8 Responsibilities of organisations providing care for people with acute stroke

Each organisation, whether a single site or part of a network of trusts, must have organised hyper-acute stroke care on a unit designated for hyper-acute stroke.

Each unit must meet the seven acute criteria for units with beds providing care in the first 72 hours:

  - Continuous physiological monitoring (ECG, oximetry, blood pressure) for 24 hours.
  - Immediate access to scanning for urgent stroke patients.
  - Direct admission from A&E/front door.
  - Specialist ward rounds on five days a week.
  - Acute stroke protocols/guidelines.
  - Nurses trained in swallow screening.
  - Nurses trained in stroke assessment and management.
- The unit must be staffed to provide specialist 1:2 nursing for the first 24 hours and subsequently for recommended stroke unit intensity.
- Staff must be trained in the provision of thrombolysis for acute ischaemic stroke.
- Staff must be trained in the management of complications of thrombolysis.
- Protocols for stroke thrombolysis and the management of complications must be in place.
- The unit must be able to provide care to the standards set out in the Royal College of Physicians' Intercollegiate Clinical Guidelines for Stroke 3rd edition 2008[3], the NICE guidelines for Acute Stroke and TIA2 2008 and the Royal College of Physicians' National Sentinel Audit standards 2010.

4.9 Workforce issues

Trusts will be required to provide sufficient qualified and appropriately trained staff to support the use of telemedicine in acute stroke. The competences necessary to support this have been described by national consensus – the Interprofessional Thrombolysis Framework – and endorsed by the SITS-MOST (Safe Implementation of Thrombolysis in Stroke-Monitoring Study) group. The competences are:

S8 Administer thrombolytic treatment in acute ischaemic stroke:
Diagnostician and overseeing administration of bolus.

S9 Administer thrombolytic treatment in acute ischaemic stroke:
Screening and initiating treatment, overseeing competency of treatment.

S10 Monitoring following thrombolytic treatment in acute ischaemic stroke:
Monitoring and Managing up to 48 hours.

4.9.1 Core skills and competences of Decision Support Provider

For the purpose of this document considering Telestroke, a Decision Support Provider is defined as a consultant with experience of acute stroke, who has demonstrable training, skills and experience in the procedures used to diagnose, treat and oversee patients presenting with stroke who will benefit from thrombolysis.

The competences necessary to support this have been described by national consensus – the Interprofessional Thrombolysis Framework – and endorsed by the SITS-MOST (Safe Implementation of Thrombolysis in Stroke-Monitoring Study) group.

Clinicians with appropriate competences may include, but is not limited to, stroke physicians, emergency medicine physicians, neurologists and specialist practitioners. Those clinicians who do not practice stroke medicine as their major specialty, will deliver their expertise in the context of an integrated comprehensive stroke service.

The following core skills and competences are required for such Decision Support Providers working in acute stroke:

- Advanced clinical assessment skills in relation to acute stroke management.
- In-depth knowledge and understanding of risks and benefits of thrombolysis therapy in acute ischaemic stroke, including having attended a recognised training course (e.g. thrombolysis masterclass or equivalent) and regular (e.g. annual) update courses.
- Attendance CT head scan reading course for acute stroke such as ASTRACAT and annual refresher courses
- A responsibility to deliver care based on current evidence, best practice and, where possible, validated research.
- A responsibility to work to standards, guidelines and protocols agreed within the Cumbria & Lancashire Telestroke Network.
- Competent in the use of telemedicine equipment.

4.9.2 Competency assessment

NCUHT, in collaboration with all participating trusts, has devised a competency assessment document for the use of the Telestroke system and equipment. All staff involved in the process will be competency assessed prior to their involvement in the service. Each site will have 'train the trainers' for the Telestroke equipment and will hold regular training sessions locally for new staff and refresher training for existing staff. The designated trainers will receive their initial training from the equipment providers.

Stroke physicians who are involved in the Telestroke rota will receive training on the use of the remote system and their acceptance will be subject to a competency based assessment.

The Telestroke thrombolysis competency document is included as Appendix 6.

