Rural EMS Counts Learning – Vital Signs

A group of North Dakota EMS Managers met on June 20th, 2023 after reviewing the Set of Vital Signs Documented Rural EMS Counts Measure. Those that reviewed the narratives found some common themes which matched what the data was saying in the Vital Sign Infographic. https://www.ndemsa.org/resources/Documents/2022-ND-EMS-Index-Infographic-3-2.pdf

As anticipated, documentation was by far the most common problem, but some common themes came through like the types of patients where vital signs were documented as often. It may be useful to talk with your crews about 1) who is a patient, 2) monitor imports, 3) pediatric patients.

Who is a patient that needs vital signs documented?

The definition of a patient should drive the answer to this question. A patient is a person who has an acute illness or injury (based on the mechanism of injury, appearance, etc.) who requests assistance or, if they have decision-making capacity, has not refused assistance.

Who is a patient?

Anyone who:

- Upon your arrival on scene, you find a person you suspect is injured or ill (or DOA) and:
    - Provides verbal consent
        - Over 18
        - Mentally competent
        - Or with guardian's consent (legally authorized)
    - You have Implied consent
        - Unconscious or otherwise mentally incompetent

Who is not a patient?

Anyone who:

- Upon arrival,
    - Is not hurt or ill
    - Just needs non-medical help – like a lift assist
    - Or refuses help
        - Does not consent
        - Mentally competent

There should be at least one set of vitals if they are a patient. If they are transported or if they are a high-risk refusal, they should have a minimum of two sets of vitals.

Persons who are "code black", "dead on arrival" or otherwise are going to be pronounced without resuscitative efforts should have vitals assessed and documented. If the blood pressure is zero, record that. If the heart rate is zero, that should be recorded. If there is no respiratory rate, record that. If the GCS is 3, document it.

If someone who meets the criteria of being a patient as mentioned above refuses to allow you to assess them, that would be recorded as a pertinent negative for the values you are unable to assess without touching the patient. You should often be able to determine a GCS and respiratory rate without touching the patient, which can be recorded in most circumstances.

Monitor Imports

Some vital sign elements may be inaccurate or not recorded when importing cardiac monitor data. In those cases, the provider must review and correct the record.

Pediatric Patients

All patients should have a blood pressure recorded unless refused. Infants should have blood pressure assessed. For infants, the best location to place the BP cuff is the lower leg (not arm). As shown in the Vital Sign Infographic, blood pressure in children under 5 years of age was only recorded in 27% of the patients. Pediatrics is an infrequent patient population. Practicing on small children at service trainings may help people feel more comfortable when encountering these patients.

Rural EMS Counts Learning – Aspirin for Cardiac Chest Pain

A group of North Dakota EMS Managers met on June 27th, 2023 after reviewing the Aspirin for Cardiac Chest Pain Rural EMS Counts Measure. Those that reviewed the narratives found some common themes.

As anticipated, documentation in discreet data fields was by far the most common problem. Some things managers can talk to their crews about are 1) making sure the correct provider impression is chosen (cardiac chest pain vs. non-cardiac chest pain) 2) making sure an adequate amount of aspirin is taken 3) documenting administration in the medications area rather than the narrative.

Provider Impression

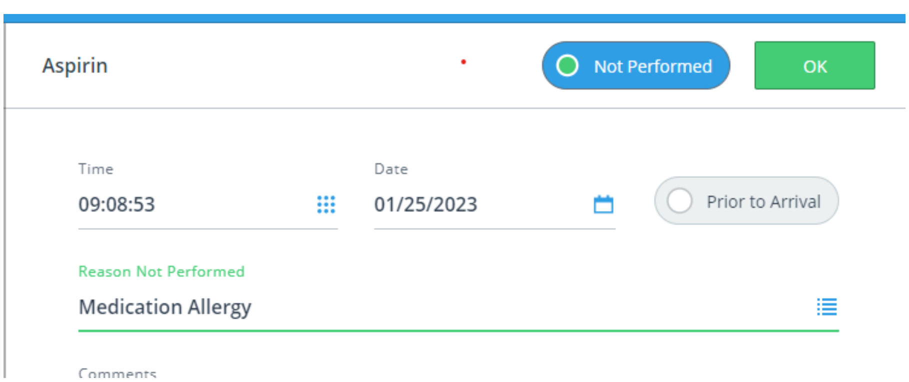
Make your crews aware there is a Chest Pain/Discomfort provider impression and a Chest Pain, Other (Non-cardiac) provider impression. The Chest Pain/Discomfort is assumed to be cardiac in nature while the Non-cardiac should be used when chest pain is most likely due to trauma.

