Get with the Guidelines® Stroke Program − NDak Form Group
Abstraction Guidelines - <mark>Created August 2018</mark>

Table of Contents:

Table of Contents

General Information:

The North Dakota data elements below will only appear for your hospital if you have the "NDak" form group enabled. Otherwise, the fields below will not display.

To check if the form group is enabled for your hospital, open a patient record and look for "Active Element Groups" at the top left-side of the screen. Refer to the screen capture below for a visual aid.
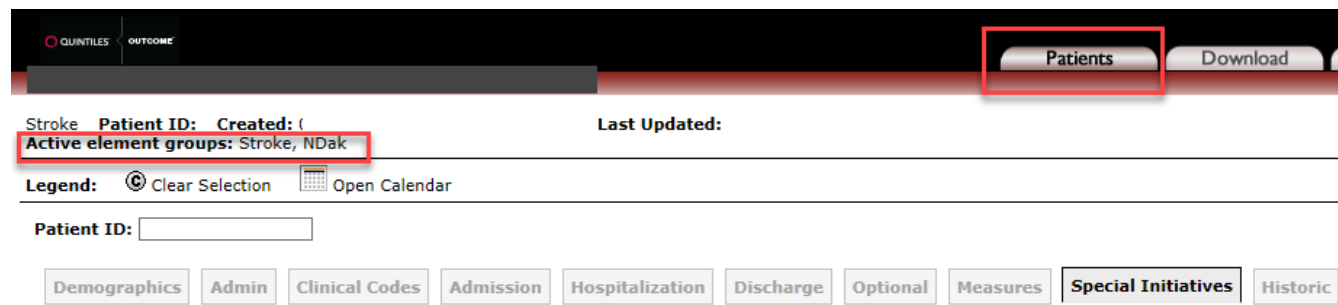
Figure 1: PMT - Top of Patient Record displays the form group enabled for the site

Special Initiatives Tab (Prehospital Care Data Elements)

EMS refers to the full scope of prehospital stroke care, including 9-1-1 activation and dispatch, emergency medical response, triage and stabilization in the field, and ground or air ambulance transport.

Several studies have shown that prehospital notification leads to significant reductions in several stroke time benchmarks, including time from arrival to physician assessment, CT performance, and CT interpretation, and is associated with higher rates of administering IV alteplase.

Note: Only complete the following data elements for patients that arrive at your hospital via EMS from home/scene or by Mobile Stroke Unit (MSU). This section is meant to allow sites to capture information related to pre-hospital management of stroke.

The entry criteria to enable the NDak EMS fields on the Special Initiatives tab is as follows:
1. The NDak EMS form group is enabled for your site
   AND
2. The field, "How patient arrived to your hospital" has the response option EMS from home/scene or Mobile Stroke Unit selected

EMS Agency Name
Required field for NDak

Definition: Select the EMS Agency from the dropdown list that transported the patient to your hospital.

Data Collection Question: Which EMS agency transported the patient to your hospital?

Format: Single-select.

Allowable Values:
- Custom list for NDak users – Refer to Table 2
- Unknown

Notes for Abstraction:
- Enter the formal name of the responding EMS agency. This may be the EMS Agency Name, or a unique number assigned by the state EMS office.
    - o This information can be found in the patient care report under the "Agency" section. Look for "Agency Number" or "Agency Name."
        - o EMS Agency Name: eResponse.02 Nemsis/PCR
        - o EMS Agency Number: eResponse.01 in Nemsis/PCR

- If not documented or unknown, select "Unknown."

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Run/Sequence number
Required field for NDak

Definition: Enter the unique number assigned by the EMS agency for the identification of the patient transported to your hospital.

Data Collection Question: What is the number assigned by the EMS agency for the identification of the transport?

Format: Text field – alphanumeric

Allowable Values:
- Customized number for each transport
- Unknown

Notes for Abstraction:
- Enter the run number per the EMS Run Sheet.
- This information can be found in the patient care report under the "Response" section. Look for "Incident Number."
    - o Incident Number: eResponse.03 in Nemsis/PCR
- If not documented or unknown, select "Unknown."

Suggested Data Sources:

- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Initial 911 Call for Help
Required field for NDak

Definition: Record the date and time the call made to 9-1-1 by the patient, family member, neighbor, or bystander was received.

Data Collection Question: What was the date and time the responding EMS agency was notified by the 911 dispatcher?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- This element is intended to capture the date and time the phone rings (911 call to public safety answering point or other designated entity) requesting EMS services.
- The information may be found in the patient care record under the "Times" section. Look for "eTimes.01 - PSAP Call Date/Time"

Suggested Data Sources:
- EMS Run Sheet
- Electronic patient care report (e-PCR)

EMS Unit Notified by Dispatch
Required field for NDak

Definition: Record the date and time the responding EMS unit was notified by dispatch.

Data Collection Question: What was the date and time the responding EMS agency was notified by the 911 dispatcher?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- This element is intended to capture the date and time the responding unit was first notified by the 911 dispatcher.
- Do not capture those patients that are transferred between hospitals via EMS.
- The date and time that the first call was received by the EMS dispatcher as recorded may be found in the patient care record under the "Times" section. Look for "Unit Notified by Dispatch Date/Time."

o   EMS Unit notified by Dispatch Date/time: eTimes.03 Nemsis/ePCR

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Dispatched as suspected stroke?
Optional Field

Definition: Record whether there is documentation that the case was identified as a possible stroke at the time the EMS agency was being dispatched to the scene. Studies indicate if there is diagnostic concordance of stroke between dispatchers and EMS, the scene time and run times are shortened.

Data Collection Question: Was the EMS agency dispatched for a suspected stroke patient?

Format: Single-select. Radio buttons

Allowable Values:
- Yes
- No
- Not Documented

Notes for Abstraction:
- **Yes:** There is documentation that the EMS unit was dispatched for a patient describing signs and symptoms of stroke.
    - EMS Patient Care Reports often collect this discrete element under the heading of "Complaint Reported by Dispatch." Stroke/CVA. Code for imported data will be Look for code 2301067 in XML file.
        - Complaint Reported by Dispatch: eDispatch.01
    - The Narrative Section of the Patient Care report may provide additional information regarding the signs, symptoms, and complaints identified at dispatch. This may be commonly found in the narrative under the "D" section if the Agency follows the DCHARTE method of documentation.
        - Please note that some state hospitals may not receive the details in the narrative (e.g., 'the complaint dispatch reported to the responding unit).

- **No:** There is documentation of the reason the EMS unit was dispatched to the patient, but there is no mention of signs and symptoms of stroke from the 911 dispatcher
- **Not Documented:** There is no documentation in the medical record as to why the EMS unit was dispatched.
- The following language is sufficient to identify patients with suspected stroke:
    - Any use of the word "stroke" or "CVA"
    - Any documentation of signs & symptoms consistent with stroke such as:
        - * Sudden numbness or weakness of face, arm or leg - especially on one side of the body.
        - * Sudden confusion, trouble speaking or understanding.
        - * Sudden trouble seeing in one or both eyes.
        - * Sudden trouble walking, dizziness, loss of balance or coordination.
        - * Sudden severe headache with no known cause.

Suggested Data Sources:

- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

EMS Unit On-Scene Arrival
Required Field for NDak users

Definition: Enter the date/time the responding unit arrived on the scene; that is, the time the vehicle stopped moving at the scene.

Data Collection Question: What is the date/time the responding unit arrived on the scene?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- Record the time the EMS vehicle reached its site destination (e.g. parking lot of an apartment building).
- Please note that date/time arrival at scene is not the same time as when the EMS agency arrived at the patient.
- This information can be found in the patient care report under the "Times" section. Look for "EMS Unit Arrived on Scene Date/Time."
    - EMS Unit Arrived On-Scene: eTimes.06 - Nemsis/ePCR

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

EMS Arrived at Patient
Required Field for NDak users

Definition: Enter the date and time when the patient was first evaluated by emergency medical services (EMS in the field) prior to arrival at your facility. Enter the date/time of first medical contact only for patients who were transported by ambulance or air directly (from the field); this is NOT the date/time of arrival to your facility.