4.10 Contingencies for technical failure see Operational Policy Document

5 INFORMATION GOVERNANCE ISSUES

5.1 Information management and technology

NCUHT has responsibility for information governance and has the responsibility to:

- Complete a Privacy Impact Statement, which will then be used as guidance to develop local versions for each site
- Complete an Equality and Diversity Assessment, which will then be used as guidance to develop local versions for each site
- Manage storage of, and appropriate authorised access to, digital information
- Generate reports, for cross organisational governance groups
- Provide a mechanism for audit

5.2 Data storage

The video-consultation and the recommendations of the Decision Support Provider will be recorded for the purposes of audit, training and research. Patients will be asked for their written consent for the digital recording as soon as practicable following the stroke, if the recording is to be used for education and training purposes.
The digital recording of the consultation is the equivalent of paper notes and needs to be stored with the same degree of security. The recording can be used within the confines of the Cumbria and Lancashire Telestroke Network for the purposes of audit and clinical review.
Separate consent will be required if the recording is to be used for training outside the network and for research.
The joint decision making checklist will ensure that there is a clear pointer from the patient's records to the recording. A copy of the joint remote decision-making checklist will be stored digitally for the purposes of audit and training.
The recordings will be held in a central location and archived when storage within the video bridge has reached capacity. The mechanism for archiving and storage has yet to be determined.

5.3 Liability

Individual trusts, or a designated lead provider trust across a network of trusts, have the responsibility to ensure that Decision Support Providers, and associated staff using telemedicine in acute stroke, are provided with:

• Employer's liability
• Public liability
• Professional indemnity

Other areas of liability:

- The provider's liability is limited to the managed service and its specifications as stipulated in the Output Based Specification i.e. repair/replace equipment Laptop/Telecart next working day, provision of 24hour helpline

- Responsibility for clinical decision making sits with:

    1. Local Medical Team are responsible for the patients continuing care and any actions or omissions
    2. Decision Support Provider is responsible and accountable for any advice given during remote consultation

- Responsibility sits with the local trust for, ensuring staff are fully trained in the equipment's use and problem solving solutions.

N.B. Please see Section 5 in the Operational Policy for contingency planning for technical failures.

6 GLOSSARY

Decision Support Provider: is defined as a consultant with experience of acute stroke, who has demonstrable training, skills and experience in the procedures used to diagnose, treat and oversee patients presenting with stroke who will benefit from thrombolysis

Patient Bedside Referrer: **i**s the clinician situated at the patient's bedside.

Telestroke: **'**Tele' refers to the use of modern telecommunications equipment, such as telephones, or video-conferencing, to allow people to communication at a distance. Telestroke is the use of this technology in an acute stroke setting.

Patient referral site: is the local hospital where the patient is situated**.**

Decision Support Service: Telestroke Service

7 REFERENCES

1. Department of Health (2007) National Stroke Strategy. Department of Health, London

2. National Institute Clinical Excellence (2008) Clinical Guideline 68 Stroke- Diagnosis and initial management of Acute stroke and transient ischaemic attack (TIA)

3. Royal College of Physicians (2008) National clinical guideline for diagnosis and initial management of Acute stroke and transient ischaemic attack (TIA)

4. Interprofessional Thrombolysis Framework http://www.uclan.ac.uk/schools/school_of_nursing/nsnf/files/nsnf_new_exec_summary.pdf Accessed 08/11/2010

5. SITS Safe implementation of stroke https://sitsinternational.org

6. Corporate Governance Audit Commission 2003

7 Royal College of Physicians' National Sentinel Audit standards 2010

8. Stroke Improvement National Audit Programme (SINAP) http://www.rcplondon.ac.uk/clinical-standards/ceeu/Current-work/stroke/Pages/SINAP.aspx