Documenting when aspirin is taken by the patient prior to arrival

If the patient states they take aspirin daily, that is not a high enough aspirin dose to reduce clot size and preserve heart tissue. It also might enteric-coated aspirin. In this case, you would still give the patient 324 mg of chewable aspirin. If a full dose of chewable aspirin has been taken, in the medications area choose aspirin and select prior to arrival.

Documenting when aspirin is not given

In the medications area of your ePCR, you should select aspirin and then select not performed. After selecting not performed, you can select reasons not performed like Contraindication Noted, Denied By Order, Medication Allergy, and Medication Already Taken.



On that note, all the services that reviewed cases noted a patient allergy to aspirin as the reason aspirin was not given. Have providers discuss with patients if it is a sensitivity to aspirin vs. a true allergy. A true allergy would present with hives, rash, swelling, or difficulty breathing after ingestion. A sensitivity would be GI symptoms, such as nausea or diarrhea. In most cases, you still give aspirin if the patient has a sensitivity. An active GI bleed would be a contraindication to give aspirin. If you have questions about whether or not to give, always contact medical control.

Rural EMS Counts Learning – 12 Lead Performed for Suspected Cardiac Chest Pain

A group of North Dakota EMS Managers met on July 11th, 2023 after reviewing the 12 Lead Performed for Suspected Cardiac Chest Pain Rural EMS Counts Measure. Those that reviewed the narratives found some common themes.

As anticipated, documentation was by far the most common problem. Some things managers can talk to their crews about are 1) different chest pain impressions 2) selecting 12 Lead in the flow chart 3) patients, regardless of age, still need a 12 Lead and 4) keeping proficiency in low volume areas.

Provider Impression

Make your crews aware there is a Chest Pain/Discomfort provider impression and a Chest Pain, Other (Non-cardiac) provider impression. The Chest Pain/Discomfort is assumed to be cardiac in nature while the Non-cardiac should be used when chest pain is most likely due to trauma.

Documenting in the Narrative vs. Procedure Section

While the most important part is the care being provided and the documentation of that care, by choosing 12 Lead in the procedure or vitals area, you are making it clearer at a state and national level that you are providing quality care. At the national level, it currently looks like only 58% of the patients that need a 12 Lead are receiving one.

https://nemsis.org/view-reports/public-reports/version-3-public-dashboards/v3-public-stemi-dashboard/

Patient Age

If a patient is elderly, they still need a 12 Lead when experiencing Chest Pain. Disparities in provided care should be something you are looking at as an organization.

Infrequency

One agency that attended had zero encounters in the last 18 months. These patients are very infrequent for many small agencies. Muscle memory for placing 12 Leads properly is important. If you can have a training area set up for people to practice on, you can keep the proficiency up.

This measure only looks at 12-Lead when the provider impression is Cardiac Chest Pain. In reality, more patients should be receiving 12 Leads. Anginal equivalents (shortness of breath, jaw pain, random arm pain, etc) also require them. Patients that are diabetic and women may present with vague symptoms like “just feel sick” or “feels nauseated” or “feel like it is hard to breathe”. Women may only experience chest pain 40-50% of the time when having an AMI. The level of suspicion needed for obtaining a 12L should be pretty broad .The Rural EMS Counts Measure filter criteria can be broadened to include more patients. This way providers have more experience doing the 12 leads.

