Welcome to the Arkansas Stroke Registry (ASR**)**

This document provides information on the Arkansas Stroke Registry (the Registry). The Registry website contains information on stroke and stroke care as well as quality improvement (QI) information and tools. The website is embedded with links within the text and shares important information to assist with Registry participation. Additional resources are also available and provided as needed.

Registry Activities

QI Support:

The Arkansas Department of Health (ADH), in collaboration with its partners, manages the Registry. Participation in the Registry offers support to assess, improve and maintain care processes to provide excellent care to stroke patients. *More information on Registry Participating Hospitals can be at healthy.arkansas.gov. Type "Stroke Registry Participating Hospitals" in the search bar.*

QI Support includes:

- An annual Stroke Program review - a discussion of selected measures, the hospital's performance and improvement strategies. For higher performing hospitals a written report may be used.
- Measure improvement strategies assist with creating and successfully completing a corrective action plan (CAP). Included with the support is a "Guide to Improve Measure Adherence" as a reference.
- Pre-hospital, acute, in-patient and discharge stroke care strategies and educational support to guide to improvement. Other forums are available for QI strategy discussions. Registry staff members are also valuable references.
- Tips and tools assist Stroke Teams in improving stroke care. Multiple reference documents are available on the website as well as other accessible through Registry staff.
- Educational sessions and brief education presentations for use by hospital coordinators are included. At times, continuing education sessions for EMS, nurses or physician credits are offered.
- There are training resources available in the database library. One training for the new coordinator/staff is the "Onboarding Series" in the "User Guide & Training" section. There are other resources available. Please review the database library.

Data Support includes:

- Entering data and instructions on data entry.
- Supporting data reports creation and graphs with tips on maximizing the use of the database.
- Requesting a grant for data entry through the American Data Network (ADN).

Annual Stroke Program Assessment

The annual program review may be done onsite, as a written report, in-person visit, or through teleconferencing on Microsoft Teams (or similar platform provided by the hospital). All members of the Stroke Team are invited and encouraged to participate. The annual review process is standardized. For new hospital staff, the agenda may be adjusted to meet the organization's and/or coordinator's specific needs.

The goals of annual review are to:

- Discuss the role of the Registry initiative and define the role(s) of each partner.
- Review the CDC consensus measures and other related data.
- Review measures selected for statewide improvement.
- Discuss the successes and challenges related to meeting adherence expectations.
- Identify the hospital's adherence relative to participating hospitals.
- Provide comparison bar charts for sharing with staff and providers.
- Identify opportunities for stroke program QI.
- Discuss GWTG/IQVIA database and the availability of data.
- Create an action plan to address the organization's identified challenges as well as the coordinator's education and training needs.

Arkansas Stroke Ready Hospital Designation (ArSRH)

Participation in the Registry is required for a hospital to receive designation as an ArSRH. Because not all hospitals can be designated by a national accrediting body as an Acute Stroke Ready Hospital, Primary Stroke Center, or Comprehensive Stroke Center, the ArSRH designation was created to show the community that the hospital is committed to providing appropriate and timely acute stroke care. The ArSRH has been designated by the state as able to provide immediate and time-critical care to the stroke patient. The initial designation process looks at the hospital's capability to provide stroke care. Once the application is completed, a visit is made by Registry leadership. After the visit, a decision is made. *More information on ArSRH Designation can be found at healthy.arkansas.gov. Type "AR Stroke Ready Hospitals" in the search bar.*

Redesignation occurs every three years. The redesignation application includes a data reporting component. The measures for reporting are selected by the ArSRH Leadership Team. One year before redesignation is due, a message is sent to prepare for successful re-designation. The early

notification is to be sure the hospital is ready for re-designation. At the initial designation, measure adherence is not required. Ongoing QI support is available to ArSRH hospitals as needed. *More information on the ArSRH application can be at healthy.arkansas.gov. Type "ArSRH designation" in the search bar.*

Stroke Regional Advisory Council

The Stroke Regional Advisory Council (SRAC) was formed to address region-specific issues as well as to provide local guidance and support for coordinators with QI challenges and questions. The state has been divided into 7 regions. Each region formed a SRAC as a forum for stroke care improvement. The SRAC is an opportunity for discussion of regional challenges, adherence challenges, common issue(s) discussions and an opportunity for identifying issues to be addressed at a higher level.