9. Good Medical Practice published by GMC 2006

10. http://www.gmc-uk.org/guidance/ethical_guidance/confidentiality.asp

11. Operational Policy Number xxxxxxxxxxx

12. ECASS III (4.5 hour for thrombolysis). Lancet Neurol 2009; 8 : 1095-102

8 APPENDICES

Appendix 1

Good Medical Practice: Duties of a Doctor

The duties of a doctor registered with the General Medical Council

Patients must be able to trust doctors with their lives and health. To justify that trust you must show respect for human life and you must:

- Make the care of your patient your first concern
- Protect and promote the health of patients and the public
- Provide a good standard of practice and care
  - Keep your professional knowledge and skills up to date
  - Recognise and work within the limits of your competence
  - Work with colleagues in the ways that best serve patients' interests
- Treat patients as individuals and respect their dignity
  - Treat patients politely and considerately
  - Respect patients' right to confidentiality
- Work in partnership with patients
  - Listen to patients and respond to their concerns and preferences
  - Give patients the information they want or need in a way they can understand
  - Respect patients' right to reach decisions with you about their treatment and care
  - Support patients in caring for themselves to improve and maintain their health
- Be honest and open and act with integrity
  - Act without delay if you have good reason to believe that you or a colleague may be putting patients at risk
  - Never discriminate unfairly against patients or colleagues
  - Never abuse your patients' trust in you or the public's trust in the profession.

You are personally accountable for your professional practice and must always be prepared to justify your decisions and action , Good Medical Practice published by GMC 2006

Appendix 2

Having a Telestroke examination – for acute stroke patients

You will be having an examination in the Accident & Emergency Department at *--name of site--,* using Telestroke equipment. As this kind of examination may be new to you, this leaflet explains what it involves and why we use it to examine patients who have had an acute stroke.

What is Telestroke?

'Tele' refers to the use of modern telecommunications equipment, such as telephones, or video-conferencing, to allow people to communication as a distance.

Telestroke is the use of this technology in an acute stroke setting.

Why is Telestroke being used?

We used this technique to improve the quality of your care.

This technology means that a stroke consultant can assess you, along with a doctor or nurse working in A&E, without needing to be present in A&E. This is particularly important if we need a consultant's opinion outside of normal working hours. It also allows us to provide better coverage of our stroke services and means that you can be assessed quicker.

Telestroke can also give us access to the results of any tests, scans or imaging of your brain that you have had. This helps us to make rapid decisions about your care, which means you will get the best treatment for you, as soon as possible.

Will others have access to information about me?

Your personal and clinical data will be recorded and stored on the remote Telestroke workstation. All information about you will be dealt within strict confidence, in line with the Trust's data protection policy.

If you decline consent for stored information to be used for educational and audit purposes, your data will not be used for these purposes, but will remain as a stored patient record.