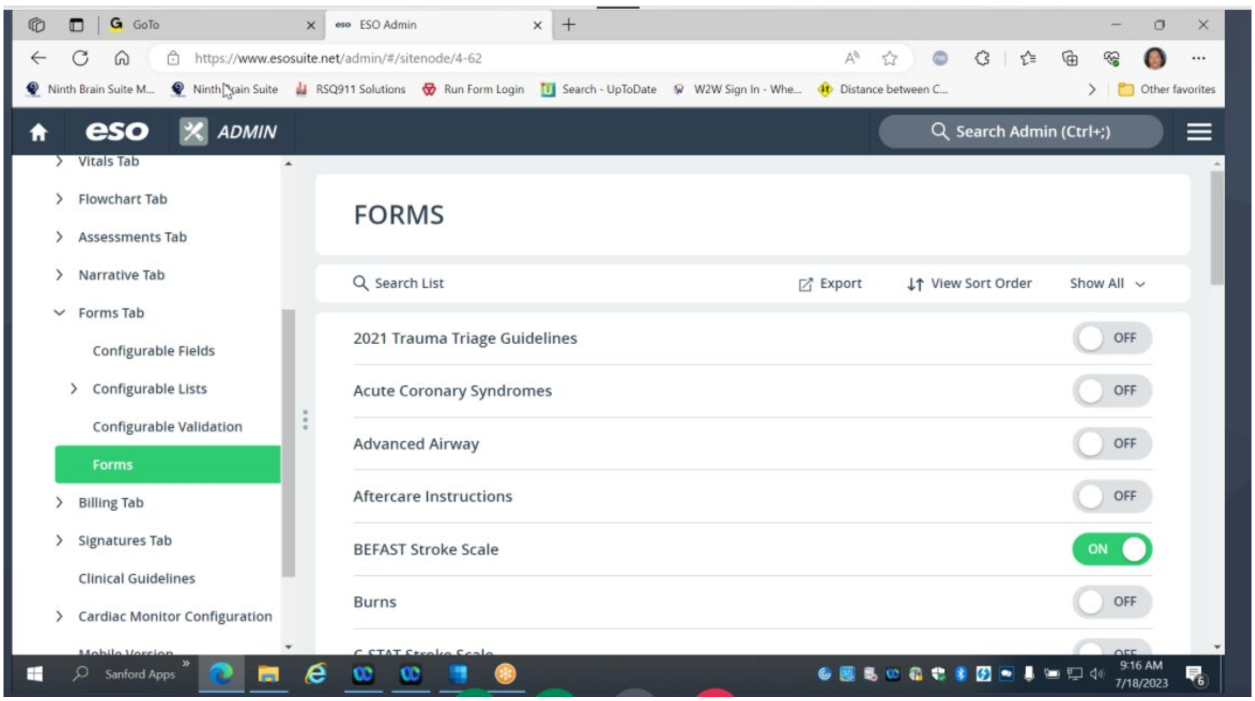
Rural EMS Counts Learning – Last Known Well for Suspected Stroke Patient

A group of North Dakota EMS Managers met on July 18th, 2023 after reviewing the Last Known Well or Time of Onset Recorded for Suspected Stroke Rural EMS Counts Measure. Those that reviewed the narratives found some common themes.

As anticipated, documentation in the discreet data fields was by far the most common problem. Managers can ensure the BE-FAST form is turned on, the last known well field is available to crews and remind crews how to present an accurate last known well time.

Last Known Well Field

If using ESO, you can activate the BEFAST Stroke Scale Form which houses the Last Known Well field. In other software, you can ask your ePCR/EHR provider how to turn on eSituation.18 Date/Time Last Known Well. Below is a screen shot in ESO EHR.



Calculating/Documenting Last Known Well

Many Last Known Well times were found in the narratives. When documenting, make sure to use a date and time. Using language like, "30 minutes ago" is confusing for the next provider in the chain of care. If the patient shows stroke symptoms, the symptoms resolve, then the symptoms reappear, the last known well time resets each time the symptoms resolve.

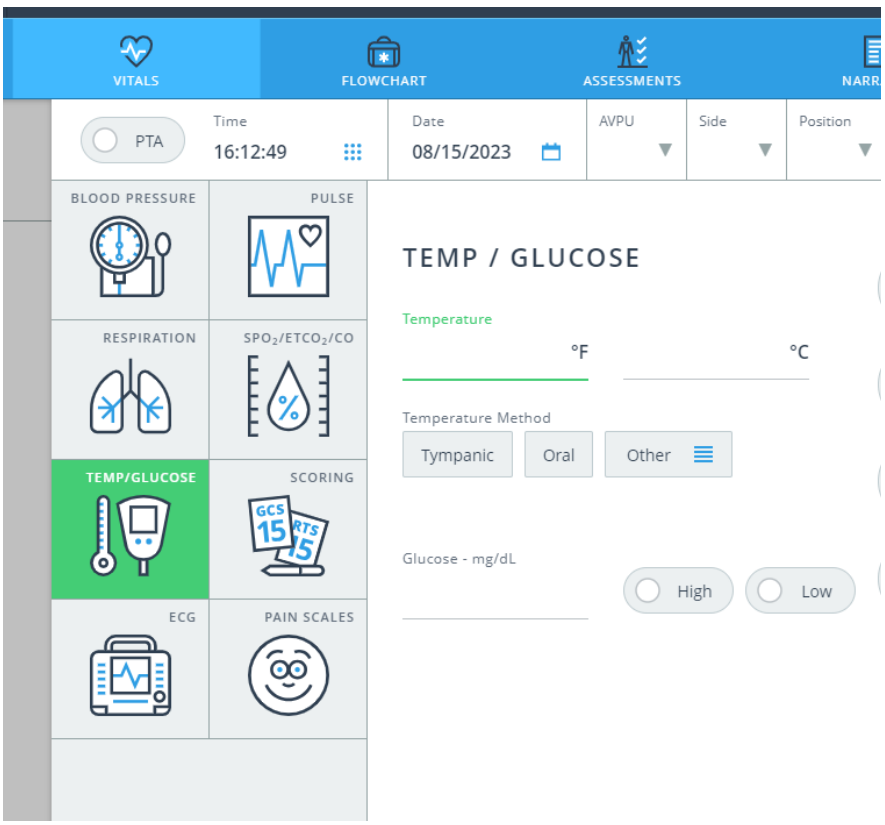
Rural EMS Counts Learning – Blood Glucose Check for Suspected Stroke Patient