The SRAC Team, comprised of EMS staff and hospital stroke coordinators, is supported by Regional Leaders elected by the SRAC team members. The leaders organize regional meetings, make connections with leaders from the other regions and bring best practices and other useful information back to their region. The leaders and their work are supported by Registry staff. Additionally, leaders provide a progress report on their region during the Acute Stroke Care Task Force meetings. SRAC Teams meet at least quarterly. *More information on SRAC can be at healthy.arkansas.gov. Type "Stroke Resources" in the search bar and view the Regional Resources and Regional Reports.*

At meetings, the leaders:

- Share blinded regional data, comparing hospitals to the regional, state, and U.S. benchmarks on key stroke care performance.
- Assist with QI efforts to:
    - Decrease the incidence of strokes and transient ischemic attacks (TIA) by increasing public awareness of stroke signs and symptoms, treatment and prevention, signs and symptoms of stroke
    - Improve regional and hospital performance
    - Share successful strategies and obtain support from others with challenges
    - Decrease death and disability associated with acute stroke
    - Reduce disparities in stroke patient care

Registry Partners

AHA/ASA - Get With The Guidelines®

Additional assistance is provided by the AHA/ASA. AHA/ASA assists in using the *Get With The Guidelines* -Stroke Patient IQVIA Reporting Platform for chart abstraction, data entry, reporting, analysis and QI. Mary Jo Sikkema is the AHA/ASA QI Manager for Arkansas and may be reached at mary.sikkema@heart.org . Brittany Henson (brittany.henson@heart.org) is an additional contact for AHA/ASA.

Data are collected and entered in the GWTG/IQVIA database. Included in the database are measure descriptions and operational definitions, detailed coding instructions including measure inclusions, and exclusions as well as other important information. ***NOTE:*** *Up to 10 employees/providers per hospital may use the database. Each person is required to have an individual password. Do not share passwords.*

If assistance is needed related to access, collecting the data elements, generating graphs, case entry identification, using the IRP, or understanding the coding instructions, contact the Registry staff. Additional updates are sent out periodically from IQVIA via email to all user accounts. Presentations may also be provided by AHA/ASA and the Registry staff. Some of the more formal presentations will offer continuing education credits for EMS, RNs, and physicians. These sessions are open to all Stroke Team members and appropriate hospital or EMS agency staff.

Access to the Database

IQVIA is the software company that developed GWTG-Stroke database and provides technical support for the software, including assigning user IDs and resetting passwords. IQVIA customer support may be reached by calling 888-526-6700. Or requests may be directed to Mary Jo Sikkema (mary.sikkema@heart.org) or Brittany Henson (brittany.henson@heart.org) from the AHA/ASA - Stroke.

