LOUISIANA EMERGENCY RESPONSE NETWORK

Door in Door Out Data (DIDO) and Stroke of Unknown Onset Collection Requirements

Hospitals Required to Submit DIDO to LERN

The Acute Stroke Ready hospitals are already required to collect this data for quality improvement. On February 20, 2020, the LERN Board voted to require Primary Stroke Centers who transfer patients out for mechanical thrombectomy (MT) services, to collect this data.

Certified Stroke Centers to Submit Stroke of Unknown Onset data to LERN

On November 16, 2023, the LERN Board voted to require Certified Stroke Centers (PSCs, TSCs, and CSCs) to collect this data.

Why?

The primary aim of LERN is to develop a comprehensive stroke system of care in Louisiana that provides timely access to proven treatments necessary for reduction of death and dependency. Time is brain. The (DIDO) time is an important metric for primary stroke centers (PSC) with no on-site mechanical thrombectomy service. Transfer of Large Vessel Occlusion (LVO) positive patients should occur as early as possible to increase the likelihood of recovery after thrombectomy.

At least 20% of all patients with ischemic stroke present with unknown time of stroke onset (TSO), including those who wake up with symptoms. Based on randomized clinical trials, the American Heart Association/American Association of Stroke has recommended emergent evaluation of such patients with MRI to identify those who may still benefit from intravenous thrombolytic therapy. To establish benchmarks for time to MRI for patients who present with unknown TSO, LERN needs data to determine how are higher level centers are performing.

Goal:

DIDO of 90 minutes

Establish the practice pattern and efficiency of advanced imaging when determining eligibility for treatment of patients with stroke of unknown time of onset.

Inclusion Criteria:

- LVO screened positive patients who presented within 24 hours of last seen normal (LSN).
- Transfer request time (Column I) and transfer time (Column J) is only relevant for LVO patients transferred.
- For LVO patients not transferred, include the reason why not in Column L – "Details".
- Patients who present within 3.5 hrs of time symptoms noted (TSN) have an unknown TSO and need advanced imaging to determine thrombolytic eligibility. Variables required of Certified Centers for new TSO requirements are highlighted. The other variables are required for PSCs without 24/7 thrombectomy for patients who present within 24 hrs of LSN AND screen positive for LVO.

Data Definitions:

1) **Hospital Identifier** = Column A
   A unique 3-letter code given to each hospital to anonymously distinguish one hospital's data from

another's. For example, Baton Rouge General Medical Center's identifier may be "AAC" while Our Lady of the Lake Regional Medical Center's identifier may be "ABD". LERN assigns this identifier.

2) **Quarter** = Column B
The quarter of the calendar year in which the data is being reported in the format of Q-YY (e.g., quarter 2 of 2022 would be 2-22). Data submission is once per quarter.

For patient info:	Submit no later than:	Quarter reported
January 1 – March 31	April 30	1-YY (e.g., 1-24)
April 1 – June 30	July 31	2- YY (e.g., 2-24)
July 1 – September 30	October 31	3- YY (e.g., 3-24)
October 1 – December 31	January 31	4- YY (e.g., 4-24)

3) **Date** = Column C
The date the patient arrived at the hospital. This should be in the format of Month/Date/year (e.g., June 10, 2024 would be 06/10/24).

4) **Patient ID #** = Column D
This shall be a facility-dependent "Dummy ID" so that identifiers can be eliminated from the transferred dataset to LERN. Please use the Hospital Identifier, followed by the quarter, followed by 001. For example, if your hospital identifier is CCC, and it is 2nd quarter of 2024, your first patient's Dummy ID should be: CCC-2-24-001. The next patient would be: CCC-2-24-002, and so on. If you click and hold the left mouse button on the bottom right corner of the cell containing CCC-2-24-001 and drag it down, the patient ID #s will automatically populate.

5) **Known Time of Stroke Onset (TSO)** = Column E

A drop-down menu allows for yes/no answer. Was the stroke witnessed or can the patient verbalize the time the stroke symptoms began? For those patients who are unknown or wake up strokes, advanced imaging may be necessary to determine thrombolytic eligibility.

6) **Time Last Seen Normal (LSN)** = Column F
This is the date and time (military time) that the patient was last known to be at his or her normal neurological condition. This time = the time of onset for:

   i.   a person who was awake at onset and can provide his or her own history and

   ii.   a person with witnessed onset.

7) **Time Symptoms Noted (TSN)** = Column G
This is the date and time (military time) that the patient was first acknowledged to have an abnormal neurological condition/stroke like symptoms, but the onset was not witnessed. For the patients who were not witnessed, you will have a LSN and a TSN.

   Ex. A patient was last seen normal at 0700 when the spouse left for work. Upon returning home for lunch at 1200, the patient was found with weakness and aphasia in the kitchen floor. The

LSN is 0700 and the TSN is 1200. This patient has an unknown TSO and may require advanced imaging to determine thrombolytic eligibility.