A group of North Dakota EMS Managers met on August 1, 2023 after reviewing the Blood Glucose Value documented for Suspected Stroke Rural EMS Counts Measure. Those that reviewed the narratives found some common themes.

Managers can look at documentation, low frequency cases, and the assessment tool used by all staff.

Documentation

Managers can make sure people have been shown where to document the blood glucose value and turn off the procedure of blood glucose check to reduce confusion. Talk to providers about the provider impression reflecting their clinical judgement, rather than what they were called to (stroke vs. seizure).



Low frequency, high criticality events

Two of the services had 8 stroke cases in the last 1.5 years. One agency reported 4 cases in the last two years. In low frequency, high stress events, how can we help providers remember the steps to take rather than relying on human memory? Simulation, checklists, guides, online medical direction are things to consider.

Stroke Assessment Tool Used

Make sure your providers are using BE-FAST which is the North Dakota Stroke System of Care's preferred stroke assessment tool. This tool has added two Balance and Eyesight changes to the Cincinnati Stroke Scale (FAST) to catch posterior strokes which may show up in gate/balance and account for approximately 20% of all strokes. Practice doing the stroke assessment using different patient scenarios.

B - Balance: Sudden trouble walking, dizziness, loss of balance or coordination.

- Perform bilateral index finger to nose test and bilateral heel to shin test.

E - Eyes: Sudden double vision, trouble seeing, or fixed gaze to one side (eye deviation) out of one or both eyes.

- Assess 4 quadrants of visual field by having patient locate your index finger.

F - Face: Sudden drooping or numbness on one side of the face.

- Ask the person to smile or show teeth.

A - Arm: Sudden numbness or weakness of the arm, especially on one side of the body.

- Ask the person to raise and extend both arms with palms up. Does one arm drift downward?

S - Speech: Sudden confusion, trouble speaking or understanding.

- Have person repeat phrase such as "You can't teach an old dog new tricks." Have the person identify a common object such as a pen or a watch by asking "What is this?".

Rural EMS Counts Learning – Lights and Sirens Response

A group of North Dakota EMS Managers met on August 8, 2023 after reviewing the Lights and Sirens Rural EMS Counts Measure.

We had a guest. Brian Maloney joined us to share Plum EMS's story of reducing lights and sirens usage. Plum EMS's story was highlighted on EMS1. Team-driven improvement in the use of lights and sirens (ems1.com)

This presentation can be viewed here.
https://transcripts.gotomeeting.com/#/s/0add7c1b8d17125a01eccf8b9eba9e0e5d9d7eb757882717ab478b6a384d2173

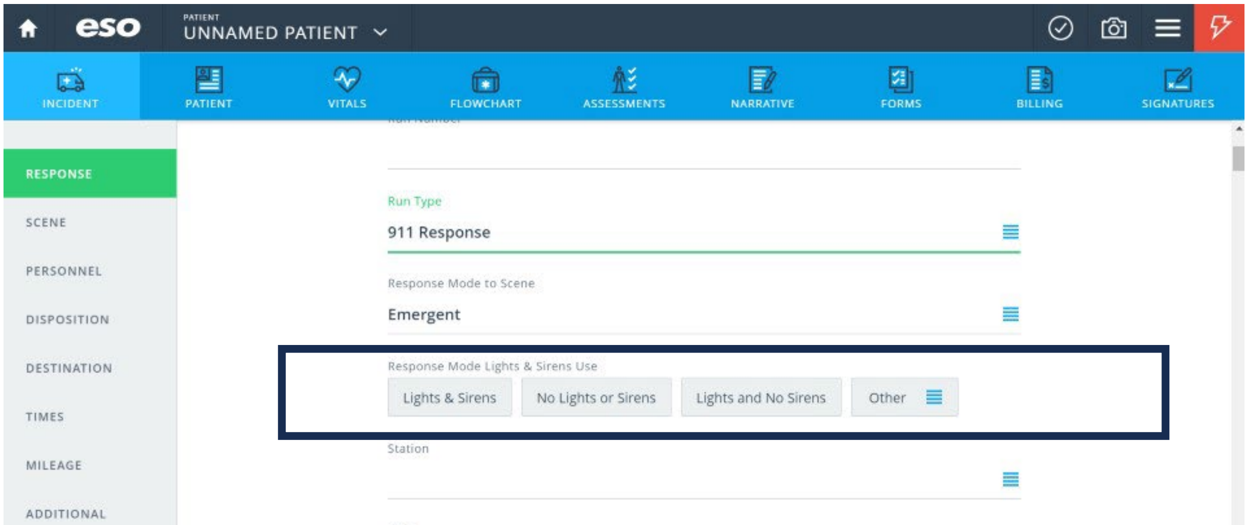
Lights and sirens response and transport should not be applied to every patient. Lights and sirens should be used sparingly and only when indicated. Keeping providers and patients safe is the reason for this national movement to reduce lights and sirens usage during response and transport. Read the national position statement signed by 14 national organizations.