Data Collection Question: What is the date/time the responding EMS arrived at the patient's side?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Unknown

Notes for Abstraction:

- Please note that date/time first medical contact arrived at the patient is **not** the same time as when the EMS vehicle arrived at the scene.
- First Medical Contact time is commonly identified as the "At Patient Side Date/Time" on the EMS Patient Care Report.
  - EMS Arrived at Patient Date and Time: eTimes.07

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

ALS Intercept Initiated
Required Field for NDak users

Definition: Indicate if the Advanced Life Support (ALS) services were initiated for the patient. BLS generally deliver their patients who will benefit from ALS care, which provides higher level of care in the prehospital setting.

Data Collection Question: Were ALS Services initiated for the patient prior to arrival at the hospital?

Format: Single-select. Dropdown menu.

Allowable Values:
- Yes
- No/ND

Notes for Abstraction:
- The level of care (BLS or ALS) the unit can provide based on the units' treatment capabilities for this EMS response. For this field, indicate if ALS services were initiated for this patient.
- ALS Intercepted may be found under the " Level of Care of This Unit" or "Type of Service Requested" on the EMS Patient Care Report.
  - eResponse.05 - Type of Service Requested – look for "intercept"
  - eResponse.15 - Level of Care of This Unit

Suggested Data Sources:
- EMS Run Sheet completed by ALS
- Admission data
- Electronic patient care report (e-PCR)

ALS Unit Notified by Dispatch
Conditionally Required Field for NDak users

Note: Field is only enabled if " ALS Intercept Initiated" = Yes. Otherwise, field remains greyed out.

Definition: An intercept is an authorized and staffed ALS unit, dispatched by request or protocol, meeting a BLS unit while en route to the nearest appropriate hospital. Record the date and time the ALS unit was notified by dispatch.

Data Collection Question: What was the date/ time the responding ALS unit was notified by dispatch?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- This element is intended to capture the date and time the ALS intercept was initiated.
- For patients who had ALS interception, there will be two EMS run sheets. For the EMS Run Sheet completed by ALS, review the patient care record and look under the "Times" section. Search for "Unit Notified by Dispatch Date/Time."

Suggested Data Sources:
- EMS Run Sheet completed by ALS
- Admission data
- Electronic patient care report (e-PCR)

ALS Interception Time
Conditionally Required Field for NDak users

Note: Field is only enabled if " ALS Intercept Initiated" = Yes. Otherwise, field remains greyed out.

Definition: Record the date and time the ALS Services arrived at the patient.

Data Collection Question: What was the date/ time the responding ALS Services arrived at the patient?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- ALS Interception time is identified as the "At Patient Side Date/Time" on the Patient Care Report completed by ALS.
  - EMS Arrived at Patient Date and Time: eTimes.07

Suggested Data Sources:
- EMS Run Sheet completed by ALS
- Admission data
- Electronic patient care report (e-PCR)

ALS Agency Name
Conditionally Required Field for NDak users

Definition: For the ALS Services that intercepted, identify the ALS Agency Name from the dropdown menu.

Data Collection Question: What is the name of the ALS Agency that intercepted?

Format: Single-select. Dropdown menu.

Allowable Values:
- Custom list for NDak users – Refer to Table 2
- Unknown

Notes for Abstraction:
- For this field, identify the ALS Agency associated with the EMS event.
- This information can be found in the patient care report completed by ALS. Review the "Agency" section and look for "Agency Number" or "Agency Name."
- EMS Agency Name: eResponse.02 Nemsis/PCR
- EMS Agency Number: eResponse.01 in Nemsis/PCR

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

EMS Unit Left Scene
Required Field for NDak users

Definition: Record the date/time the responding unit left the scene with a patient (started moving).

Data Collection Question: What is the date and time the EMS unit left the scene with the patient to transport to the hospital?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknown

Notes for Abstraction:
- Enter the date/time the EMS vehicle left the scene to transport the patient to your hospital. This is commonly identified as "unit left scene" on the Patient Care Report.
    - EMS Unit Left Scene Date and Time: eTimes.09 Nemsis/ePCR
- If date/time is unknown or not documented, select "Unknown."

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Last Known Well as Documented by EMS
Required Field for NDak users

Definition: Record the estimated date and time the patient was last known to be well or in their usual state of health. This is described or estimated by the patient, family, and/or bystanders. This information is critical in determining the patient's eligibility for fibrinolytic treatment.

Data Collection Question: What is the date and time the patient was last known to be well or in their usual state of health?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYYHH:MM
- Date: MM/DD/YYYY
- Unknown
- Checkbox for "unknowable"

Notes for Abstraction:
- Select "Unknown" if the date/time was not documented,
- If the date/time last known to be well could not be determined by the responding EMS personnel (e.g., no family member present and patient was unresponsive or confused), then select "Unknowable" since this information was not available to EMS.
    - This information may be available in the Electronic patient care report under the patient History. Review the "Barriers to Patient Care" and "Date/Time Last Known Well."
        - EMS Unit Left Scene Date and Time: eTimes.09 Nemsis/ePCR

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Discovery of Stroke Symptoms as Documented by EMS
Optional Field for NDak users

Definition: The date and time the symptoms were first noticed (or were discovered). This is described or estimated by the patient, family, and/or healthcare professionals.

Data Collection Question: What is the date and time the patient's symptoms were discovered per EMS documentation?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Date: MM/DD/YYYY
- Unknowable

Notes for Abstraction:
- For this field, record the date/time that patient was discovered to have symptoms. This date and time should not vary. If the event was witnessed, then the last known well date and time and the discovery date and time will be identical. Record both, even if identical
- If the date/time of discovery of stroke symptoms could not be determined by the responding EMS personnel (e.g., no family member present and patient was unresponsive or confused), then select "Unknowable" since this information was not available to EMS.
- **Example:** If a patient goes to bed at 10:00 p.m. (2200) without symptoms and wakes up at 7:00 a.m. with symptoms. Time last known well = 10:00 p.m. (2200), Symptom onset is unknown since it occurred during sleep, Discovery of symptoms = 7:00 a.m. (0700)

- Discovery of Stroke Symptoms as Documented by EMS is not available in NEMSIS.

Suggested Data Sources:
- EMS Run Sheet
- Admission data

Date/Time Pre-Notification provided to Hospital
Conditionally Required Field for NDak users

Note: The field is enabled if the field, "How patient arrived at your hospital" = EMS from home/scene or Mobile Stroke Unit **AND** "Advanced notification by EMS/Mobile Stroke Unit? (Traditional Responder or Mobile Stroke Unit)" = YES. Otherwise, field will remain greyed out.

Definition: Record the date and time advanced notification was provided by the responding EMS unit to the receiving hospital.

The intent of this element is to determine when prehospital notification is provided, does that shorten the time until the initial computed tomography (CT) or magnetic resonance imaging (MRI) in comparison to those patients that arrive to the hospital without prior notification.

Data Collection Question: What is the date and time pre-notification, or pre-arrival alert was provided to the receiving hospital by the EMS unit?

Format: Single-select. Dropdown menu.

Allowable Values:
- Date and Time (military time): MM/DD/YYYY HH:MM
- Unknown

Notes for Abstraction:
- This information can be found in the patient care report under the "Disposition" section. Look for "Date/Time of Destination Prearrival Alert or Activation" or "Destination Team Pre-Arrival Alert or Activation."
  - Date/Time of Destination Prearrival Alert or Activation: eDisposition.25

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Additional Information Provided as Part of Pre-notification?
Conditionally Required Field for NDak users

Note: The field is enabled if the field, "How patient arrived at your hospital" = EMS from home/scene or Mobile Stroke Unit **AND** "Advanced notification by EMS/Mobile Stroke Unit? (Traditional Responder or Mobile Stroke Unit)" = YES. Otherwise, field will remain greyed out.