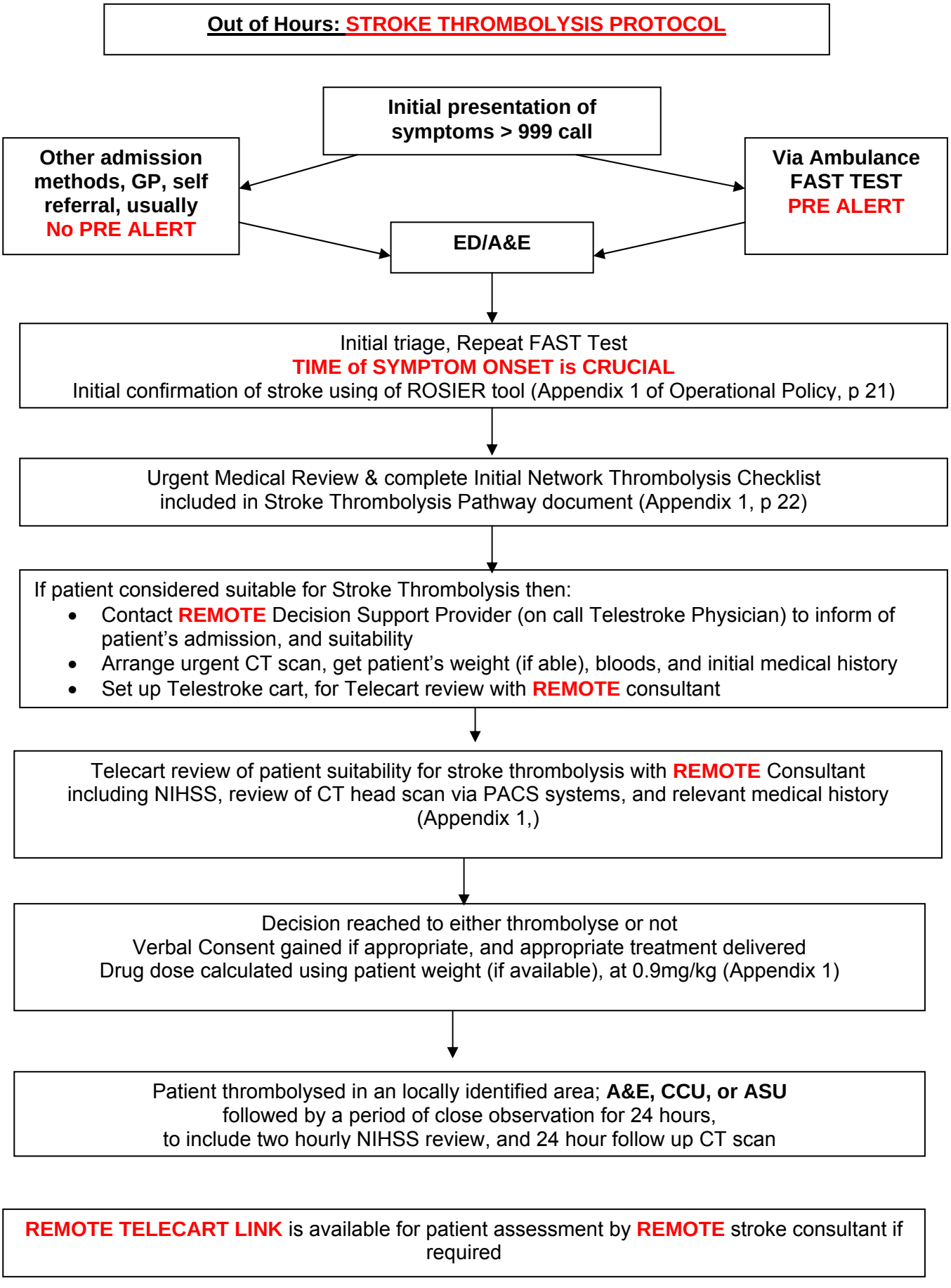
Hospital contacts

If you have any questions, please ask a member of staff caring for you. Alternatively, please contact the Stroke Team, on XXXXX.

Patient Advice and Liaison Service (PALS)

To make comments or raise concerns about the Trust's services, please contact our Patient Advice and Liaison Service (PALS). Ask a member of staff to direct you to PALS or call XXXX at *--name of site--* Email XXXX

Appendix 3 – THROMBOLYSIS ASSESSMENT PROCESS



Appendix 4 – INSTRUCTIONS FOR THE USE OF TELESTROKE EQUIPMENT

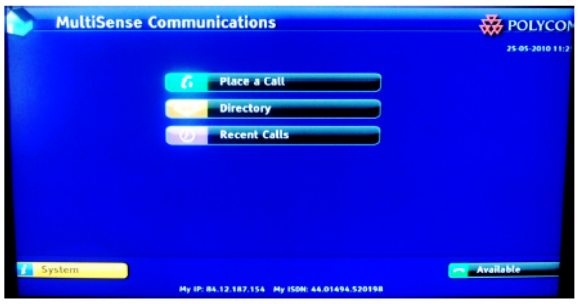
MULTISENSE Communications Ltd

Cardiac & Stroke Networks LANCASHIRE & CUMBRIA

Quick Reference Guide
Practitioner Cart

To Turn On Your Practitioner Cart

- To switch the Practitioner Cart on press the **Power** Button on the front of the Cart by the Battery indicator. You may need to also turn the HDX System on as well. To do this press the Power button on the HDX Remote control.
- The monitor may also need to be switched on.
- The system will take approximately one minute to fully load. The screen will then display the following screen:



Make a Call

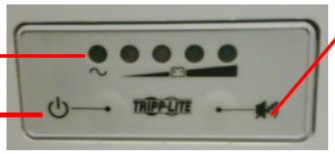
Manually dialling the number:

- To enter the number you wish to dial manually, first select Place a Call from the VC Homepage.
- From the Place a Call screen, enter the number you wish to dial in the available field using your remote control.
- When you have entered the number and are ready to make your call, press the **Call** button (left of the directory button).