UAMS/ IDHI /Mercy Tele-stroke

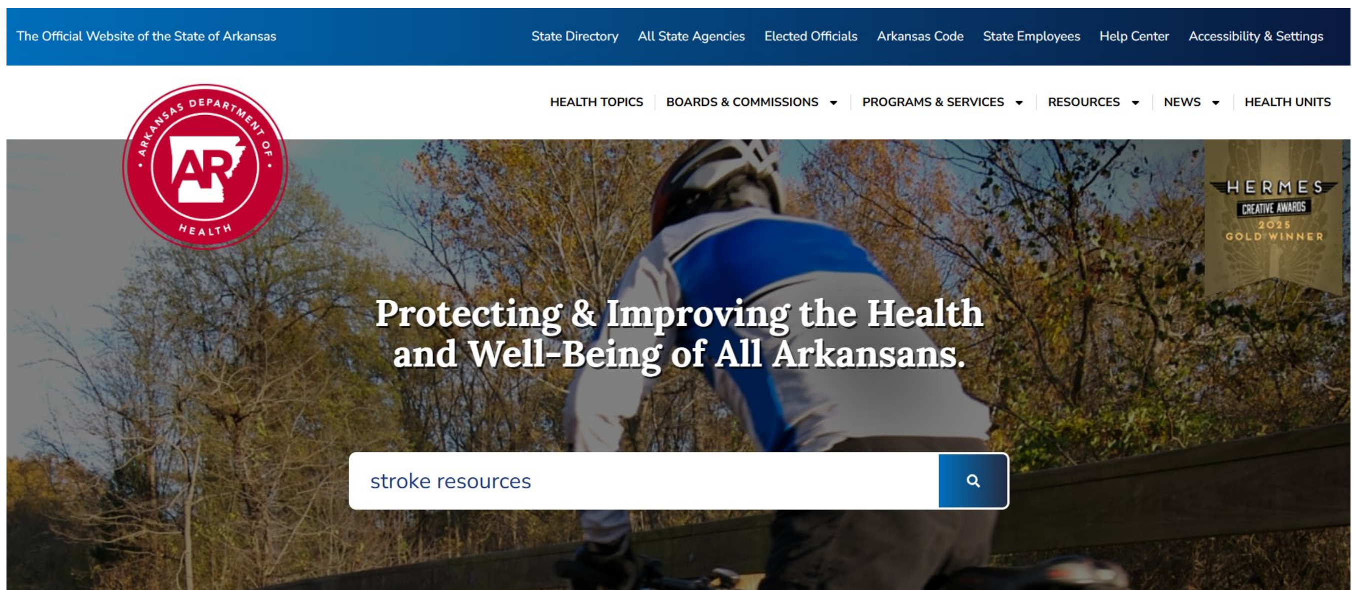
Tele-medicine works to optimize stroke patient care and outcomes. Sites participating in Institute for Digital Health & Innovation (IDHI) and Mercy Tele-stroke programs are equipped with telemedicine technology to connect with vascular neurologists 24/7 and receive support and ongoing education. IDHI support and Mercy Virtual Care support are available online.

American Date Network (ADN)

ADN is a contractor for the Registry and provides chart abstraction, through a grant, for qualifying hospitals. Stroke coordinators of hospitals using ADN are required to grant permission to review the patient's medical record, including all required information. The stroke coordinator is expected to review the measure adherence for use in QI activities and complete a review of a sample of patients entered to ensure the data are entered completely and correctly. All hospitals using ADN for abstraction are assigned an abstractor. For more information, contact Nancy Cole (ncole@americandatanetwork.com). To request a grant for abstracting assistance, contact Registry staff member Jon Weigt (jonathan.p.weigt@Arkansas.gov).

Arkansas Department of Health Website

The Arkansas Department of Heath website is: **healthy.arkanasas.gov**. Enter "Stroke Resources" in the search bar for more information. The website contains great information on stroke and stroke resources.



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Stroke Continuum of Care

To facilitate timely stroke care, the pre-hospital phase is critical. The immediate identification of a suspected stroke patient in the field facilitates timely in-route assessment and hospital pre-notification, allowing the receiving ED staff time to prepare prior to the patient's arrival. It is for this reason that the Registry includes pre-hospital providers in its scope. Hospitals and pre-hospital providers are encouraged to provide support in a community outreach approach. The purpose of community outreach is to educate the community on behavioral and health risk factors that increase the incidence of stroke. Additionally, as newer treatments for stroke patients are identified and adapted, informing the community builds trust in the healthcare system. Members of the community are more likely to seek care for themselves and others earlier if they are aware of the signs of stroke.

Real-time aggregate data as well as patient-level data are available immediately after entry. The stroke program has identified specific CDC Consensus Measures. These include selections from the acute, inpatient, and discharge measures. Monitoring these measures provides information on care provided along the stroke continuum of care. Additional data elements are also monitored, including information related to the timeliness of care. It is important to review the organization's adherence to selected measures monthly. Each hospital can compare its results with the aggregate results of all participating Registry hospitals.

Assessing Stroke Severity:

In Arkansas, the pre-hospital providers use BE FAST (Balance, Eyes, Face, Arms, Speech, and Time) to report their findings to the receiving ED. The use of BE FAST, in the pre-hospital phase, helps to determine if the patient may be having a stroke. The components of the scale collect vital information needed by the ED to assess the patient's eligibility for IV-thrombolytics.