https://naemsp.org/NAEMSP/media/NAEMSP-Documents/Annual%20Meeting/2021%20MDC%20Handouts/Joint-Statement-on-Red-Light-and-Siren-Operations-with-Logos-FINAL-(003).pdf

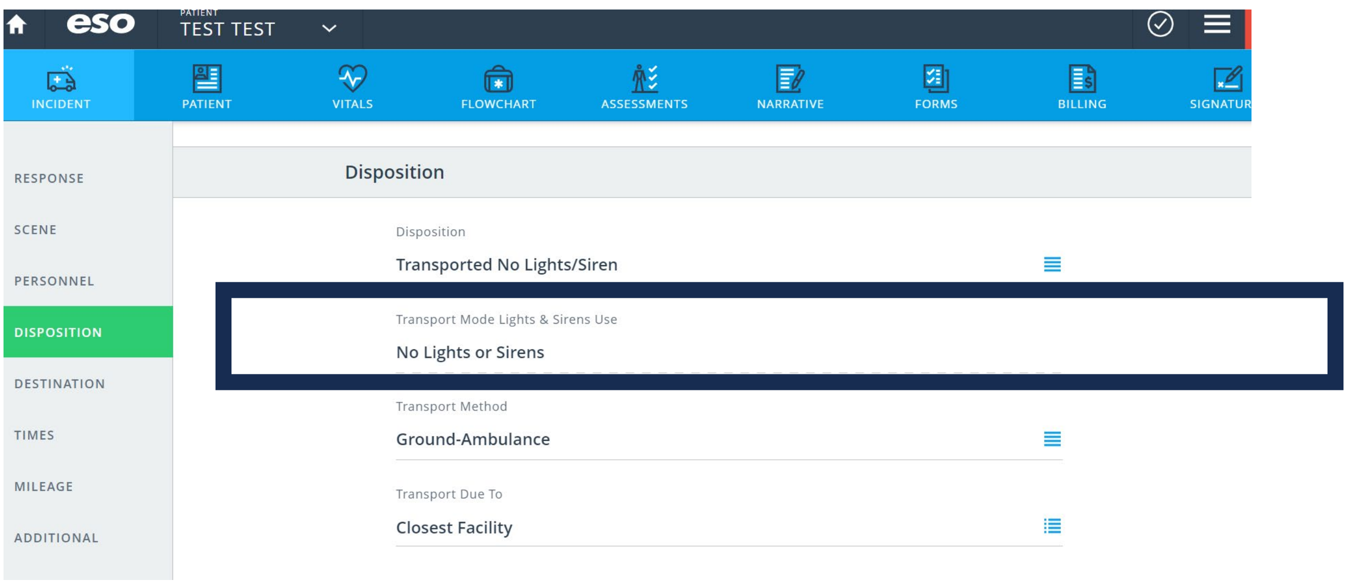
Documentation

It is important to know how often your agency uses lights and sirens. Make sure the lights and sirens fields are activated. If this field is not activated, the measure will look at emergent vs. non-emergent. We know lights and sirens usage is NOT required for billing emergent and want to parse out the usage of lights and sirens from the emergent response.

Below are screenshots of where to turn on the field and where you will document in ESO EHR.