Definition: Record any additional information that was provided by the responding EMS unit as part of pre-notification to the hospital.

Data Collection Question: What additional information was provided to the receiving hospital by the EMS unit during prenotification?

Format: Multi-select field

Allowable Values:
- Blood Glucose Value
- Blood Pressure
- LKW time per EMS
- Result of Stroke Screen/Severity Score
- Seizure Activity

Notes for Abstraction:
- The information can be found in the patient care report, under the "patient's narrative" section or in the following areas for the items below.
  - **Blood Glucose Value**: eVitals.18
  - **Blood Pressure**: eVitals.06
  - **LKW time per EMS**: eSituation.18
  - **Result of Stroke Screen/Severity Score**
    - **Stroke screen type**: eVitals.30
    - **Stroke score**: eVitals.29
  - **Seizure Activity:** No specific NEMSIS element

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- electronic patient care report (e-PCR)

Blood Glucose level (mg/dL)
Required Field for NDak users

Definition: Record the earliest blood glucose value recorded by EMS personnel in the pre-hospital care setting. In the event, the glucometer reads "low" or "high" as opposed to displaying a value, select the appropriate "too low" or "too high" response option.

Data Collection Question: What is the earliest blood glucose value recorded by EMS prior to patient being transported to your hospital?

Format: Single-select. Dropdown menu, radio buttons, and text field (3 methods available)

Allowable Values:
- Numerical value to be entered (acceptable range: 0-999 mg/dL)
- Too high
- Too low
- Glucometer not available
- Patient Refused
- Not Documented

Notes for Abstraction:
- Multiple values may be available for this field. Enter the earliest blood glucose value taken by EMS.
  - If available, a numerical value should be entered.

    o However, if the glucometer being used reads "low" or "high" as opposed to displaying a value, select the appropriate "too low" or "too high" response option.
- If there is documentation that a glucometer was not available, select "glucometer not available."
- If no documentation that glucose was checked or unknown, select "Unknown."
- If patient did not allow EMS personnel to check their glucose level, select "Patient refused."
    o This information is located under the Vital Signs section: Blood Glucose Level.

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Initial Blood Pressure by EMS:
Required Field for NDak users

Definition: Record the earliest blood pressure (BP) recorded by EMS personnel in the pre-hospital care setting.

Data Collection Question: What is the earliest BP reading recorded by EMS prior to patient being transported to your hospital?

Format: Single-select. text field and checkbox

Allowable Values:
- Systolic acceptable range: 50 -220 mm Hg.
- Diastolic acceptable range: 30 -160 mm Hg.
- ND

Note to Abstractor:
- Record the earliest blood pressure recorded by EMS personnel.
- This information can be found in the patient care record under the "Vitals section." Look for "SBP (Systolic Blood Pressure)" and "DBP (Diastolic Blood Pressure)."
    o eVitals.06 - SBP (Systolic Blood Pressure)
    o eVitals.07 - DBP (Diastolic Blood Pressure)
- If the information is not available in the patient's medical record, including the EMS run sheet, select the checkbox for "not documented." Please note the acronym "ND" refers to Not Documented.

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Were any antihypertensive medications, including nitro given by EMS?
Required Field for NDak users

Definition: Indicate if any antihypertensive medications, including nitroglycerin were administered by EMS personnel in the pre-hospital care setting.

Data Collection Question: Were any antihypertensive medications, including nitroglycerin given by EMS?

Format: Single-select. Dropdown menu.

Allowable Values:
- Yes
- No/ND

Note to Abstractor:
- This information can be found in the patient care record under the "Medications" section.
- To determine if medication was administered by EMS personnel, look for " eMedications.10 - Role/Type of Person Administering Medication."
- Examples of antihypertensive medications include Labetalol, Lopressor, and Vasotec. To review the list of antihypertensive medications, please refer to **Table 1** below. **Please note that the list of antihypertensive medications is not all inclusive.**
- To determine which medications were given by EMS personnel, please review "Medication Given" section of the patient care record.
    - Medications (eMedications.03 – Medication Given)
        - Data Element Comment in NEMSIS:
            - **Reference the NEMSIS Suggested Lists at:** http://nemsis.org/v3/resources.html
            - **RxNorm:** Website - http://uts.nlm.nih.gov

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

(EMS) Suspected stroke?
Required Field for NDak users

Definition: Record whether there is documentation that the patient was identified as a possible stroke in the providers primary or secondary impression.

Data Collection Question: Is there documentation that the patient was identified as a possible stroke in the providers primary or secondary impression?

Format: Single-select. Radio button.

Allowable Values:
- Yes
- No
- Not Documented

Notes for Abstraction:
- **Yes:** There is documentation that the providers primary impression was that of stroke.
- **No:** There is no documentation that the providers primary impression indicated stroke or signs and symptoms of stroke is not mentioned.
- **Not Documented:** There is no documentation relating to the providers impression.
- This information can be found in the Patient Care Report under the "Situation" section. Review the Provider's Primary Impression, Provider's Secondary Impressions.
    - Providers Primary Impression: eSituation.11
    - Providers Secondary Impressions: eSituation.12

Suggested Data Sources:

- EMS Run Sheet
- Admission Data
- Electronic patient care report (e-PCR)

Indicate the stroke screen tool used:
Required Field for NDak users

Definition: Indicate the type of stroke screen used by EMS. Numerous prehospital neurological assessment tools have been developed to accurately identify stroke patients, which facilitates appropriate field treatment, prearrival notification, and routing to an appropriate hospital destination.

Data Collection Question: Which prehospital stroke assessment was used by EMS personnel in the field?

Format: Single-select. Dropdown menu

Allowable Values:
- CPSS
- BE FAST
- DPSS
- FAST
- LAPSS
- MASS
- Med PACS
- MEND
- mLAPSS
- OPSST
- ROSIER
- Other – if selected, please specify

- Stroke screen tool used, but tool used is unknown
- No stroke screen tool used
- Not Documented

Notes for Abstraction:
- If multiple screenings completed, capture the first positive stroke screen prior to hospital arrival.
- In the patient care report, this data may be found under the "Vitals" section. Look for "Stroke Scale Type," which will display the type of stroke scale used.
    - Stroke Scale Type: eVitals.30
- **Not Documented:** There is no documentation that EMS performed a prehospital screen.
- **Examples of nationally recognized pre-hospital stroke screens include:**
    - **Cincinnati Prehospital Stroke Scale (CPSS)**
        - The CPSS was derived from a simplification of the 15-item National Institutes of Health Stroke Scale (NIHSS) and evaluates the presence or absence of facial palsy, asymmetric arm weakness, and speech abnormalities in potential stroke patients. Speech is tested by asking the patient to repeat the sentence, "The sky is blue in Cincinnati," and abnormality is reported if the patient slurs words, says the wrong words, or is unable to speak.
    - **Miami Emergency Neurologic Deficit (MEND)**
        - The components on the MEND exam are provided in a checklist format checklist that provides key information. It incorporates the three components of

the Cincinnati Prehospital Stroke Scale (CPSS) as well as additional components from the NIH Stroke Scale (NIHSS). MEND does not indicate large vessel occlusion.

- The information for "MEND" can be found in the vital signs or in the narrative section of the EMS Run Report. Look for "Stroke Scale Type."