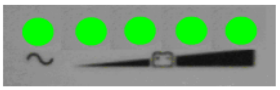
Dialling from the directory

- If the site you wish to dial to is in your directory press the **Directory** button in the centre of the remote control.
- Using the **Arrow** keys you can move through your directory list.
- When the specific number you wish to call is highlighted in **Yellow** press the **Call** button.
- The call will then try to connect.

Practitioner Cart Power

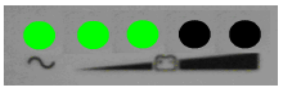


Flashing green lights:
The battery is charging.



All green Lights on:
The Battery is fully charged.

3 Green Lights:
30%-50% of Power left. An alarm will Beep to alert you.



Flashing Amber Light:
30% or less power in the cart. An alarm will continually beep to warn you. Plug in the power cord in ASAP

No lights:
There is no power. You will have to plug in the power cord.

Aiming the HDX Camera

- To move and aim the camera both in and out of a call, press the **Near** button underneath the downward Arrow Key on the remote control. This will give you control of your camera.
- Using the **Arrow keys** you can pan the camera left / right and tilt it up / down.
- Using the **Zoom** buttons (to the right of the Arrow keys) you can zoom the camera in / out.

To Hang Up A Call

- Press the **Hang-Up** button, located to right of the Directory button.

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Cardiac & Stroke Networks LANCASHIRE & CUMBRIA

Remote Control

1: Info, Gives access to system status.
2: Power, to turn system on/off.
3: Screen, to view button presses and menus.
4: Preset, sets and recalls preset camera positions.
5: Camera, to select a camera source.
6: Display, shows, moves or hides the picture-in-picture.
7: Content, Start and stop sending content to far site.
8: Far, activates camera control of the far end.
9: Arrow Keys, these allow you to pan/tilt the camera and will also navigate you through the menu screens.
10: Enter, will confirm the selection that is highlighted.
11: Volume, to adjust the volume that you are hearing.
12: Zoom, to zoom the camera in and out, whilst automatically focussing.
13: Near, activates / returns camera control to your camera.
14: Mute, activates / deactivates your microphone.
15: Back, returns you to the screen you were previously at.
16: Home, returns you to the Home Screen screen.
17: Directory, will display the systems directory.
18: Call, initiates a call.
19: Hang-up, ends a call.
20: Keyboard, shows the on-screen keyboard.
21: Delete, will delete a letter or number, one at a time.
22: Option, will display a menu of optional features.
23: Number pad.
24: Dot, used to enter a dot in an IP address.
25: Play, Stop, Record controls for a programmed device.

Troubleshooting

No Picture on the screen:
- Is the Cart turned on and does it have battery power? (If it has no battery power plug in the power cord, you can use the cart whilst it is charging).
- Is the system switched on?
- Is the Monitor switched on?
- Is the system on Standby Mode? (Lift up the remote control to 'wake up' the system)
- Check the monitor is on the correct input.

Difficulty in making a connection:
- Is the system you are dialling switched on?
- Ensure the number you dialled is correct.
- Ask the person you were calling to call you to find out if the problem is with your system.
- Make a test call to a test number.
- If you can make calls but not receive them your local numbers may not be configured correctly contact your local support.

No Outgoing/Incoming Audio:
- Make sure the Mute is not activated at either site. To deactivate the Mute press the Orange Mute Button.
- Check the volume level at both sites.
- Check the microphone connections at both sites.
- Re-dial the call.