UNNAMED PATIENT
INCIDENT
PATIENT
VITALS
FLOWCHART
ASSESSMENTS
NARRATIVE
FORMS
BILLING
SIGNATURES
RESPONSE
SCENE
PERSONNEL
DISPOSITION
DESTINATION
TIMES
MILEAGE
ADDITIONAL
Run Type
911 Response
Response Mode to Scene
Emergent
Response Mode Lights & Sirens Use
Lights & Sirens
No Lights or Sirens
Lights and No Sirens
Other
Station



TEST TEST
INCIDENT
PATIENT
VITALS
FLOWCHART
ASSESSMENTS
NARRATIVE
FORMS
BILLING
RESPONSE
SCENE
PERSONNEL
DISPOSITION
DESTINATION
TIMES
MILEAGE
ADDITIONAL
Disposition
Disposition
Transported No Lights/Siren
Transport Mode Lights & Sirens Use
No Lights or Sirens
Transport Method
Ground-Ambulance
Transport Due To
Closest Facility

Rural EMS Counts Learning – Agencies and Facilities

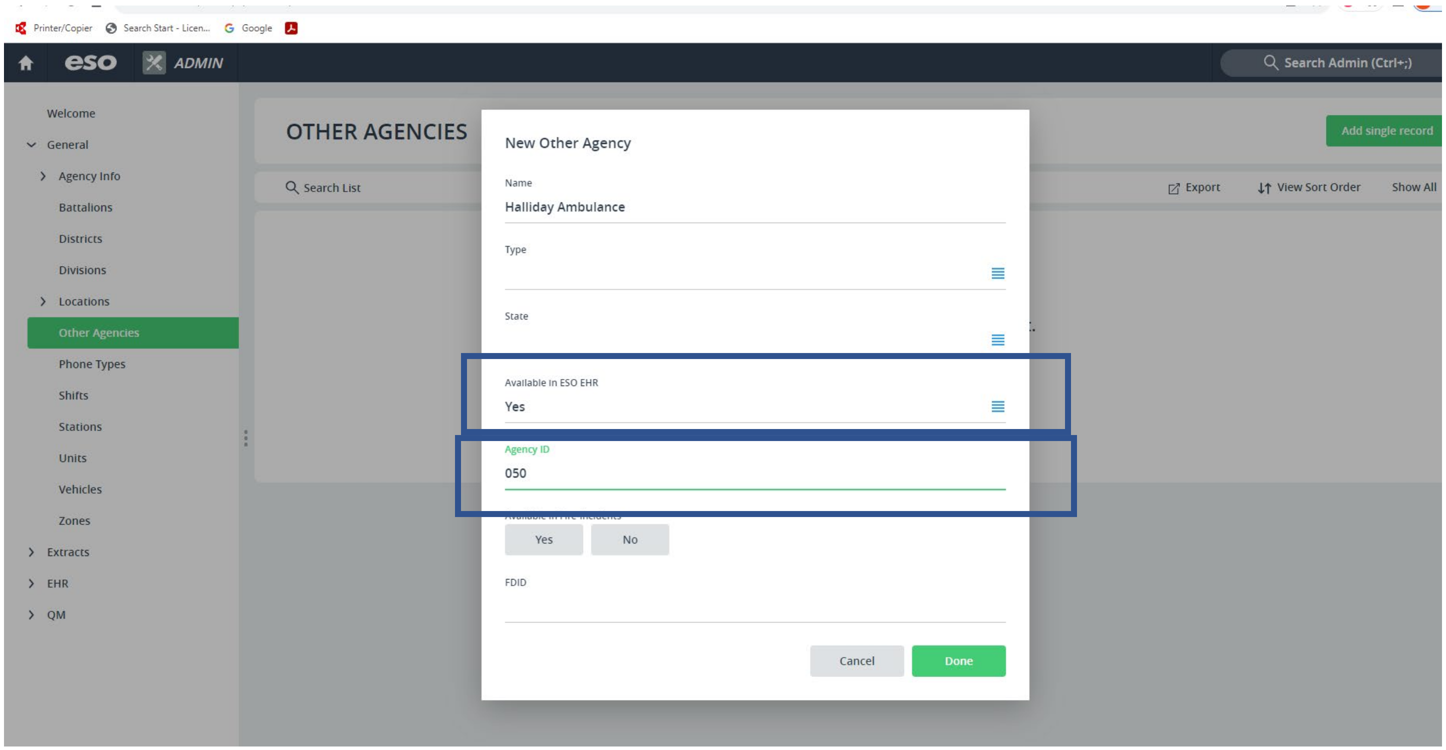
A group of North Dakota EMS Managers met on August 23, 2023. There were questions about how to add agencies or facilities.

Below are the directions for ESO, but the facility and agency codes used would be the same for agencies using a different software vendor.