- o **Los Angeles Prehospital Stroke Scale (LAPSS)**
  - The LAPSS is a longer instrument consisting of 4 history items, a blood glucose measurement, and 3 examination items designed to detect unilateral motor weakness (facial droop, hand grip, and arm strength).
- o **Modified LAPSS**
- o **Vision, aphasia, and neglect (VAN)**
- o **Melbourne Ambulance Stroke Scale (MASS)**
- o **LA County Department of Social Services (DPSS)**
- o **Ontario Prehospital Stroke Screening Tool (OPSST)**
- o **Face Arm Speech Time (FAST)**
  - The FAST contains 3 key elements (facial weakness, arm weakness, and speech disturbance) from the CPSS, but avoids the need to repeat a sentence as a measure of speech, instead using assessment of language ability by the paramedic during normal conversation with the patient.
- o Recognition of Stroke in the Emergency Room Scale (ROSIER)

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Stroke Screen Outcome:
Conditionally Required Field for NDak users

Note: If "Indicate the stroke screen tool used" has a screen tool selected, then this is a required field.

Collected For: GWTG Stroke Screen Performed and Reported

- **Definition:** Early detection of stroke is essential to triage patients with a possible stroke. This is critical to improve patient outcomes and decrease long term disability. Record the result of the stroke screening (positive or negative). If the stroke screen is performed multiple times, capture the positive screen.

Data Collection Question: Did the results of the screening tool used by EMS indicate patient was positive or negative for a stroke?

Format: Single-select. Dropdown menu.

Allowable Values:
- Positive
- Negative
- Not Documented

Notes for Abstraction:
- This information can be found in the vital signs or in the narrative section of the EMS Run Report. Look for "Stroke Scale Score."
  - o Stroke Scale Score - eVitals.29 Nemsis/ePCR

- If the stroke screen is performed multiple times, capture the positive screen.
- **Positive:** Select this option if the results indicated the patient's symptoms were suggestive of stroke.
- **Negative:** Select this option if the results indicated the patient's symptoms were not suggestive of stroke or if the results are inconclusive.
- **Not Document:** Select this option if the results of the screening tool used are not in the medical record.

Suggested Data Sources:
- EMS Run Sheet – narrative section or vital signs
- Admission data
- Electronic patient care report (e-PCR)

Indicate the severity scale used
Conditionally Required Field for NDak users

Collected For: GWTG Stroke Severity Screen Performed and Reported

Definition: A severity assessment could help EMS personnel determine the presence of a large vessel occlusion, which could potentially impact where the patient is directly transported (e.g., endovascular-capable facility rather than a primary stroke center). Record the type of stroke scale used.

Data Collection Question: Which severity scale assessment was used by EMS personnel?

Format: Single-select. Dropdown menu.

Allowable Values:
- CPSSS/CSTAT
- FAST ED
- LAMS
- RACE
- Other – when selected, please specify
- Not Documented

Notes for Abstraction:
- Examples of nationally recognized pre-hospital stroke severity assessment include:
  - Cincinnati Prehospital Stroke Severity Scale (CPSSS)
  - Los Angeles Motor Scale (LAMS)
  - Field Assessment Stroke Triage for Emergent Destination (FAST ED)
  - Rapid Arterial Occlusion Evaluation (RACE)

Suggested Data Sources:
- EMS Run Sheet – narrative section or vital signs
- Admission data
- Electronic patient care report (e-PCR)

Positive for LVO?
Optional Field for NDak users

Note: If "Indicate the severity scale used?" = Not Documented, then the field, "Positive for LVO?" is greyed out.

Definition: A severity assessment could help EMS personnel determine the presence of a large vessel occlusion stroke. Record if the result of the stroke severity assessment indicated the presence of a large vessel occlusion (LVO).

Data Collection Question: Did the results of the severity assessment indicate patient had a large vessel occlusion?

Format: Single-select. Dropdown menu.

Allowable Values:
- Yes
- No
- Not Documented

Notes for Abstraction:
- Response for this field is based on the predictive value of the severity scale used.
- **Yes:** Select this option if results of the severity assessment indicate patient was positive for a large vessel occlusion.
  - CPSSS/CSTAT ≥ 2 indicates the presence of large vessel occlusion (LVO) in patients
  - FAST ED ≥ 4 indicates the presence of large vessel occlusion (LVO) in patients
  - LAMS ≥ 4 indicates the presence of large vessel occlusion (LVO) in patients
  - RACE ≥ 5 indicates the presence of large vessel occlusion (LVO) in patients
- **No:** Select this option if results of the severity assessment indicate patient did <u>not</u> have a large vessel occlusion
- **Not Document:** Select this option if the results of the severity assessment used are not in the medical record.

Suggested Data Sources:
- EMS Run Sheet – narrative section or vital signs
- Admission data
- Electronic patient care report (e-PCR)

If severity scale assessment completed, enter total score
Conditionally Required Field for NDak users

Note: The field is enabled if "stroke screen tool" = positive AND "severity screen scale used" has a tool indicated. If "severity screen scale used" has the response "not document" selected, then this field will not be enabled.

Collected For: GWTG Stroke Severity Screen Performed and Reported

Definition: Record the findings of the severity scaled used to assess the patient exhibiting stroke-like symptoms.

Data Collection Question: If the severity scale was completed, what was the total score?

Format: Text Field

Allowable Values:
- **Below are the acceptable ranges based on the severity tool assessment selected by user:**
  CPSSS/CSTAT: numerical values Range: 0 to 4.

FAST ED: numerical values Range: 0 to 9
LAMS: numerical values Range: 0 to 5
RACE: numerical value Range: 0 to 9
OTHER: 0 to 99

Notes for Abstraction:
- Values entered outside the given range will cause the tool to display an error on the screen.
- The information for this field can be found in the patient care report, under the " Patient Assessment" or in the narrative section Look for "Stroke Scale Type" or "Stroke Scale Score."
- **Not Documented:** Select this option if the severity score is unknown or not in the patient's medical record.

Suggested Data Sources:
- EMS Run Sheet – narrative section or vital signs
- Admission data
- Electronic patient care report (e-PCR)

How was destination decision made?
Conditionally Required Field for NDak users

Collected For: GWTG Pre-hospital care measures

Definition: Select the reason the unit chose to deliver or transfer the patient to the destination.

Data Collection Question: What was the reason for EMS delivering the patient to the destination?

Format: Single-select. Radio button

Allowable Values:
- Directed to a designated stroke center by protocol
- Directed to the nearest facility by protocol
- Patient/Family choice
- Online medical direction
- Closest facility
- Other
- Unknown/Not documented

Notes for Abstraction:
- This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination."
  - Reason for Choosing Destination: eDisposition.20 Nemsis/ePCR
- Select **Directed to a designated stroke center by protocol** when patients are transported to a designated stroke center based on an established protocol that is directing the destination be based on the presumed stroke diagnosis. EMS services are often required by either state or regional EMS medical advisory committees to transport patients to specific destinations unless otherwise directed.
  - This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "Regional Specialty Center."
- Select **Directed to the nearest facility by protocol** when patients are transported to the nearest facility based on an established protocol that is directing the destination to the nearest facility.

EMS services are often required by either state or regional EMS medical advisory committees to transport patients to specific destinations unless otherwise directed.
- o This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "Protocol."
- Select **Patient/Family choice** when documentation indicates that a patient or family's choice of facility determined the hospital destination (differently than EMS would have otherwise chosen).
  - o This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "Family Choice" or "Patient Choice."
- **On-line medical direction** is the medical direction provided directly to out-of-hospital providers by the medical director or designee, generally in an emergency, either on-scene or by direct voice communication. The mechanism for this contact may be radio, telephone or other means as technology develops, but must include person-to-person communication of patient status, and orders to be carried out.
  - o This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "On-Line/On-Scene Medical Direction."
- Select **closest facility** when the patient is taken to the closest hospital by default. This would be when there is no protocol in place.
  - o This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "Closest Facility."
- Select **Other** if the patient was transported to a hospital based on a protocol/rationale not mentioned in the current list. If Other is selected, please specify the reason for how destination decision was made.
  - o This information can be found in the Patient Care Report under the "Disposition" section. Look for "Reason for choosing destination" and the indicated reason is "Other" or any of the other options indicated.
- Select **Unknown/ Not Documented** if there is no documentation regarding how decision to transport a patient to a hospital was made.

