Acute Stroke Ready Hospital (ASRH) Designation Reference Guide

North Dakota Stroke System of Care

NORTH Dakota | Health & Human Services

Be Legendary.

5/2024

Welcome!

We are pleased that your facility has decided to become an Acute Stroke Ready Hospital (ASRH) or to maintain your ASRH designation. This reference guide will help organize everything you need to submit your application successfully and prepare for your facility's upcoming site visit. This guide includes an overview of the requirements, specifics about what to submit, and an appendix full of examples to reference. If you have questions or need clarification about the following criteria and supplemental documentation you will be asked to submit as part of the ASRH designation process, please contact Christine Greff, State Cardiac and Stroke Systems Coordinator, at cgreff@nd.gov.

Tips for Successfully Submitting Your Application

- ✓ Getting Started
  - Your application will be provided to you via email from the North Dakota Department of Health and Human Services (DHHS), Emergency Medical Systems Unit (EMSU) Cardiac and Stroke Coordinator, or you can find the application online at https://www.hhs.nd.gov/health/EMS/stroke_system under Stroke System of Care Hospital Designation.
  - For support during the application process, please contact the EMSU at cgreff@nd.gov.
  - Please also refer to the Acute Stroke Ready Hospital Site Visit Document Submission checklist to ensure you have all the required documentation.
- ✓ Uploading Documentation
  - All attachments must be in PDF format.
  - Name files with short but descriptive titles, or the file may not upload properly.
  - Eliminate pages of unnecessary documentation by uploading only the documents or sections of documents that are necessary to illustrate the required criteria.
  - Ensure uploads are easy to read (*i.e.,* not upside down, not vertical layout when should be horizontal, are legible, etc.)
  - Ensure all documentation (protocols, policies, agreements, letters, etc.) is up-to-date and not missing signatures.
- ✓ Completing the Application
  - Submit the application via email to cgreff@nd.gov.

Contact Information

Please complete the hospital contact information form as described below. This form will need to be completed with your application and resubmitted any time there is a change in the information provided. See *Appendix 1A*-Contact Information Form.

- Stroke Coordinator
    - Your primary contact is your on-site designated stroke coordinator. This person manages the day-to-day work of your stroke program and is part of your stroke program leadership team.
- Secondary Contact
    - The secondary contact may be a designated administrator (*i.e.,* DON, quality department director, etc.) for your hospital and someone who supports the implementation of your stroke program. This person will manage the stroke program in the absence of the stroke coordinator and will be contacted when the stroke coordinator cannot be reached.
- Stroke Medical Director
    - The physician (or approved advanced practice provider) who works with the stroke coordinator and oversees championing the stroke work in your hospital.
- Registry/Data Entry
    - This person is the abstractor who submits data into the state stroke registry.
- Stroke Registry Reimbursement Contact
    - This person is responsible for stroke registry reimbursement and may be in contact with the EMSU Grants Coordinator regarding grant awards and stroke registry reimbursement for your facility.

Required Documentation

The following documents should be uploaded and submitted when applying for Acute Stroke Ready hospital designation:

1. **Acute Stroke Ready Hospital Designation Application**
2. **EMS Feedback Forms**

   The EMS feedback form should be utilized to enhance communication and ensure loop closure between EMS and hospital personnel on stroke activations and treatment. This

form should include an area to highlight what went well and opportunities for improvement that were noted. The EMS feedback form should be completed for all stroke codes transferred to your facility via EMS.

For step-by-step instructions on how to use GWTG: Stroke to develop an EMS feedback form, please refer to *Appendix 2A*.

For an example of an EMS feedback form, please refer to *Appendix 2B*.

For an example of an EMS feedback form, please refer to the EMS feedback tab in the Comprehensive Stroke Log Template here.

3. Comprehensive Stroke Log

A comprehensive stroke log is an essential component of a successful stroke program. The comprehensive stroke log should provide your stroke leadership staff with a broad overview of all stroke code activations and quality metric times to make it easier to identify fallouts. The log should include but is not limited to stroke code activation time, stroke team arrival to bedside, door time, door-to-CT time, door-to-CT interpretation time, door-to-needle time, door-in door-out time, etc. Please note that the clock time and the time in minutes from door should be included in your log for quality metrics.

In addition, the comprehensive stroke log should be used for a complete view of your facility's stroke program, including patient diagnosis (how many stroke patients per year), treatment (how many times IV thrombolytic was administered, why IV thrombolytic was not administered), and disposition (transfer).