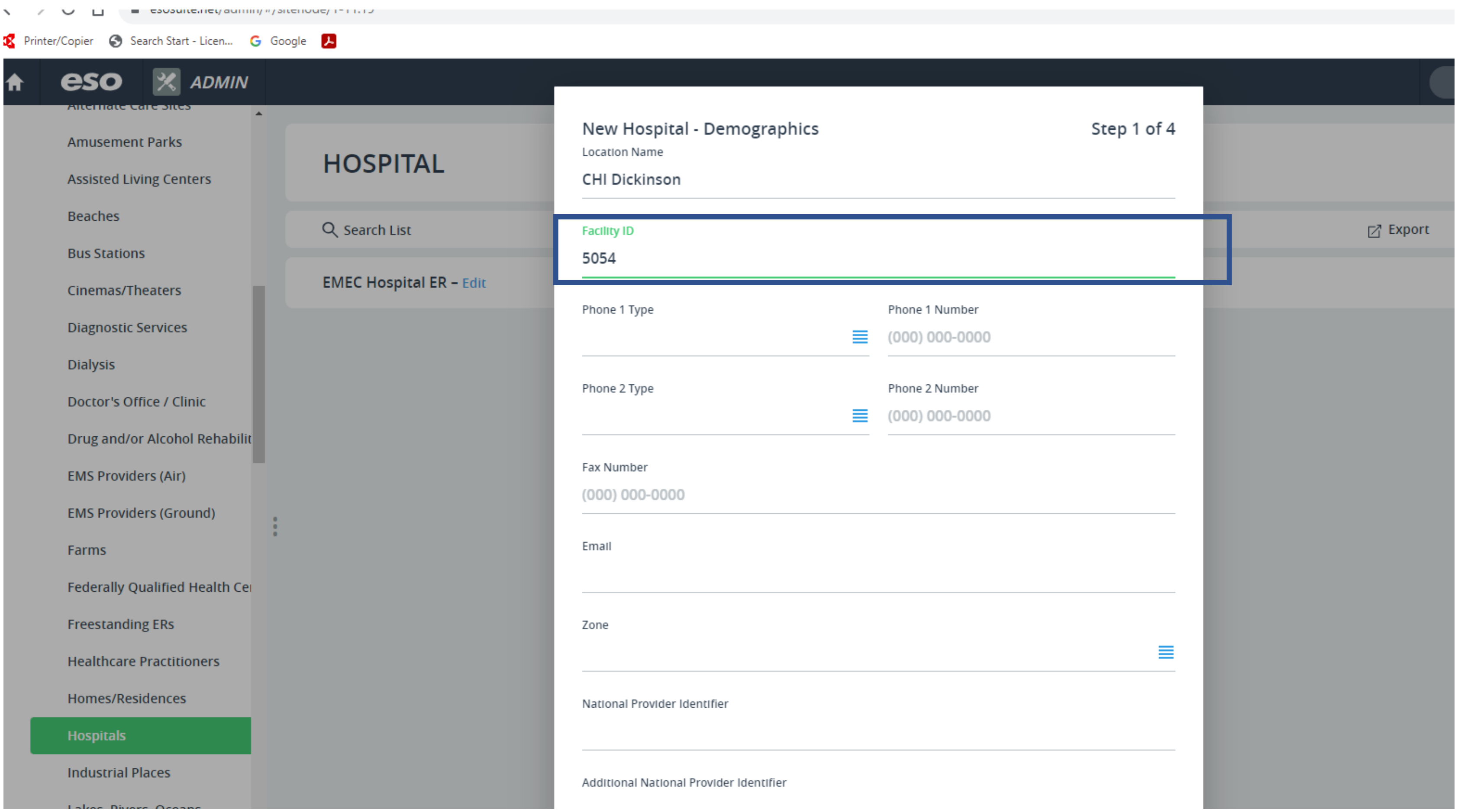
Under the Admin Tab, Click on Other Agencies. Click Available in ESO to Yes and then type in the agency ID. Agency ID's are the license number equal to 3 digits. Here is a list that can be used. Click on ND_Agencies.