No response from Keypad:
- Check the angle of the keypad (the infrared receiver for the keypad is in the camera)
- Check the path between keypad and camera is not obstructed
- Check the batteries for the keypad.

Image Freezes during the call:
- Re-Dial the call

Cleaning the Practitioner Cart
- Do not spray liquids directly onto the system when cleaning. Always apply spray to a static free cloth.

If these suggestions do not resolve the issue please contact support.

Turning the Practitioner Cart off

When you are ready to turn the System off press and hold down the Power button on the Practitioner Cart under by the Battery Indicator. This will turn off the monitors and HDX Videoconferencing system.

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Appendix 5 – JOINT REMOTE DECISION-MAKING CHECKLIST

STROKE THROMBOLYSIS REMOTE DECISION MAKING
INCLUDING USE OF TELESTROKE JOINT ASSESSMENT CHECKLIST

To be used simultaneously by the Patient Bedside Referrer and
Decision Support Provider

Patient's Name:	
Patient's date of birth:	
Consultant on-call for stroke thrombolysis:	
Time of stroke onset:	

The following must be cross-checked and signed off by both Patient Referring doctor and Decision Support Provider

Item to be cross-checked	Satisfied (√)	Variance?
Definite new diagnosis of acute stroke		
<3 hours of stroke onset time		
Inclusion/exclusion criteria		
CT scan findings (no blood, <1/3 MCA)		
Pre-dose NIHSS (<25)		
Pre-dose BP (<185/110 mmHg)		
Explained benefits/risks of thrombolysis		
Patient +/family verbal consent		
Patient's weight + dosage calculation		
Consultant's decision for thrombolysis?	Yes	No
If not for thrombolysis, state reason(s):		
Name of person prescribing:		
Time of bolus given:		
HDU/CCU/ASU bed available		
Appointed person to do follow-up NIHSS		
Requested follow-up CT at 24 hours		

Signature:	Job Title:	Date:
Print Name:		Time
Review case:	Yes	No

Appendix 6 – STROKE PHYSICIAN COMPETENCIES

Competencies for the use of the telestroke system

A number of different members of staff will be required to use the telemedicine system. Here competencies are divided up in to four key roles, nurse, medical staff, Train the Trainer and on call consultant. Different hospitals will use different staff groups to support the telemedicine service .

Competence has been graded on a scale of 1-5 as per the Stroke Specific Education Framework –

1 - Basic – the criteria demand only a very limited and generalized understanding.
2 - Factual – the criteria call for a knowledge that is detailed, but does not involve any more than a superficial understanding of any principles or theories.
3 - Working – the criteria call for the application of factual knowledge of widely understood technical principles and implications within the field of practice.
4 - In-depth – the criteria demand a broad and detailed understanding of the theoretical underpinning of an area of practice.
5 - Critical – the criteria call for the ability to evaluate and devise approaches to situations that depend on the critical application of theories and conceptual constructs within the area of practice.

	Clinical Competencies	Nurse	Medical Staff	On call consultant
1	Understands the technical background to the telemedicine system	3	3	5
2	Demonstrate knowledge of thrombolysis for stroke patients	3	3	5
3	Discuss the inclusion/exclusion criteria for stroke thrombolysis and be able to state where to find further information	3	3	5
4	Discuss and participate in consent process, acting as patient's advocate if required	4	4	5
5	Demonstrate understanding of the thrombolysis pathway	3	3	4
6	Identify and co-ordinate investigations and assessments needed prior to thrombolysis	3	4	5
7	Demonstrate ability to take a patient history from all available sources	3	4	5
8	Demonstrate effective communication with key groups in rapidly changing environment (patient, radiology, nurses, doctors, bed managers)	3	3	5
9	Discuss the process of care for patients deemed not suitable for thrombolysis, and the need for appropriate referrals	3	4	5
10	Have knowledge of how to calculate dose, and delivery of bolus and infusion.	3	3	5
11	Be aware of possible complications of thrombolysis and appropriate actions (including knowledge of laryngeal oedema, anaphylaxis, and need for neuro surgical opinion)	3	3	5
12	Discuss the plan of care for thrombolysed patients over the next 24 hours	3	3	5
13	Demonstrate knowledge of CT scans and recognise obvious abnormalities	1	3	4
14	Co-ordinate all further assessment points e.g. NIHSS	3	3	5