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

What was destination hospital's level of service?
Required Field for NDak users

Definition: Intent of the field is to determine if patients are transported to the appropriate hospital based on provider impression, assessment, and treatment. For this field, indicate the type of destination the patient was transported to for this episode of care?

Data Collection Question: What was the type of destination the patient was transported to for this episode of care?

Format: Single-select.

Allowable Values:
- Non-stroke designated hospital
- ASRH
- PSC
- CSC

- TSC
- ND

Notes for Abstraction:
- Review the patient care record to determine the destination hospitals level of service. Look under the eDisposition section and review "Type of Destination" and "Hospital Capability."
    - eDisposition.21 - Type of Destination
    - eDisposition.23 - Hospital Capability

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Was closest facility bypassed?
Conditionally Required Field for NDak users

Note: The field, "Was closest facility bypassed?" will only enabled **if** the user does not select the response option "closest facility" for the question, "How was destination decision made?" If "closest facility" is selected, then this question will be greyed out for the user.

Definition: Indicate if the closest facility was bypassed.

Data Collection Question: What was the type of destination the patient was transported to for this episode of care?

Format: Single-select.

Allowable Values:
- Yes
- No
- ND

Notes for Abstraction:
- The information can be found in the patient care record. To determine if the closest facility was bypassed, look at the Disposition section and review "Reason for Choosing Destination."
    - eDisposition.20 - Reason for Choosing Destination
- If "closest facility" is not selected, then review the patient narrative to determine if the closest facility was bypassed.

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

Was a Thrombolytic Checklist used?
Optional Field for NDak users

Definition: A thrombolytic checklist is intended to be used in the prehospital identification of patients who may benefit from the administration of thrombolytics for acute ischemic stroke. Record if a thrombolytic checklist was used by EMS personnel when treating a patient for stroke in the field.

Data Collection Question: Was a thrombolytic checklist used in the field?

Format: Single-select.

Allowable Values:
- Yes
- No/ ND

Notes for Abstraction:
- The information can be found in the patient care report, under the "patient's narrative" section or under the "Vitals" section. Look for "Reperfusion Checklist."
    - Reperfusion Checklist: eVitals.31 Nemsis/ePCR
- **Yes**: A thrombolytic checklist was used.
- **No/Not documented**: No thrombolytic checklist was documented

Suggested Data Sources:
- EMS Run Sheet
- Admission data
- Electronic patient care report (e-PCR)

If severity scale used, did result alter hospital destination (e.g. CSC vs. PSC)?
Conditionally Required Field for NDak users

Note: The field is enabled if "severity screen scale used" has a tool indicated. Otherwise, this field will not be enabled (e.g., response option, "Not Documented" is selected).

Definition: A severity assessment could help EMS personnel determine the presence of a large vessel occlusion, which could potentially impact where the patient is directly transported (e.g., endovascular-capable facility rather than a primary stroke center). Record which severity scale tool was used.

Data Collection Question: If a severity scale was used, did the result alter which hospital (e.g. CSC vs. PSC) to transport the patient?

Format: Single-select. Dropdown menu.

Allowable Values:
- Yes
- No
- Not Documented

Notes for Abstraction:
- **Yes:** Select this option if the results of the severity assessment changed the hospital destination the patient was being transported to by EMS
- **No:** Select this option if the results of the severity assessment did not change the hospital destination the patient was being transported to by EMS
- **Not Documented:** Select this option if the result of the severity assessment impacted the hospital destination is unknown or the information is not available in the patient's medical record and/or EMS Run Sheet.

Suggested Data Sources:
- EMS Run Sheet

- Admission data
- Electronic patient care report (e-PCR)

Table 1

Medication	Class
Accupril	ACE Inhibitor
Accuretic	ACE Inhibitor and Diuretic
Acebutolol	Beta Blocker
Aceon	ACE Inhibitor
Adalat	Ca++ Blockers
Adalat CC (extended release)	Ca++ Blockers
Afeditab CR	Ca++ Blockers
Aldactazide	Diuretic
Aldactone	Diuretic
Aldoclor	Diuretic & Other anti-hypertensive med
Aldomet	Other anti-hypertensive med
Aldoril	Diuretic & Other anti-hypertensive med
Altace	ACE Inhibitor
Amiloride, Amiloride HCl	Diuretic
Amiloride/hydrochlorothiazide	Diuretic
Amlodipine	Ca++ Blockers
Amlodipine/atorvastatin	Ca++ Blocker & Statin
Apresoline	Other anti-hypertensive med
Aquatensen	Diuretic
Atacand	ARB
Atacand HCT	ARB and Diuretic
Atenolol	Beta Blocker
Atenolol Inj	Beta Blocker
Atenolol/chlorthalidone	Beta Blocker and Diuretic
Avalide	ARB and Diuretic
Avapro	ARB
Azilsartan	ARB
Azor	ARB and Calcium Channel Blocker
Benazepril, Benazepril Hydrochloride	ACE Inhibitor
Benazepril/amlodipine	ACE Inhibitors and Ca++ Channel Blocker
Benazepril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Bendroflumethiazide	Diuretic
Benicar	ARB
Benicar HCT	ARB and Diuretic

Benzthiazide	Diuretic
Bepridil	Ca++ Blockers
Betapace, Betapace AF	Beta Blocker
Betaxolol	Beta Blocker
Bisoprolol, Bisoprolol Fumarate	Beta Blocker
Bisoprolol/hydrochlorothiazide	Beta Blocker and Diuretic
Brevibloc	Beta Blocker
Bumetanide	Diuretic
Bumex	Diuretic
Bystolic	Beta Blocker
Caduet	Ca++ Blocker & Statin
Calan	Ca++ Blockers
Calan SR	Ca++ Blockers
Candesartan	ARB
Candesartan/hydrochlorothiazide	ARB and Diuretic
Capoten	ACE Inhibitor
Capozide	ACE Inhibitor and Diuretic
Captopril	ACE Inhibitor
Captopril HCT, Captopril/hydrochlorothiazide	ACE Inhibitor and Diuretic
Cardene	Ca++ Blockers
Cardizem	Ca++ Blockers
Cardizem CD	Ca++ Blockers
Cardizem Monovial	Ca++ Blockers
Cardura	Other anti-hypertensive med
Carvedilol	Beta Blocker
Catapress	Other anti-hypertensive med
Catapress-TTS	Other anti-hypertensive med
Chlorothiazide	Diuretic
Chlorothiazide/methyldopa	Diuretic & Other anti-hypertensive med
Chlorthalidone	Diuretic
Clevidipine	Ca++ Blockers
Cleviprex	Ca++ Blockers
Clonidine	Other anti-hypertensive med
Clonidine hydrochloride/Chlorthalidone	Diuretic & Other anti-hypertensive med
Clonidine/chlorthalidone	Diuretic & Other anti-hypertensive med
Clorpres	Diuretic & Other anti-hypertensive med
Combipress	Diuretic & Other anti-hypertensive med
Coreg	Beta Blocker

