Advisory 19-04 Mobile Stroke Unit Guidelines

To: All EMS Agencies/Providers

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Regional Medical Director

Date: April 16, 2019

As requested by EMS agencies, the Regional Medical Director was asked to develop a set of guidelines for agencies and providers when interfacing with the UR Mobile Stroke Unit (MSU). After community feedback and endorsement by the REMAC as being medically appropriate, they are attached and represent best practices as well as clinical and operational guidelines.

Dispatch processes will be developed separately through the respective County dispatch center and the UR MSU operator, AMR Rochester. As we learn more about the operational and clinical capabilities of the MSU, these guidelines will be updated accordingly.

With questions, do not hesitate to contact your Agency Medical Director or the Division of Prehospital Medicine at the MLREMS Program Agency.

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Monroe-Livingston Regional EMS System
Guidelines for Interfacing with the Mobile Stroke Unit

The following represents both clinical and operational guidelines for ambulance services interfacing with the UR Medicine Mobile Stroke Unit (MSU).

Additional Asset

The MSU is similar to any other specialized asset (RSI, Tox-Medic, or EMS Physician) that may enhance patient care. Like those specialized assets, the presence or absence of that asset does not, in and of itself, define the standard of care for the community.

Dispatch and Response

The MSU may either be automatically dual-dispatched for a report of a stroke (EMD Card 28) at the discretion and written authorization of an ambulance service to its respective dispatch center, or be requested by a field unit for a patient with signs and symptoms consistent with a stroke and a last known well of less than 24 hours.

The MSU will always be dual-dispatched with the closest appropriate primary responding ambulance and will not supplant the responsibility of the closest appropriate ambulance to respond to a call for service.

The primary responding ambulance should target a scene time of less than ten minutes and strive to meet all treatment goals outlined in the MLREMS Cerebrovascular Accident Care Bundle, inclusive of blood glucose determination and vascular access with no less than a 20g catheter.

If the MSU's estimated time to arrival at the scene is more than the on-scene primary responding ambulance unit ETA to the nearest stroke center, it is appropriate to cancel the MSU.

At any time the primary responding ambulance may cancel the MSU. The following conditions may suggest that the patient would benefit by direct transport to the appropriate Emergency Department and cancellation of the MSU by the primary responding ambulance is reasonable:

- The patient was found to have a non-stroke cause for their symptoms (eg hypoglycemia).
- The patient is in cardiac arrest or requires RSI, CPAP, or ventilatory support.
- The time to stroke center is less than the time to MSU rendezvous.
- The rendezvous point is less than ten minutes from the destination facility.
- An appropriately safe rendezvous site cannot identified.

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Communications

The UR MSU is equipped with a radio capable of Monroe County Fire and EMS Frequencies. Any request for the MSU should be routed through the requestors dispatch center to AMR Rochester. AMR Rochester will confirm availability and dispatch the MSU to the location of the request. The MSU and/or AMR Rochester will facilitate communication with the primary responding unit including at time of dispatch the starting location of the MSU and the ETA to the requestors location. It is expected that the MSU will be able to maintain direct, two-way communications to the requesting unit in order to facilitate response and as appropriate, intercept. Dispatch centers are strongly encouraged to have a written protocol for dispatch and communication that are developed collaboratively between the UR MSU, AMR Rochester, the dispatch center, and primary ambulance services.

MSU Arrival On Scene

Once the MSU arrives on scene, MSU staff will obtain report, confer with the primary responding ambulance, and perform a patient assessment with the aid of a TeleStroke physician. Any questions of the patient/family as it relates to the services of the MSU should be deferred to the MSU staff.

- If evidence of focal neurologic deficit within 24 hours, and the patient is amenable to transport, the patient is moved to the MSU for care.
- If no evidence of focal neurologic deficit, the patient remains with the primary responding ambulance for care, the primary responding ambulance provides care pursuant to regional standard, and the MSU goes back in service.

Should the MSU arrive before the primary responding ambulance, the MSU is expected to serve as a first response unit and provide necessary care until the primary responding ambulance arrives if the patient is not presenting with a stroke.