15	Understands decision making process when to initiate contact with on call consultant	2	3	5
16	Able to carry out assessment of patient via telemedicine	3	3	5
	Governance and documentation			
17	Knowledge of process to document consultation	3	3	5
18	Can retrieve 'record of consultation' from the system	2	3	5
19	Understands importance of data collection and how this is done	3	3	4

I confirm that the above has completed the training required and obtained the competencies for participation in the stroke thrombolysis pathway.

Signature _____
Name _____
Date _____

Proposed training for stroke and non-stroke specialist medical staffing for participation in thrombolysis via telemedicine.

Where the stroke telemedicine service is being used to support decision making for stroke thrombolysis, it is essential that the medical staff in the hospital who are responsible for the patients' care are competent to assess and care for acute stroke patients. This competence must be record and documented.

The following sets out the requirements for non-stroke medical staff to participate in the thrombolysis pathway.

1. Requirements

- Individuals must be at Registra level or above (e.g. A&E Consultants, A&E Registrar, Med Registrar, Neurologists)
- Individuals must have completed and signed off the defined competencies (see competencies documentation)
- Individuals must have completed the training requirements (see training checklist)

2. Composition of training

Element	Competencies covered	Delivered by	Source
NIHSS training	14	Online	NIHSS
Advanced thrombolysis training module	2,3,6,10,11,12,13	Online Regional Training	Advanced thrombolysis module BASP training
Masterclass thrombolysis training	2,3,6,10,11,12,13,14	Online Network Study Day	Masterclass module Masterclass
Introduction to local thrombolysis pathway, local protocol, roles and responsibilities, consent process.	4,5	Locally delivered	
Training on telemedicine equipment	1,17,18,19	Locally, Network. Manufacturer	
Core skills	7,8,9,10	No specific stroke training needed	
CT Interpretation and Assessment Training	13	Neuroradiologist Dr Ian Turnbull	Network 2 day course, 1 training day, 1 assessment day, RCP accredited

3. **Progress for sign off**
   - Medical staff should not be involved in stroke thrombolysis cases until they have completed their training and competencies.
   - Competencies and training should ideally be signed off by the stroke consultant
   - In some cases self assessment of competencies could be agreed.
   - Records of training and competencies should be held centrally by the stroke service, by lead clinician or nominated deputy.

Example - Training checklist for medical staff

Name_____

	Delivered by	Date completed	Signature
NIHSS training	Online		
Advanced thrombolysis training module	Online		
Masterclass thrombolysis training	Online		
Introduction to local thrombolysis pathway, protocol, roles and responsibilities	Local		
Local protocol	Local		
Local roles and responsibilities	Local		
Consent process	Local		
CT Interpretation and Assessment Training	Dr Ian Turnbull		
Training on telemedicine equipment	Locally, Network, Manufacturer		

I confirm that the above clinician has completed the training required and obtained the competencies for participation in the stroke thrombolysis pathway.

Signature_____ Name_____ Date_____

Proposed training for Nurse involved in the Stroke Assessment Pathway which involves participation in thrombolysis via telemedicine.

Where the stroke telemedicine service is being used to support decision making for stroke thrombolysis, it is essential that the nursing staff in the hospital who are responsible for the patients' care are competent to assess and care for acute stroke patients. This competence must be a record and documented.

The following sets out the requirements for nursing staff to participate in the thrombolysis pathway.

