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 our 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 positive patients not transferred, include the reason why not in Column Q – "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. For PSC's who do not have 24/7 thrombectomy coverage, will need to provide pertinent data in the "DIDO" tab and "Unknown TSO" tab. For all other certified stroke centers who have 24/7 thrombectomy care, please only provide data in the "Unknown TSO" tab.

LOUISIANA EMERGENCY RESPONSE NETWORK

Data Definitions:

"DIDO" TAB

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. Please reach out to Justin Schleis, Justin.Schleis3@La.Gov , with questions about your hospital's 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. For patient's who the response is "no", should be included in the "Unknown TSO" spreadsheet.

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. If information not documented, keep blank.

> 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 at 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) **Decision Time** = Column K

This is the date and time (military time) that the decision to emergently transfer for possible thrombectomy for a patient who screened 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, no need to include in this data set.
If the decision was made not to transfer an LVO Positive patient, please include why in the details column (Q).

12) **Transfer Request Time** = Column L

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.*

13) **Acceptance Time** = Column M

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 too long to get acceptance, 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 Q.

14) **EMS on Scene Time** = Column N

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

15) **Transfer Time =** Column O

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

16) **Reason for Transfer Delay =** Column P

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

17) **Optional Field for Details for Reason for Transfer Delays=** Column Q

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.

18) Note

The remainder of the cells will auto populate your data from the previous cells provided. Please do not manipulate these calls or delete formulas.

"Unknown TSO" TAB

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. Please reach out to Justin Schleis, Justin.Schleis3@La.Gov , with questions about your hospital's 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.

   =====For questions on which patient's to include, please use this algorithm.

Unknown Time of Stroke Onset Stroke Data Collection Algorithm
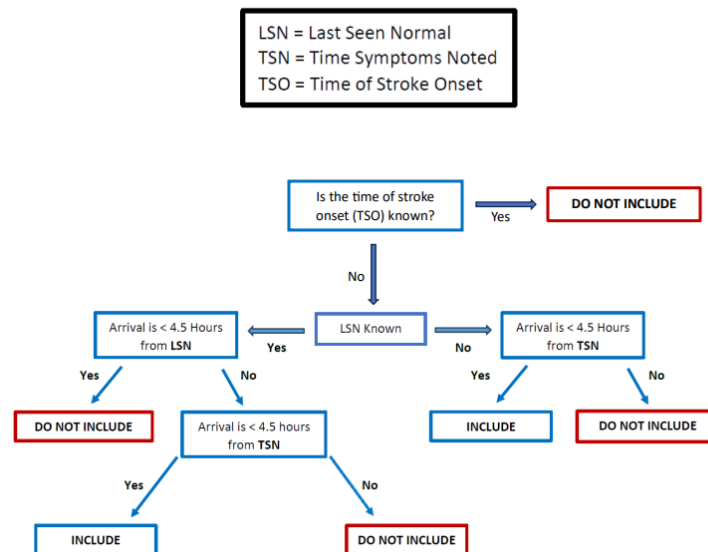
LSN = Last Seen Normal
TSN = Time Symptoms Noted
TSO = Time of Stroke Onset

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,

Certified Stroke Center Data Collection
V9- 07/23/2025

advanced imaging may be necessary to determine thrombolytic eligibility. For patient's who the response is "no", should be included in the "Unknown TSO" spreadsheet.

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:

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

    iv.   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 at 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) **Reason Why Advanced Imaging Not Pursued** = Column K
A drop down will be provided for you with potential reasons that advanced imaging was not pursued.
- Other standard lytic contraindication (includes complete stroke on CT and ICH on CT)
- Presence of LVO and need for emergent intervention
- Advanced imaging not available
- Patient not eligible for MRI
- Protocol not pursued with no clear reason

==If you answer column K, STOP, there is no need to place an answer in the columns following (L-O. If you leave Column K blank, please complete columns L-O.==

12) **Imaging Used to Determine Eligibility for IV Lytic =** Column L

A drop down menu will allow selections for CT, CTP or MRI. Only choose CT if this is what was used for IV lytic determination.

13) **Time Imaging for Unknown Stroke Onset completed** = Column M
This is the time (military time) that the CT, CTP, or MRI is completed to determine eligibility for IV lytic. (Not when the imaging was interpreted)

14) **Time of IV Lytic Administration** = Column N

For those patients who met unknown TSO or wakeup stroke criteria and received lytic based on advanced imaging. Please place the lytic administration time here. If lytic not administered, keep blank and place data in column O (Reason why patient not treated with IV Lytic after advanced imaging)

15) **Reason why patient not treated with IV lytic after advanced imaging** = Column O
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. Only place data if IV lytic not given. The following drop down list is available:
- CTP not favorable, no/small penumbra/salvageable tissue
- MRI not favorable, completed stroke (no DWI-FLAIR mismatch)
- MRI did not support stroke/stroke mimic
- Patient/family refusal

Data Submission to LERN

Email the completed data form quarterly to Justin Schleis 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.