Transferring Care to the MSU

Should the primary responding ambulance and MSU agree that the patient is presenting with signs/symptoms of a focal neurologic deficit within 24 hours, the primary responding ambulance will transfer care to the MSU using the regionally accepted MIST format. As the determination of an acute neurological deficit is being made by the MSU staff consulting with a physician experienced in the care of stroke patients via Telemedicine, any disagreement between the primary ambulance unit and the MSU should result in care being transferred to the MSU to err on the side of the patient's acute needs, and a patient care concern can be referred to the MLREMS Patient Safety Committee for evaluation after care has been transferred.

Once a verbal report has been given, the primary responding ambulance will aid in extrication (if necessary) and loading of the patient consistent with usual practice for the transfer of patient care to another transporting unit. The primary responding ambulance should document all assessment findings and care rendered to the point of patient handoff with the MSU.

Should the patient already be on the primary ambulance unit' s gurney, both primary ambulance and MSU gurney's will be brought next to each other on a solid, flat, level surface. Both gurneys will be locked/secure in place with no less than two persons on either side of each gurney. The MSU will provide a slide board or hover mat to assist with transfer of the patient to the MSU gurney using standard practices.

Should the MSU be intercepting a transporting primary ambulance, the MSU and requesting unit should rendezvous at a solid, flat, level surface away from heavy vehicle traffic (eg parking lot). Roadways are inherently unsafe and should not be used. The MSU staff will then board the primary ambulance to obtain report and perform an assessment. If the assessment reveals no need for the MSU, the primary ambulance continues transport while the MSU returns to service. If the assessment reveals an acute focal neurologic deficit less than 24 hours old, the patient will be removed from the ambulance on its gurney and the above transfer process to the MSU will occur.

Once patient care has been transferred to the MSU, the primary responding ambulance may go back in service pursuant to agency policy.

It is the MSU's responsibility to provide information to the patient to allow an informed decision regarding their care.

MSU Level of Care

The MSU will function as an ALS Ambulance, abiding by all local patient care protocols. Prehospital care is provided to the ALS level by a paramedic.

Patient assessments are done by the entire MSU team, which is inclusive of an EMT, Paramedic, CT Technician, Critical Care Nurse, and Telestroke Physician. The role of the physician is to determine the likelihood of the presentation being consistent with a stroke and thus recommending the patient's movement to the MSU for diagnostic and potential therapeutic interventions.

The Telestroke Physician does NOT provide direct on-line medical control to the primary ambulance unit.

Once a patient is identified as having a potential stroke, the patient is moved to the MSU where assessments continue while CT imaging is performed. Any initiation of medications outside the scope of practice of the paramedic (eg: tPA, labetalol, hydralazine, nicardipine, K-Centra) is done through direct verbal order from the Telestroke Physician to the MSU Nurse.

The MSU Paramedic will operate within the MLREMS Scope of Practice at all times, inclusive of protocols for agitation, nausea, seizures, etc. Only if the MSU Paramedic is a MLREMS-Credentialed RSI Paramedic may they perform RSI. Should the patient require RSI and the patient has not yet been transferred to the MSU, the primary responding ambulance should initiate transport and request or perform RSI while en route to the nearest appropriate facility. Should the patient require RSI and the patient is aboard the MSU, the RSI Paramedic may perform RSI aboard the MSU pursuant to regional policy and procedure and in most cases will accompany the patient to the appropriate hospital.

Destination Determination

If the patient on the primary unit does not meet any indication for transfer to the MSU, then the patient remains with the primary ambulance unit and standard patient destination determinations apply. Specifically, the MSU evaluation of a patient does not require the patient to be transported to a UR Medicine hospital. The patient may be transported to the appropriate hospital based on the patient's clinical needs and preferences. The primary ambulance unit will then provide usual care and make notifications per current procedures.

If the patient is transferred to the MSU, the MSU will transfer the patient to the appropriate facility based on clinical condition and patient preference. A patient with findings suggestive of a large vessel occlusion stroke should be transported to the nearest facility capable of mechanical thrombectomy (SMH or RGH). All other patients may be transported to the nearest appropriate facility based on the patient's preference. The MSU will then provide usual care and make notifications per current procedures.

Approved April 15, 2019

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