The GWTG/IQVIA database collects data on the National Institute of Health Stroke Scale (NIHSS). The NIHSS is a systematic assessment tool providing a qualitative measure of stroke-related neurologic defects. The scale is widely used as a clinical assessment tool to evaluate the acuity of ischemic stroke patients, determine appropriate treatment, and predict patient outcomes. Additionally, the NIHSS serves as a data collection tool for planning patient care, provides a common language for information exchanges among healthcare providers, and provides severity adjustment for morbidity and mortality reviews. It is designed to be a simple, valid, and reliable tool that can be administered at the bedside by physicians, nurses, and therapists. for additional information and to become certified to administer the NIHSS.

Stroke Bands

Arkansas's Stroke Band system allows for the linkage of EMS and hospital statewide data and is a key component for driving QI. Additionally, stroke coordinators report increased awareness by staff that a patient had a stroke; and that ED, inpatient, and discharge stroke orders apply. Those that use the band as awareness of the patient's stroke diagnosis believe the band assists in facilitating the patient's care.

The stroke bands are blue and start with an "S" and are followed by six digits. They are applied by EMS for all suspected stroke cases validated by a positive stroke scale score (BE FAST is recommended). The band is removed by hospitals staff if a stroke is ruled out. The hospital ED staff ensures stroke bands are applied to all confirmed stroke cases, including patients arriving by private vehicle and transfers. Hospital staff are responsible for inputting all stroke band IDs into the patient's electronic medical record and the Registry using GWTG. Stroke bands are shipped by the ADH Stroke Team to Arkansas Hospitals and EMS Agencies. *To order stroke bands, please send an email to* stroke.bands@arkansas.gov*. In the email, indicate the number of stroke bands requested and shipping instructions. Include a contact person if different than the requestor*.

Data Collection

Identification of patients may be done concurrently or retrospectively. Often a combination of both concurrent and retrospective review is done. The concurrent process allows for addressing care issues while the patient is still hospitalized. A retrospective review is done after discharge. For the retrospective review, the patient for entry is typically identified using the coding process. This process provides a list of patients to be reviewed for inclusion into the Registry. Included on the website is a list of the diagnosis-related groups (DRGs) used for case identification. Because coding is a financial process, physician documentation supersedes coding. If the physician's documentation does not indicate that the patient's clinical discharge diagnosis is stroke or TIA, the patient does not need to be entered. Abstract, enter and save 100% of patient records as complete within **90** days of the patient's discharge. The entry requirements apply to all methods of entry including hospital staff or abstraction through ADN. Included in the database are patients with a final discharge diagnosis of TIA, ischemic stroke, hemorrhagic stroke, and stroke not otherwise specified (NoS). This includes patients transferred to another acute care facility. Case inclusion criteria are listed in the GWTG-Stroke Coding Instructions. Please note that patients entered as stroke NoS are rare. Because there is no specificity in the type of stroke, patients entered as NoS are exempt from most measures.

Re-abstraction Guidelines:

Re-abstraction is a requirement for participation in the Registry. The purpose is to evaluate the data coding quality, accuracy, and completeness of entry. The number of re-abstractions required to be completed is determined by the facility's annual volume of stroke cases. A re-abstraction template can be requested by contacting ADH staff. If preferred, ADN can complete the re-abstraction. The number of required re-abstractions are determined by the following:

- 1-100 total stroke cases per year = 5 charts to be re-abstracted
- 101-200 total stroke cases per year = 7 charts to be re-abstracted
- >200 total stroke cases per year = 10 charts to be re-abstracted

Ensure stroke cases are re-abstracted for patients discharged between July – June every year, either through internal staff or through the Registry's contractor ADN. Hospitals that administer IV thrombolytics must include at least one patient receiving IV-thrombolytics in the re-abstraction sample. If an in-house re-abstraction process is preferred, a second abstractor needs to re-abstract the same charts. The secondary abstractor must be identified, and contact information uploaded into the template. ADN staff can complete the re-abstractions for the facility. This benefit is paid for by the state. Please contact Nancy Cole (ncole@americandatanetwork.com) with questions and/or to request this service.