https://nemsis.org/state-data-managers/state-map-v3/north-dakota/

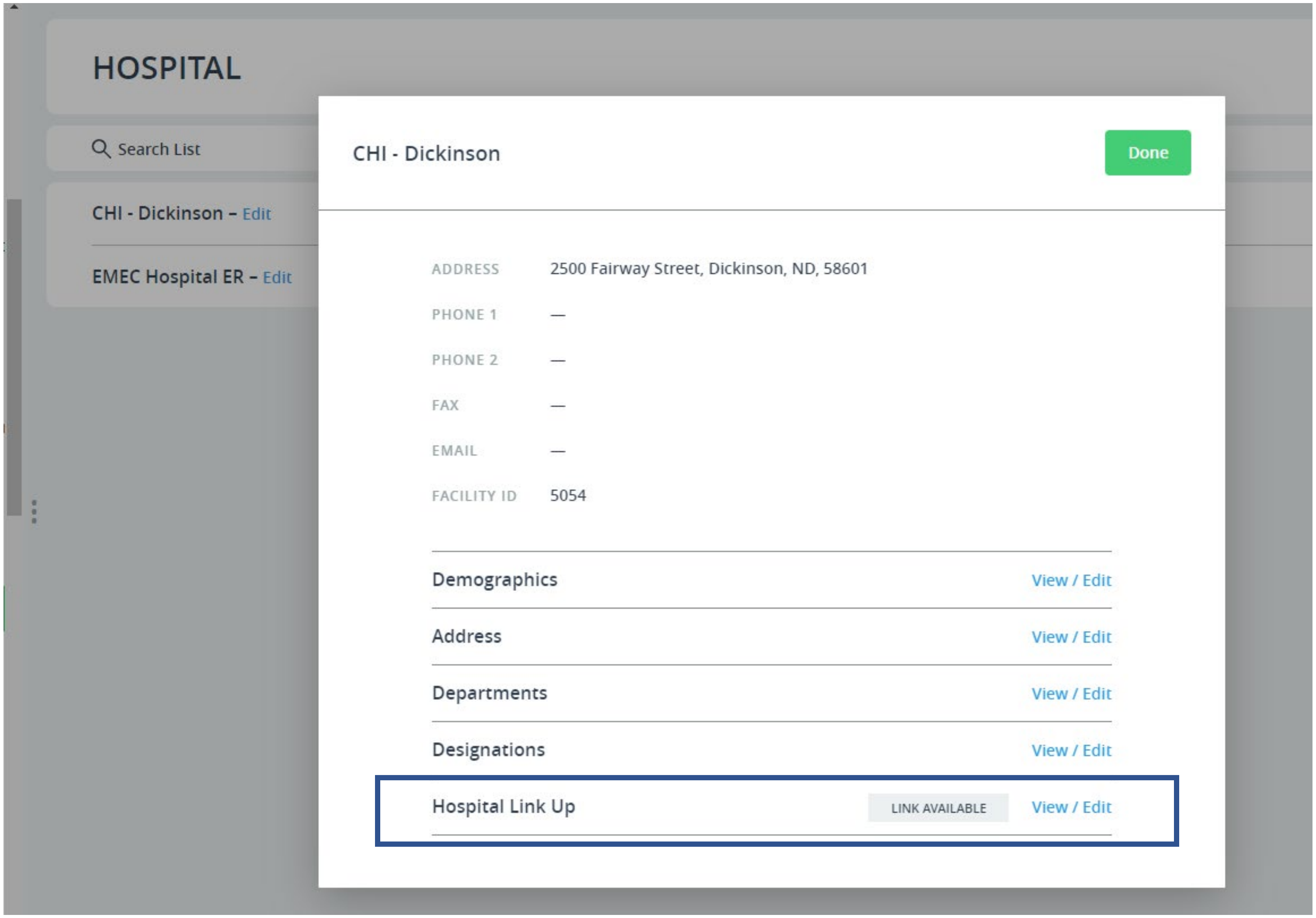
- ND_Agencies.xlsx 2/22/2019
- ND_Facilities.xlsx 12/17/2018



For hospitals, under the Admin Tab, click on Locations then Hospitals. There you can add a hospital but you will need to use the facility location code. This can be found in ND_Facilities.



In ESO EHR, for the hospital to have access to the record in Patient Tracker, the Hospital Link must be made. This can be done after the facility is created.



Excerpt from ESO Training Materials

d. (If Link Available appears) For Hospital Link Up, click View / Edit.

The Hospital Link Up dialog box appears.

e. Read the agreement details for sharing patient data with the hospital.

f. For Linked Hospital, click the field or the list icon to the right of the field, then select the appropriate single option from the menu that appears.

The menu contains all the hospitals that ESO has set up in the ESO Suite, that have the same county and zip code as the location you are creating the linkup for.

g. Click OK.

h. Click Done.

The Hospital Linked label appears in the location's details dialog box.

If a medic using EHR selects the linked hospital in an patient care record, then that patient care report becomes available in the hospital's EHR system to view as an incoming patient.

The hospital can view the record whether it has a draft or locked status, until you deactivate that location in the Admin module.

https://www.esosuite.net/EsoSuite/TrainingMaterials/Administration/Content/Admin/General/04_CreateALinkUp.htm?Highlight=hospital%20linkup (Login required)