Your stroke log may include:

- Patient Demographics
- Stroke Diagnosis
- Arrival Mode
- Patient Arrival/Door Time
- EMS Prenotification

- Stroke Code Activation Time
- Door to Stroke Code
- Telehealth or Telestroke Activated
- Acute Stroke Team Arrival Times
- Last Known Well Time
- POC BG Time
- CT Initiated Time
- Door to CT time
- Initial NIHSS
- Time Labs Resulted
- CT Results Time
- Door to CT Interpretation Time
- Patient Weight/Source
- Time Thrombolytic Initiated
- Door-to-Needle Time
- NPO Order
- Dysphagia Screen Complete
- VS and Neuro Checks completed q. 15 min.
- Post IV Thrombolytic/Discharge NIHSS
- Patient Transfer Time
- Door to Transfer
- Discharge Disposition
- Order Set Used
- Comments (Inclusion/Exclusion)
- Things that went well
- Opportunities for improvement
- Feedback to clinical staff
- EMS feedback sent

The stroke coordinator should regularly review the log to evaluate the stroke activation and treatment process. We encourage adding all stroke code activations regardless of the final diagnosis. This will help evaluate the stroke activation process more thoroughly and identify any areas for improvement.

You can access a Comprehensive Stroke Log Template in Excel here. This document is meant to be customized to your facility's needs.

For another example of a comprehensive stroke log in Excel, click here. This document is meant to be customized to your facility's needs.

For step-by-step instructions on how to use GWTG-Stroke to generate your stroke log, please refer to How to Run Get With The Guidelines-Stroke Time Tracker Report, see *Appendix 3A*.

4. **Evidence of an Acute Stroke Team (AST) available 24 hours a day, 7 days a week**.

   The AST may be staffed by various healthcare personnel, depending on the resources available at your facility. The AST includes all nurses and providers that respond to stroke, at minimum, one nurse and one provider, and a laboratory and radiology team member. Members of your AST should be available and/or on-call 24 hours a day, 7 days a week.

   A call back time of less than 20 minutes is recommended for all AST members with the exception of the AST lead (*i.e.,* the provider) who is expected to respond within 15 minutes to the bedside.

   Please submit three months of your Acute Stroke Team (AST) call schedules for your providers, nurses, and Laboratory and Radiology departments (if not in-house 24/7).

5. **Stroke Activation Protocol**

   Your stroke activation protocol should include criteria for activating a stroke code, define the Acute Stroke Team (AST), detail the roles and responsibilities of each AST member, steps on how to activate the stroke code, and timeframe for activation. The protocol must include activation from different areas in your facility; for example, if your facility has an inpatient unit or swing bed, your activation protocol should also address the protocol for activation from these areas.

The stroke activation protocol must be facility-specific. It may be part of your stroke code policy/protocol and include your facility's stroke code algorithm.

Please submit your facility's stroke activation protocol.

For an example of stroke activation protocol, please refer to Appendix 5A.
For an example of stroke activation protocol, please refer to Appendix 5B.

6. Stroke Treatment Guidelines/Protocols

The stroke treatment guidelines/protocols for acute diagnosis, stabilization, monitoring, and treatment of patients for TIA, ischemic, and hemorrhagic strokes. These protocols should encompass care in the Emergency Department (ED). If your facility admits stroke patients, a separate protocol for inpatient care must also be submitted. Protocols should be developed by a multidisciplinary team and reviewed and revised as needed at least once yearly to reflect changes in the medical knowledge, care standards, and guidelines.

Your protocols must include a stroke patient's diagnostic workup, intervention, and patient monitoring for all types of strokes, including the IV thrombolytic eligible patient. Also, include guidelines for identification of contraindications to IV thrombolytic (inclusion/exclusion criteria), blood pressure management, reversal, and post-lytic complications.

Protocols should include time goals and any algorithms that help guide ED care or patient transfer.

Please submit your stroke treatment guidelines/protocols for Emergency Department care and, if applicable, your inpatient stroke protocol.

Your facility may use the North Dakota Acute Stroke Treatment Guideline, attached to *Appendix 6A*.

If your facility does not use the state stroke guidelines, your protocol should align with clinical practice guidelines. Access the American Heart Association's clinical practice guidelines links in *Appendix 6B*.

For guidance on developing an ICH Anticoagulation Reversal Clinical Practice Guideline, see *Appendix 6C*.

For guidance on developing a Post-IV Thrombolytic Complication Management Guideline, see *Appendix 6D*

7. Stroke Order Sets

Stroke order sets must reflect your stroke treatment guidelines/protocols and include orders that address diagnosis, stabilization, monitoring, and treatment of patients for TIA, ischemic and hemorrhagic strokes, thrombolytic administration, and blood pressure management.

Order sets must be reviewed and revised as needed and at least once yearly to reflect any changes made to stroke guidelines/protocols or updates in clinical best practices.