1. **Requirements**
   - Individuals must be at Registered Level 1 at Band 5 or above
   - Individuals must have completed and signed off the defined competencies (see competencies documentation)
   - Individuals much have completed the training requirements (see training checklist)

2. **Composition of training**

Element	Competencies covered	Delivered by	Source
FAST training	5	Network staff, Local Train the Trainer	Presentation provided by the Cardiac and Stroke Network
ROSIER training	3,4,5	Network staff, Local Train the Trainer	Presentation provided by the Cardiac and Stroke Network
NIHSS training	14	Online	NIHSS http://nihss-english.trainingcampus.net/
Additional Stroke Thrombolysis Training	2,3,6,10,11,12,13	Network Study Day Regional Training	
Introduction to local thrombolysis pathway, local protocol, roles and responsibilities, consent process.	3,4,5,15	Locally delivered	Local Trust policy & procedures.
Training on telemed cart	1, 17	Locally, Network. Manufacturer	
Core skills	7,8	No specific stroke training needed	

3. Progress for sign off

- Nursing staff should not be involved in stroke thrombolysis cases until they have completed their training and competencies.
- Competencies and training should ideally be signed off by the stroke lead
- In some cases self assessment of competencies could be agreed.
- Records of training and competencies should be held centrally by the stroke service, by lead clinician or nominated deputy.

Example - Training checklist for nursing staff

Name_____

	Delivered by	Date completed	Signature
FAST training	Network Local		
ROSIER training	Network Local		
NIHSS training	Online		
Introduction to local thrombolysis pathway, protocol, roles and responsibilities	Local		
Additional Stroke Thrombolysis Training	Network		
Local protocol	Local		
Local roles and responsibilities	Local		
Consent process	Local		
Training on telemedicine equipment	Locally, Network, Manufacturer		

I confirm that the above nurse has completed the training required and obtained the competencies for participation in the stroke thrombolysis pathway.

Signature_____ Name_____ Date_____

Proposed training for stroke and non-stroke medical staffing for participation in thrombolysis via telemedicine.

Where the stroke telemedicine service is being used to support decision making for stroke thrombolysis, it is essential that the medical staff in the hospital who are responsible for the patients' care are competent to assess and care for acute stroke patients. This competence must be recorded and documented.

The following sets out the requirements for stroke and non-stroke medical staff to participate in the thrombolysis pathway.

1. Requirements

- Individuals must be at SHO level or above (eg A&E Junior Medical Staff, A&E Registrar, Med Registrar, Medical SHO)
- Individuals should have completed and signed off the defined competencies (see competencies documentation)
- Individuals should have completed the training requirements (see training checklist)

2. Composition of training

Element	Competencies covered	Delivered by	Source
ROSIER training	5	Network or Local Train the Trainer	Network presentations provided
NIHSS training	14	Online	NIHSS http://nihss-english.trainingcampus.net/
Stroke Advancing modules 1 & 2	2,3,4,6,10,11,12	Online	Masterclass module
Additional Stroke Thrombolysis Training	2,3,6,10,11,12,13	Network Study Day Regional Training	Masterclass BASP training
Introduction to local thrombolysis pathway, local protocol, roles and responsibilities, consent process.	3,4,5,7,8,9,10,14,15,16	Locally delivered	Local Trust policy & procedures.
Training on telemed cart	1,17,18,19	Locally, Network. Manufacturer	
Core skills	7,8,9,10	No specific stroke training needed	

3. **Progress for sign off**
   - Medical staff should not be involved in stroke thrombolysis cases until they have completed their training and competencies.
   - Competencies and training should ideally be signed off by the stroke consultant
   - In some cases self assessment of competencies could be agreed.
   - Records of training and competencies should be held centrally by the stroke service, by lead clinician or nominated deputy.

Example - Training checklist for medical staff

Name_____

	Delivered by	Date completed	Signature
ROSIER training	Network Local train the trainer		
NIHSS training	Online		
Advanced thrombolysis module 1 & 2	Online		
Introduction to local thrombolysis pathway, protocol, roles and responsibilities	Local		
Local protocol	Local		
Local roles and responsibilities	Local		
Consent process	Local		
Training on telemed cart	Locally, Network, Manufacturer		

I confirm that the above clinician has completed the training required and obtained the competencies for participation in the stroke thrombolysis pathway.

Signature_____ Name_____ Date_____