Corgard	Beta Blocker
Corlopam	Other anti-hypertensive med
Corzide 40/5, 80/5	Beta Blocker and Diuretic
Covera-HS	Ca++ Blockers
Cozzar	ARB
Delone	Diuretic
Demadex	Diuretic
Diazoxide	Other anti-hypertensive med
Dibenzyline	Other anti-hypertensive med
Dilatrate-SR	Other anti-hypertensive med
Diltiazem	Ca++ Blockers
Diovan	ARB
Diovan HCT	ARB and Diuretic
Diucardin	Diuretic
Diupres	Diuretic
Diurese	Diuretic
Diuril	Diuretic
Doxazosin	Other anti-hypertensive med
Dyazide	Diuretic
DynaCirc CR	Ca++ Blockers
Dyrenium	Diuretic
Edarbi	ARB
Edecrin	Diuretic
Enalapril	ACE Inhibitor
Enalapril/hydrochlorothiazide, enalapril maleate/ hydrochlorothiazide	ACE Inhibitors and Diuretic
Enalaprilat	ACE Inhibitor
Enduron	Diuretic
Eplerenone	Diuretic
Eprosartan	ARB
Eprosartan/hydrochlorothiazide	ARB and Diuretic
Esidrix	Diuretic
Esmolol	Beta Blocker
Ethacrynic acid	Diuretic
Exforge	ARB and Ca++ Channel Blocker
Exna	Diuretic
Felodipine	Ca++ Blockers
Fenoldopam	Other anti-hypertensive med
Fosinopril	ACE Inhibitor
Fosinopril sodium/hydrochlorothiazide	ACE Inhibitors and Diuretic
Furocot	Diuretic
Furosemide	Diuretic

Guanabenz	Other anti-hypertensive med
Guanadrel	Other anti-hypertensive med
Guanethidine	Other anti-hypertensive med
Guanfacine	Other anti-hypertensive med
Hydralazine	Other anti-hypertensive med
Hydrochlorothiazide (HCTZ)	Diuretic
Hydrochlorothiazide/triamterene	Diuretic
HydroDIURIL	Diuretic
Hydroflumethiazide	Diuretic
Hydromox	Diuretic
Hydro-Par	Diuretic
Hygroton	Diuretic
Hylorel	Other anti-hypertensive med
Hytrin	Other anti-hypertensive med
Hyzaar	ARB and Diuretic
Imdur	Other anti-hypertensive med
Indapamide	Diuretic
Inderal, Inderal LA Long-Acting	Beta Blocker
Inderide	Beta Blocker and Diuretic
InnoPran XL	Beta Blocker
Inspra	Diuretic
Irbesartan	ARB
Irbesartan/hydrochlorothiazide	ARB and Diuretic
Ismelin	Other anti-hypertensive med
Ismo	Other anti-hypertensive med
Isochron	Other anti-hypertensive med
Isoptin SR	Ca++ Blockers
Isordil	Other anti-hypertensive med
Isordil Titradose	Other anti-hypertensive med
Isosorbide dinitrate	Other anti-hypertensive med
Isosorbide mononitrate	Other anti-hypertensive med
Isradipine	Ca++ Blockers
Labetalol	Beta Blocker
Lasix	Diuretic
Levatol	Beta Blocker
Lisinopril	ACE Inhibitor
Lisinopril/hydrochlorothiazide	ACE Inhibitors and Diuretic
ModifiedLo-Aqua	Diuretic
Loniten	Other anti-hypertensive med
Lopressor	Beta Blocker
Lopressor HCT, Lopressor Hydrochlorothiazide	Beta Blocker and Diuretic

Losartan	ARB
Losartan and hydrochlorothiazide	ARB and Diuretic
Lotensin	ACE Inhibitor
Lotensin HCT	ACE Inhibitors and Diuretic
Lotrel	ACE Inhibitors and Ca++ Channel Blocker
Lozol	Diuretic
Mannitol	Diuretic
Mavik	ACE Inhibitor
Maxzide	Diuretic
Metahydrin	Diuretic
Methyclothiazide	Diuretic
ModifiedMethyldopa	Other anti-hypertensive med
Methyldopa/hydrochlorothiazide	Diuretic & Other anti-hypertensive med
Metolazone	Diuretic
Metoprolol succinate	Beta Blocker
Metoprolol Tartrate	Beta Blocker
Metoprolol tartrate and hydrochlorothiazide, Metoprolol/hydrochlorothiazide	Beta Blocker and Diuretic
Micardis	ARB
Micardis HCT	ARB and Diuretic
Microzide	Diuretic
Midamor	Diuretic
Minipress	Other anti-hypertensive med
Minizide	Diuretic & Other anti-hypertensive med
Minoxidil	Other anti-hypertensive med
Moduretic	Diuretic
Moexipril, Moexipril Hydrochloride	ACE Inhibitor
Moexipril/hydrochlorothiazide, moexipril hydrochloride/hydrochlorothiazide	ACE Inhibitors and Diuretic
Monopril	ACE Inhibitor
Mykrox	Diuretic
Nadolol	Beta Blocker
Nadolol/bendroflumethiazide	Beta Blocker and Diuretic
Naqua	Diuretic
Naturetin	Diuretic
Nebivolol, Nebivolol Hydrochloride, Nebivolol HCl	Beta Blocker
Nicardipine	Ca++ Blockers
Nifediac	Ca++ Blockers
Nifedical	Ca++ Blockers
Nifedipine	Ca++ Blockers
Nifedipine Extended release	Ca++ Blockers

Nimodipine	Ca++ Blockers
Nimotop	Ca++ Blockers
Nisoldipine	Ca++ Blockers
Nitro-Dur	Other anti-hypertensive med
nitroglycerin	Other anti-hypertensive med
Nitrolingual	Other anti-hypertensive med
Nitropress	Other anti-hypertensive med
Nitroprusside	Other anti-hypertensive med
Nitroquick	Other anti-hypertensive med
Nitrostat	Other anti-hypertensive med
Norvasc	Ca++ Blockers
Olmesartan medoxomil/Amlodipine/ Hydrochlorothiazide	ARB and Calcium Channel Blockers and Diuretic
Olmesartan, olmesartan medoxomil	ARB
Olmesartan/amlodipine, olmesartan medoxomil/amlodipine	ARB and Calcium Channel Blocker
Olmesartan/hydrochlorothiazide, olmesartan medoxomil/hydrochlorothiazide	ARB and Diuretic
Oretic	Diuretic
Osmitrol	Diuretic
Penbutolol	Beta Blocker
Perindopril, Perindopril Erbumine	ACE Inhibitor
Phenoxybenzamine	Other anti-hypertensive med
Pindolol	Beta Blocker
Plendil	Ca++ Blockers
Polythiazide	Diuretic
Prazosin	Other anti-hypertensive med
Prazosin hydrochloride/polythiazide	Diuretic & Other anti-hypertensive med
Prinivil	ACE Inhibitor
Prinzide	ACE Inhibitors and Diuretic
Procardia	Ca++ Blockers
Procardia XL Extended Release	Ca++ Blockers
Proglycem	Other anti-hypertensive med
Propranolol, propranolol hydrochloride, propranolol HCl	Beta Blocker
Propranolol/hydrochlorothiazide	Beta Blocker and Diuretic
Quinapril HCl/HCT, Quinapril hydrochloride/hydrochlorothiazide, Quinapril/Hydrochlorothiazide	
Quinapril, Quinapril HCl	ACE Inhibitor
Quinapril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Quinaretic	ACE Inhibitors and Diuretic
Quinethazone	Diuretic
Ramipril	ACE Inhibitor
Renese	Diuretic