Please submit a copy of your order sets for all types of strokes, including thrombolytic administration.

For an example of a stroke order set, please refer to *Appendix 7A*.

8. Dysphagia Screen

All patients exhibiting stroke symptoms must have an NPO order or pass an evidence-based dysphagia screen before receiving any oral medication, fluids, or food. As part of your protocol, you may require your nursing staff to complete a dysphagia screen. If no dysphagia screen is complete, an NPO order is required. We strongly recommend that "NPO until the patient passes a dysphagia screen" be included in your order sets.

Please submit a copy of your facility's dysphagia screen.

For an example of an evidence-based dysphagia screen in a fillable format, please refer to *Appendix 8A*.

To view the dysphagia screen infographic, please refer to *Appendix 8B*.

9. Acute Stroke Team (AST) Education

All AST members (at minimum, all nurses and providers that respond to stroke) must receive at least two hours of stroke education annually. Although all AST members performing the National Institutes of Health Stroke Scale (NIHSS) must maintain NIHSS certification, the two hours of required education annually do not include NIHSS recertification (like the recertification of Advanced Cardiac Life Support (ACLS)).

Your facility should develop a system to track AST participation in stroke education. Acceptable options include maintaining educational records in each individual employee file or keeping a master list of participants for each educational offering.

Stroke education does not need to be formal continuing education units (CEUs). Examples of stroke education for AST members and other staff involved in the care of stroke patients may include but are not limited to:

- ✓ Implementing mock stroke codes, including the stroke activation process (incorporate EMS)
- ✓ Competency checks on IV thrombolytic administration annually
- ✓ Consider providing BEFAST education to all staff
- ✓ Partnering with a Telestroke provider or a Primary or Comprehensive Stroke Center partner on formal education opportunities and case review
- ✓ National acute stroke best practice tools, trainings, and resources:
    - National Stroke Association
    - American Heart Association/American Stroke Association
    - North Dakota Cardiac and Stroke Conference

If they are part of the AST, education should be provided during orientation on the facility stroke code process, stroke treatment guidelines, and protocols.

Please submit your records of AST education for the past year and your education plan for the next year.

For an example of an education plan and education record, please refer to *Appendix 9A*

10. Laboratory Scope of Practice

Your facility's laboratory should have the capacity to complete basic laboratory testing at all times. Your laboratory scope of practice should include hours of operation, hours on-site, on-call hours, response times, and process for stat labs.

Please submit your scope of practice or policy document for the laboratory.

11. Radiology Scope of Practice

Your facility should have the capacity to perform and interpret brain imaging studies 24 hours a day, 7 days per week. Personnel interpreting such scans should be board-certified radiologists with experience and expertise in reading head CTs and brain MRIs.

Your radiology scope of practice should include hours of operation, hours on-site, on-call hours, response times, radiology services, and process for STAT CT read.

Please submit your scope of practice or policy document for the radiology department.

12. Written CT Downtime Protocol

To be designated a stroke center, your facility must have 24/7 CT coverage. However, if your CT scanner is not operational for a short time, your facility must have a protocol to care for stroke patients who arrive by private vehicle, EMS, or for those that develop stroke symptoms at your facility. Do not simply state, "Our facility will go on diversion,"

but describe the plan to reroute stroke patients to the next closest stroke center. Include instructions for how and when to complete a state advisory.

This protocol should include a plan for transmitting CT images if the picture archiving and communications system (PACS) is unavailable.

13. Data Collection and Quality Metric Tracking

Data Collection-Your facility must be current on data submission to the North Dakota stroke registry within 90 days of the site visit (we strongly recommend data entry be current at the time of application submission). If you do not upload your facility's stroke data, identify the person responsible for abstraction at your facility in the contact information card provided in Appendix 1A. Work closely with the data entry person to ensure all stroke patients are submitted to the registry.

Please submit evidence of data collection by submitting your GWTG-Patient List. For a how to guide on how to obtain your patient list report by diagnosis, please see *Appendix 13A*.

Quality Metric Tracking-Demonstrate that there is a process in place to track your facility's quality metrics. This may be within your comprehensive stroke log, on an Excel spreadsheet, or you may utilize the stroke registry reports.

Your AST should be familiar with your quality metric goal times and know where your facility stands in meeting those goals. Quality metrics include but are not limited to door-to-CT, door-to-CT interpretation, door-to-needle, and door-to-transfer.

If you track your quality metric data utilizing another method besides the comprehensive stroke log, please submit your quality metric tracking for the previous calendar year.

For a how to guide on how to run your GWTG-Stroke Rural Stroke Recognition Report (Quality Metrics), please refer to *Appendix 13B*.

14. Comprehensive Performance Improvement Program

What do you do with the data you collect? Demonstrate that there is a process to utilize the data you capture.