8) **Time of Arrival to the Emergency Department Door =** Column H
This is the date and time (military time) that the patient was first acknowledged as being present at the facility. If the patient arrives by ambulance, this is the time the ambulance arrives at the Hospital. If the patient arrives by private vehicle or as a walk-in, this is the time stamp on the ED triage form.

9) **Mode of Arrival =** Column I
A drop-down menu allows for selection of private vehicle, ambulance, air ambulance, and unknown.

10) **NIHSS Total Score** = Column J
The NIHSS exam should be performed by certified examiners on all patients with suspected stroke based on 2018 AHA Guidelines for the Emergency Management of Patients with Acute Ischemic Stroke. The total score, performed prior to thrombolytic, if given, should be recorded.

11) **Imaging Used to Determine Eligibility for IV Lytic =** Column K
A drop-down menu allows for selection of CT, CTP (perfusion), or MRI.

12) **Time Imaging for Unknown Stroke Onset** completed = Column L
This is the time (military time) that the CT, CTP, or MRI is completed to determine eligibility for IV lytic.

13) **Time of IV Lytic Administration** = Column M
For those patients who had an unknown TSO or were wake up stroke and advanced imaging was completed to determine lytic eligibility.

14) **Reason why Unknown Stroke Onset Presenting within 3.5 hours of TSN Was Not Treated with IV Lytic**
= Column N
This will give insight as to why the patient with a wake up or unknown TSO stroke did not receive IV lytic after the use of advanced imaging. The following pick list is available:
- Established Stroke on CT
- No/small Penumbra on CTP
- Stroke on FLAIR
- Hemorrhage in Imaging
- Stroke Mimic
- Refusal
- Other Standard IV Lytic Contraindication or Warning
- Unable to treat within 4.5 hrs of TSN

15) **Decision Time** = Column O
This is the date and time (military time) that the decision to transfer the patient was made for or against emergent transfer for possible thrombectomy for a patient who screen positive for LVO. *We want to know how long it took for your site to decide that the patient needed to be transferred. Ideally, this is within minutes of arrival.*

If the patient screened negative for LVO, leave blank (ASRH), even if the patient was transferred for higher level of care.

If the decision was made against transfer for possible thrombectomy, do not include the time of acceptance or time of transfer/departure/door out, even if transferred, and include the reason the patient was determined to not be a candidate for thrombectomy in the Details Column.

16) **Transfer Request Time** = Column P

Enter the date and time of transfer request in military time or n/a if the patient was not transferred. Leave the field blank if the time cannot be determined. If your site does not have a consistent method for source documentation of the time of transfer request, then this is a target for process improvement.

Ideally, the transfer request will be within minutes of the decision time, for patients who screened positive for LVO and were presumed to be candidates for thrombectomy. *We want to know how long it took from the time you decided the patient needed to be transferred until the time you initiated that process*

17) **Acceptance Time** = Column Q

Enter the date and time (military time) that the receiving hospital agreed to take the transfer.

If the LERN Communication Center was used to facilitate acceptance, please indicate this in the Details Column.

If it took so long to get accepted, that the patient was no longer transferred with the intent of offering thrombectomy, leave this blank and indicate the patient could not be transferred in time for thrombectomy in the Details Column.

18) **EMS on Scene Time** = Column R

Enter the date and time (military time) that EMS arrived to transfer the patient. *This variable is required only for sites who are active in the remediation process for DIDO.*

This is the time that the secondary transfer EMS ground or air ambulance arrived to transfer the patient for thrombectomy to a thrombectomy center

19) **Transfer Time =** Column S

Enter the date and time (military time) when the patient departs the hospital for the receiving facility.

20) **Reason for Transfer Delay =** Column T

This will facilitate tracking any reasons that cause delay in transfer. The following pick list has been added:

- Delay in request Patient factor
- Delay in request Facility factor
- Delay in recognition of LVO
- Delay in finding accepting facility
- Delay in Arrival of Inter-Hospital Ambulance
- Other

21) **Optional Field for Details for Reason for Transfer Delays=** Column U

If additional details are thought to be necessary or add value to understanding your barrier/s to efficient door in-to-door out, this field allows for a free-text description. If your patient was LVO positive and was not transferred, please explain why here.

Data Submission to LERN

Email the completed data form quarterly to Deborah Spann at Justin.Schleis3@La.Gov.

Data is due per the following table:

Date of end of quarter	Date data report is last acceptable
March 31st, 2024	April 30th, 2024
June 30th, 2024	July 31st, 2024
September 30th, 2024	October 31st, 2024
December 31st, 2024	January 31st, 2025

LERN Stroke Data will be accumulated and organized in summary form. LERN will not release any identified data related to a participating hospital. If disseminated, LERN data will be in aggregate form.