Resectisol	Diuretic
Reserpine	Other anti-hypertensive med
Saluron	Diuretic
Sectral	Beta Blocker
SODIUM EDECRIN	Diuretic
Sorbitrate	Other anti-hypertensive med
Sorine	Beta Blocker
Sotalol, sotalol hydrochloride, Sotalol HCL	Beta Blocker
Spironolactone	Diuretic
Spironolactone/hydrochlorothiazide	Diuretic
Sular	Ca++ Blockers
Tarka	ACE Inhibitors and Ca++ Channel Blocker
Tasosarten	ARB
Telmisartan	ARB
Telmisartan/amlodipine	ARB and Calcium Channel Blocker
Telmisartan/hydrochlorothiazide	ARB and Diuretic
Tenex	Other anti-hypertensive med
Tenoretic	Beta Blocker and Diuretic
Tenormin	Beta Blocker
Tenormin IV	Beta Blocker
Terazosin	Other anti-hypertensive med
Teveten	ARB
Teveten HCT	ARB and Diuretic
Thalitone	Diuretic
Tiazac	Ca++ Blockers
Timolol	Beta Blocker
Toprol-XL	Beta Blocker
Torsemide	Diuretic
Trandate, Trandate HCL	Beta Blocker
Trandolapril	ACE Inhibitor
Trandolapril/verapamil, trandolapril/verapamil hydrochloride	ACE Inhibitors and Ca++ Channel Blocker
Triamterene	Diuretic
Tribenzor	ARB and Calcium Channel Blockers and
Trichlormethiazide	Diuretic
Twynsta	ARB and Calcium Channel Blocker
Uniretic	ACE Inhibitors and Diuretic
Univasc	ACE Inhibitor
Valsartan	ARB

Valsartan/aliskiren	ARB and Other anti-hypertensive med
Valsartan/amlodipine	ARB and Ca++ Channel Blocker
Valsartan/hydrochlorothiazide	ARB and Diuretic
Valturna	ARB and Other anti-hypertensive med
Vascor	Ca++ Blockers
Vaseretic	ACE Inhibitors and Diuretic
Vastoec	ACE Inhibitor
Vastoec IV	ACE Inhibitor
Verapamil extended release	Ca++ Blockers
Veraparmil	Ca++ Blockers
Verdia	ARB
Verelan	Ca++ Blockers
Verelan PM	Ca++ Blockers
Visken	Beta Blocker
Wytensin	Other anti-hypertensive med
Zaroxolyn	Diuretic
Zebeta	Beta Blocker
Zestoretic	ACE Inhibitors and Diuretic
Zestril	ACE Inhibitor
Ziac	Beta Blocker and Diuretic

Table 2

EMS Agency Name	EMS Agency State	Level of Service
5th Medical Group Ambulance Service: 151	North Dakota	Basic Life Support Ground Ambulance
Almont Ambulance Service: 1	North Dakota	Basic Life Support Ground Ambulance
Altru Health System Ambulance Service: 48	North Dakota	Advanced Life Support Ground Ambulance
Ambulance Service, Inc.: 18	Minnesota	Advanced Life Support Ground Ambulance
Ashley Ambulance Service: 3	North Dakota	Basic Life Support Ground Ambulance
Barnes County / City Ambulance: 125	North Dakota	Advanced Life Support Ground Ambulance
Belcourt Ambulance Service: 143	North Dakota	Basic Life Support Ground Ambulance
Belfield Ambulance Service Inc.: 5	North Dakota	Basic Life Support Ground Ambulance
Berthold Ambulance Service Inc.: 6	North Dakota	Basic Life Support Ground Ambulance
Billings County Ambulance Service: 84	North Dakota	Basic Life Support Ground Ambulance
Binford Substation: 156	North Dakota	Substation (BLS)
Bottineau Ambulance Service: 14	North Dakota	Basic Life Support Ground Ambulance
Bowbells Ambulance Service: 15	North Dakota	Basic Life Support Ground Ambulance
Bowdon Ambulance District: 16	North Dakota	Basic Life Support Ground Ambulance
Bowman Ambulance Squad Inc.: 17	North Dakota	Basic Life Support Ground Ambulance
Carpio Ambulance Service: 20	North Dakota	Basic Life Support Ground Ambulance
Carrington Health Center Ambulance: 21	North Dakota	Basic Life Support Ground Ambulance

Casselton Ambulance Service, Inc.: 23	North Dakota	Advanced Life Support Ground Ambulance
Cavalier Ambulance Service, Inc.: 24	North Dakota	Advanced Life Support Ground Ambulance
Coal Creek Station Amb Service - GRE: 122	North Dakota	Industrial Ambulance Service
Community Ambulance Service Inc. - Beach: 4	North Dakota	Basic Life Support Ground Ambulance
Community Ambulance Service of New Rockford: 95	North Dakota	Basic Life Support Ground Ambulance
Community Ambulance Service of Rolla: 113	North Dakota	Advanced Life Support Ground Ambulance
Community Ambulance Service, Inc. - Minot: 88	North Dakota	Advanced Life Support Ground Ambulance
Community Volunteer EMS of LaMoure: 153	North Dakota	Basic Life Support Ground Ambulance
Cooperstown Ambulance Service: 26	North Dakota	Basic Life Support Ground Ambulance
Coteau Properties Co. Ambulance Service: 8	North Dakota	Industrial Ambulance Service
Coyote Creek Mine Ambulance: 10	North Dakota	Industrial Ambulance Service
Dakota Gasification Co. Ambulance Service: 9	North Dakota	Industrial Ambulance Service
Dickinson Area Ambulance Service, Inc.: 29	North Dakota	Advanced Life Support Ground Ambulance
Divide County Ambulance Service: 27	North Dakota	Basic Life Support Ground Ambulance
Drayton Volunteer Ambulance Association Inc.: 30	North Dakota	Basic Life Support Ground Ambulance
Edgeley Ambulance Service: 31	North Dakota	Basic Life Support Ground Ambulance
Edmore Volunteer Ambulance Service: 32	North Dakota	Basic Life Support Ground Ambulance
Ellendale Community Ambulance Service: 33	North Dakota	Basic Life Support Ground Ambulance
Emmons County Ambulance Service: 72	North Dakota	Advanced Life Support Ground Ambulance
Esmond Community Ambulance Service: 34	North Dakota	Basic Life Support Ground Ambulance
Fairview Substation: 163	Montana	Substation (BLS)
Falkirk Mine Ambulance Service: 123	North Dakota	Industrial Ambulance Service
Fessenden Ambulance Service: 36	North Dakota	Basic Life Support Ground Ambulance
First Medic Ambulance of Ransom County: 73	North Dakota	Advanced Life Support Ground Ambulance
Flasher Ambulance Service: 38	North Dakota	Basic Life Support Ground Ambulance
F-M Ambulance Service, Inc.: 35	North Dakota	Advanced Life Support Ground Ambulance
Gackle Ambulance Service: 42	North Dakota	Basic Life Support Ground Ambulance
Garrison - Max Ambulance District: 43	North Dakota	Basic Life Support Ground Ambulance
Glen Ullin Area Ambulance Service: 44	North Dakota	Basic Life Support Ground Ambulance
Glenburn Area Ambulance Service Inc: 45	North Dakota	Basic Life Support Ground Ambulance
Golva Substation: 170	North Dakota	Substation (BLS)
Grenora Ambulance Service: 49	North Dakota	Basic Life Support Ground Ambulance
Halliday Ambulance Service: 50	North Dakota	Basic Life Support Ground Ambulance
Hankinson Vol Ambulance Service: 51	North Dakota	Basic Life Support Ground Ambulance
Harvey Ambulance Service, Inc.: 52	North Dakota	Basic Life Support Ground Ambulance
Hebron Ambulance Service: 54	North Dakota	Basic Life Support Ground Ambulance
Hope Ambulance Service: 58	North Dakota	Basic Life Support Ground Ambulance
Hunter Ambulance Service: 59	North Dakota	Basic Life Support Ground Ambulance
Jamestown Area Ambulance: 150	North Dakota	Advanced Life Support Ground Ambulance
Jud Substation: 154	North Dakota	Substation (BLS)