Advanced Stroke Life Support Education

Advanced Stroke Life Support (ASLS) courses are available throughout the 7 Arkansas Stroke Regions for physicians, nurses, and EMS. For information, contact the local ASLS Training Center Coordinator for future class dates and registration. *More information on ASLS Coordinators can be at health.arkansas.gov. Type "Stroke Resources" in the search bar and view the ASLS Flyer.*

Arkansas Department of Health Stroke Awards

ADH awards hospitals, EMS agencies, and geographic regions for their performance measured by the outcomes in GWTG -S. The period for awards is based on the ADH fiscal year and uses data collected from July to the following June. The type of awards given are reviewed annually and may change. If there are questions related to the awards, contact the Registry staff.

Registry Contacts

Keep the welcome letter for future reference. Feel free to share this information with members of the Stroke Committee and providers caring for stroke patients.

Registry contacts:

- Jonathan Weigt RN, RN Supervisor/Expert; jonathan.p.weigt@arkansas.gov
- Joanne LaBelle RN, MS, CPHQ, HRM; Technical assistance and QI support joanne.labelle@arkansas.gov
- Jasmine Gilmore, Administrative Coordinator jasmine.t.gilmore@Arkansas.gov
- David Vrudny MPH, CPHQ, Stroke and Heart Attack Section Chief, david.vrudny@arkansas.gov

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Appendix — Quick-Start Checklist for New Stroke Coordinators

Purpose: *A concise, at-a-glance guide to the essential responsibilities, access requirements, timelines, and resources for participation in the Arkansas Stroke Registry (ASR).*

1. Get Oriented

- Review ASR Welcome Letter and “Stroke Resources” on healthy.arkansas.gov.
- Save letter for Registry contact list (QI, technical support, ADN, AHA/ASA).

2. Set Up System Access

- Obtain your individual GWTG/IQVIA login (do not share passwords).
- Verify access to coding instructions, reporting tools, and case-entry functions.
- Know support contacts: IQVIA Help Desk & AHA/ASA QI staff.

3. Understand Participation Requirements

- Review CDC consensus measures
    - Statewide stroke improvement priorities.

4. Complete Required Data Entry

- Identify cases (concurrent + retrospective coding lists).
- Enter 100% of stroke/TIA records within 90 days of discharge.
- Enter stroke band IDs in both EMR and GWTG.
- If using ADN, confirm abstractor assignment & review responsibilities.

5. Annual Program Review

- Prepare for stroke program review scheduled by ADH (onsite, virtual, or written)
- Review measure performance, charts, challenges, and improvement opportunities.
- Update Corrective Action Plan (CAP) as needed.

6. ArSRH Designation (If Applicable)

- Confirm your designation cycle (initial or 3-year redesignation).
- Review ArSRH application steps & prep for site visit when required.

7. Participate in SRAC

- Identify your Stroke Regional Advisory Council region and quarterly meeting dates.
- Review blinded regional/state/US benchmark data prior to meetings.

8. Coordinate with EMS & TeleStroke

- Ensure EMS BE FAST reporting and pre-notification processes are understood.
- Confirm stroke band application workflows across EMS, ED, and inpatient areas.
- Verify TeleStroke workflows (IDHI or Mercy) if your hospital participates.

9. Education & Training

- Complete Onboarding Series in the database library.
- Participate in ADH/AHA/ASA education opportunities (many offer CE).
- Locate ASLS course dates in your region.

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10. Complete Required Re-abstractions

Hospital annual volume determines required re-abstractions:

- 1–100 cases: 5 charts
- 101–200 cases: 7 charts
- 200 cases: 10 charts

Include one IV-thrombolytic case when applicable.
ADN can complete re-abstractions if requested (state-funded).

11. Supplies & Resources

- Order stroke bands via stroke.bands@arkansas.gov; ensure internal distribution workflow.
- Maintain access to reference materials, measure guides, and registry tools.

12. Data-Driven Recognition

- Review ADH Stroke Awards criteria (based on July–June GWTG-S performance).
- Ensure data completeness/accuracy throughout the fiscal year.