- ✓ Step 1: **Identify trends and opportunities for improvement**.
  - Review your comprehensive stroke log.
  - Look at cases that resulted in a stroke ICD-10 code.
  - Review all identified charts using a case review form to track treatment times (*e.g., stroke code activation, acute stroke team arrival times, etc.)* and whether quality metric goal times *(e.g., door-to-CT, door-to-CT interpretation, door-to-needle, etc.)* were met.
  - Use a case review form to evaluate clinical practice guideline adherence *(e.g., vital signs and neuro checks every fifteen minutes, NPO order until the dysphagia screen is passed)*.
  - Your acute stroke team or stroke program management may identify opportunities for improvement.
  - Review your Acute Stroke Ready Hospital site visit report.
  - Receive feedback from the receiving hospital on stroke care performance.

- ✓ Step 2: **Develop written action plans with measurable goals and timelines to improve practice**.
  - Ensure key stakeholders are involved.
  - Identify the responsible party for each action item.
  - Use a performance improvement method that works for your facility. Some examples include Plan-Do-Study-Act or SBAR (Situation, Background, Assessment, Recommendation), or the Lean process.

- ✓ Step 3: **Implement the action plan to improve the opportunities identified**.
  - Communicate plans with clinical staff.
  - Track efforts and outcomes.

- ✓ Step 4: **Evaluate**
  - Review your data. Did you meet your goals?

- Provide outcome to key stakeholders and clinical staff.
- Celebrate wins.
- Establish plans to continue performance improvement.

Review your quality metric data and stroke code performance at regularly convened meetings. This can be in an existing structure, such as an ED or trauma meeting or a separate stroke committee meeting. Involve the AST and any departments involved in stroke treatment (*i.e.,* EMS, radiology, laboratory, registration, quality). This provides an opportunity for all to review care and identify areas to improve.

Please submit all performance improvement-related documents, which may include:

- Stroke-specific case review forms
- Stroke meeting agendas and minutes from the previous calendar year
- Performance improvement action plans
- Performance improvement projects/efforts
- Data that supports performance improvement

For an example of a stroke case review form, please refer to *Appendix 14A*.

For an example of a performance improvement action plan templates, please refer to *Appendix 14B*.

15. Transfer Agreements and Protocols-

Transfer Agreement-

The North Dakota Century Code chapter 23-43, Stroke Centers and Care, states, "Through agreement, a comprehensive stroke center and primary stroke center may coordinate with an acute stroke-ready hospital to provide appropriate access to care for acute stroke patients. The coordinating stroke care agreement must be in writing and include, at minimum:

a. The transfer agreement for the transport and acceptance of a stroke patient seen by the acute stroke-ready hospital for stroke treatment therapies the stroke center or primary care center is not capable of providing; and
b. Communication criteria and protocol with the acute stroke-ready hospital."

A stroke-specific transfer agreement between the ASRH and at least one hospital that has 24/7 neurosurgery and endovascular coverage consistent with the Primary Stroke Center or Comprehensive Stroke Center. This may necessitate multiple agreements. Contact the receiving tertiary center stroke coordinator to initiate the draft of a transfer agreement.

Transfer Protocol-

A written transfer protocol or algorithm that describes your own facility's process for safely transferring stroke patients to higher-level stroke centers. This document should outline what you do to initiate and complete a transfer of a stroke patient. Include specifics such as phone numbers for receiving facilities and for EMS options, considerations for mode of transport, medical management, and information transfer. Partnering with Telemedicine services to initiate transfer is acceptable.

Please submit:

- A stroke-specific transfer agreement or memorandum of agreement (MOA).
- A transfer protocol from your facility.

For an example stroke transfer protocol, please refer to *Appendix 15A*.

For an example stroke transfer algorithm, please refer to *Appendix 15B*.

16. Attestation Letter

A letter attesting that the application is accurate and current shall be submitted as part of the ASRH application process. The letter should be signed by your facility's CEO and stroke medical director. The signed letter should declare that the documentation represents the hospital's stroke processes, protocols, and capabilities.

Please submit the attestation letter on hospital letterhead.

For an example stroke leadership attestation letter, please refer to *Appendix 16A*.

Submit Application

Upload and attach the completed application, all required documentation, and the signed letter of attestation to an email and send to the Cardiac and Stroke Systems Coordinator at the North

Dakota Department of Health and Human Services, Emergency Medical Systems Unit, Christine Greff, at cgreff@nd.gov.

Congratulations on successfully completing your application. The Cardiac and Stroke Systems Coordinator will follow up with any other necessary documentation requests or questions. The review team will evaluate your facility's application and site visit documents prior to your site visit.