Kenmare Ambulance Service: 61	North Dakota	Basic Life Support Ground Ambulance
Kidder County Ambulance Service: 117	North Dakota	Basic Life Support Ground Ambulance
Killdeer Area Ambulance Service Inc: 62	North Dakota	Advanced Life Support Ground Ambulance
Kindred Area Ambulance Service: 63	North Dakota	Basic Life Support Ground Ambulance
Kulm Ambulance Corps, Inc.: 64	North Dakota	Basic Life Support Ground Ambulance
Lake Region Ambulance Service: 28	North Dakota	Advanced Life Support Ground Ambulance
Lakota Ambulance Service: 65	North Dakota	Basic Life Support Ground Ambulance
Lambert Substation: 165	Montana	Substation (BLS)
Langdon Ambulance Service: 67	North Dakota	Basic Life Support Ground Ambulance
Lansford Substation: 157	North Dakota	Substation (BLS)
Larimore Ambulance Service Inc.: 69	North Dakota	Basic Life Support Ground Ambulance
Leeds Ambulance Service: 70	North Dakota	Basic Life Support Ground Ambulance
Lemmon EMT Association: 138	South Dakota	Basic Life Support Ground Ambulance
Lidgerwood Rural Ambulance Service District: 71	North Dakota	Basic Life Support Ground Ambulance
Maddock Ambulance Service: 74	North Dakota	Basic Life Support Ground Ambulance
Mandaree EMS: 149	North Dakota	Basic Life Support Ground Ambulance
Marmarth Ambulance Service: 146	North Dakota	Basic Life Support Ground Ambulance
Max Substation: 155	North Dakota	Substation (BLS)
McClusky Rural Ambulance District: 78	North Dakota	Basic Life Support Ground Ambulance
McHenry Ambulance Service: 79	North Dakota	Basic Life Support Ground Ambulance
Mcintosh V.F.D. Ambulance Service: 80	South Dakota	Basic Life Support Ground Ambulance
Mckenzie County Ambulance Service: 129	North Dakota	Basic Life Support Ground Ambulance
Mcville Community Ambulance Service: 82	North Dakota	Basic Life Support Ground Ambulance
Medina Ambulance Service: 83	North Dakota	Basic Life Support Ground Ambulance
Mercer County Ambulance Service Inc. -- Beulah: 7	North Dakota	Basic Life Support Ground Ambulance
Mercer County Ambulance Service Inc. -- Hazen: 53	North Dakota	Basic Life Support Ground Ambulance
Metro Area Ambulance Service Inc - Bismarck: 12	North Dakota	Advanced Life Support Ground Ambulance
Metro Area Ambulance Service Inc-Mandan: 139	North Dakota	Advanced Life Support Ground Ambulance
Michigan Area Ambulance Service Inc.: 85	North Dakota	Basic Life Support Ground Ambulance
Mohall Ambulance Service: 89	North Dakota	Basic Life Support Ground Ambulance
Mott Volunteer Ambulance Service: 90	North Dakota	Basic Life Support Ground Ambulance
Munich Rural Ambulance: 91	North Dakota	Basic Life Support Ground Ambulance
Napoleon Ambulance Service: 92	North Dakota	Basic Life Support Ground Ambulance
New England Ambulance Service: 93	North Dakota	Basic Life Support Ground Ambulance
New Leipzig Ambulance Service: 94	North Dakota	Basic Life Support Ground Ambulance
New Salem Ambulance Service: 96	North Dakota	Basic Life Support Ground Ambulance
New Town Community Amb. Service District: 97	North Dakota	Advanced Life Support Ground Ambulance
Northwood Ambulance Service: 98	North Dakota	Basic Life Support Ground Ambulance
Oakes Volunteer Ambulance Service: 99	North Dakota	Basic Life Support Ground Ambulance
Oliver County Ambulance Service: 25	North Dakota	Basic Life Support Ground Ambulance
Page Ambulance Service: 100	North Dakota	Basic Life Support Ground Ambulance
Park River Volunteer Ambulance Service: 101	North Dakota	Basic Life Support Ground Ambulance
Parshall Rural Ambulance Service Inc.: 102	North Dakota	Basic Life Support Ground Ambulance
Pembina Ambulance Service: 103	North Dakota	Basic Life Support Ground Ambulance

Plaza Ambulance Service: 104	North Dakota	Basic Life Support Ground Ambulance
Portal Ambulance Service: 105	North Dakota	Basic Life Support Ground Ambulance
Powers Lake Ambulance Association: 106	North Dakota	Basic Life Support Ground Ambulance
Ray Community Ambulance District: 107	North Dakota	Basic Life Support Ground Ambulance
Regent Ambulance Service: 108	North Dakota	Basic Life Support Ground Ambulance
Richardton-Taylor Ambulance Service: 109	North Dakota	Basic Life Support Ground Ambulance
Richland County Ambulance: 160	Montana	Basic Life Support Ground Ambulance
Riverdale Ambulance Department: 110	North Dakota	Basic Life Support Ground Ambulance
Rock Lake Ambulance Service: 111	North Dakota	Basic Life Support Ground Ambulance
Rolette Ambulance Service, Inc: 112	North Dakota	Basic Life Support Ground Ambulance
Rugby Emergency Medical Services: 148	North Dakota	Advanced Life Support Ground Ambulance
Sanford Hillsboro Ambulance Service: 56	North Dakota	Basic Life Support Ground Ambulance
Sargent County Amb Service - Forman: 40	North Dakota	Basic Life Support Ground Ambulance
Sargent County Ambulance Service - Milnor: 86	North Dakota	Basic Life Support Ground Ambulance
Savage Substation: 164	Montana	Substation (BLS)
Sherwood Substation: 115	North Dakota	Substation (BLS)
Spirit Lake Emergency Medical Service: 142	North Dakota	Basic Life Support Ground Ambulance
Standing Rock Ambulance - Mclaughlin, SD: 158	North Dakota	Substation (BLS)
Standing Rock Ambulance Service: 41	North Dakota	Advanced Life Support Ground Ambulance
Stanley Ambulance Service: 116	North Dakota	Advanced Life Support Ground Ambulance
Tioga Ambulance Service: 118	North Dakota	Basic Life Support Ground Ambulance
Tolley Substation: 159	North Dakota	Substation (BLS)
Towner County Ambulance Service Inc. - Cando: 19	North Dakota	Basic Life Support Ground Ambulance
Towner Fire, Ambulance, and Rescue Service, Inc.: 119	North Dakota	Basic Life Support Ground Ambulance
Turtle Lake Ambulance Service: 120	North Dakota	Basic Life Support Ground Ambulance
Underwood Ambulance Service: 121	North Dakota	Basic Life Support Ground Ambulance
Upham Ambulance Service: 124	North Dakota	Substation (BLS)
Valley Ambulance & Rescue Serv Inc: 47	North Dakota	Basic Life Support Ground Ambulance
Velva Ambulance Service: 126	North Dakota	Basic Life Support Ground Ambulance
Walhalla Ambulance Service: 127	North Dakota	Basic Life Support Ground Ambulance
Washburn Volunteer Ambulance Serv: 128	North Dakota	Basic Life Support Ground Ambulance
West River Ambulance Service: 55	North Dakota	Basic Life Support Ground Ambulance
West Traill Ambulance - Finley: 37	North Dakota	Substation (BLS)
West Traill Ambulance Service: 77	North Dakota	Basic Life Support Ground Ambulance
Westhope Ambulance Service: 130	North Dakota	Basic Life Support Ground Ambulance
Williston Ambulance Service: 131	North Dakota	Advanced Life Support Ground Ambulance
Wilton Rural Ambulance Service: 133	North Dakota	Basic Life Support Ground Ambulance
Wing Rural Ambulance: 134	North Dakota	Basic Life Support Ground Ambulance
Wishek Ambulance Service: 135	North Dakota	Basic Life Support Ground Ambulance
Wyndmere-Barney Rural Amb Dist: 136	North Dakota	Basic Life Support Ground Ambulance