



### Advisory 19-05 Updated Care Bundles

To: All EMS Agencies

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At their April 15<sup>th</sup> meeting, the REMAC approved additional care bundles as a resource for providers and agencies as they engage in performance improvement activities. These are attached and updated on the MLREMS website and include Suspected Opioid Overdose, Suspected Mechanical Fall, Orthopedic Injury Immobilization and Syncope.

The Prehospital Care Bundles have been created to provide a simple framework to help EMS providers identify the most critical elements when caring for a patient. These bundles do not replace protocol, but are designed to assist quality assurance and performance evaluations as we work collectively to optimize the delivery of prehospital medicine. As the science and evidence changes, so will these care bundles and the Program Agency welcomes suggestions for change and requests for future Care Bundles focusing on specific areas of patient care.

With any questions, please do not hesitate to contact this office.

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## Prehospital Care Bundles

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SOUND CLINICAL JUDGEMENT.**



# Syncope Care Bundle

## Syncope

Metric	Goal
Spinal Motion Restriction (SMR)	Implement SMR if indicated based on the history, mechanism of injury, and physical examination
Blood Glucose	Obtained and documented
EKG	Obtained and documented
Vascular Access	Obtained during encounter
Etiology Consideration	Documented consideration of the most likely reason for the loss of consciousness

## Theory/Evidence

### Spinal Motion Restriction (SMR)

- Spinal motion restriction should be performed when indicated and documented when not. In the setting of syncope, SMR should be considered for any resultant trauma (falls, MVC's, etc).

### Blood Glucose

- A blood glucose should be performed on all patients who have experienced syncope to exclude symptomatic hypoglycemia as an etiology of the patient's presentation.

### EKG

- A 12-lead EKG should be obtained and documented on patients who have experienced syncope to exclude active dysrhythmia or ischemia as an etiology of the patient's presentation.

### Vascular Access

- Establishing vascular access in patients who have experienced syncope allows for the ability to emergently administer medications or fluid resuscitate, when indicated.

### Etiology Consideration

- Consideration and documentation of the suspected etiology of the patient's syncope will help guide the provider's evaluation, treatment, and transport decisions.



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# Suspected Opioid Overdose Care Bundle

## Suspected Opioid Overdose

Metric	Goal
Manage the Airway	Maintain patent airway with adjunct as necessary
Support Breathing	Support ventilation and oxygenation as necessary
Support Circulation	Support circulation as necessary; start CPR when indicated
Naloxone Administration	Consider naloxone administration if inadequate respiratory effort
Re-assess respiratory effort	Consider re-dosing naloxone per protocol if respiratory effort remains compromised
Suicide Screening	Assess intent of opioid overdose

### Theory/Evidence

#### Manage the Airway

- Opioid overdoses cause apnea and maintaining a patent airway is the first essential step in supporting respiration.

#### Support Breathing

- While maintaining a patent airway, ventilate and oxygenate per protocol.

#### Support Circulation

- Support airway, breathing and circulation before administering naloxone.

#### Naloxone Administration

- Administer to reverse the respiratory depression of the suspected opioid overdose. The goal of naloxone administration is to restore adequate, spontaneous respiratory effort, not to regain consciousness.

#### Re-assess Respiratory Effort

- Re-evaluate respiratory effort after the administration of naloxone to determine if additional doses are indicated. The duration of action of naloxone is shorter than some opioids.

#### Suicide Screening

- Patients who are suicidal must be transported to the hospital for appropriate psychiatric evaluation; involve law enforcement as appropriate.



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# Suspected Mechanical Fall Care Bundle

## Suspected Mechanical Fall

Metric	Goal
Spinal Motion Restriction (SMR)	Implement SMR if indicated based on the history, mechanism of injury, and physical examination
Assessment of Prodromal Symptoms	Assess for evidence of symptoms prior to the suspected mechanical fall which would indicate that the fall was not purely mechanical in etiology
Cincinnati Stroke Scale	Evaluated and documented
Blood Thinning and/or Anti-Platelet Medications	Documented use (or pertinent negative non-use) of blood thinning and/or anti-platelet medications

## Theory/Evidence

### Spinal Motion Restriction (SMR)

- Spinal motion restriction should be performed when indicated and documented when not. In the setting of syncope, SMR should be considered for any resultant trauma (falls, MVC's, etc).

### Assessment of Prodromal Symptoms

- Symptoms prior to falling can indicate a medical etiology of a suspected mechanical fall. Palpitations, dizziness, light-headedness, chest pain, and dyspnea are all examples of prodromal symptoms which may necessitate workup or treatments (e.g. blood glucose, EKG, vascular access, etc). A description of the fall should also be included in prehospital documentation.

### Cincinnati Stroke Scale

- A stroke may present as a suspected mechanical fall especially in a patient with a history of stroke, TIA, or with other vascular risk factors. Screening mechanical fall patients with the Cincinnati Stroke Scale aids in identifying these patients.

### Blood Thinning Medications

- The use of blood thinning and/or anti-platelet medications increases the risk of internal and intracranial bleeding as a result of a mechanical fall. Patients taking blood thinning medications who experience a mechanical fall should be transported to the emergency department for more complete evaluation. Blood thinning medications include Coumadin (Warfarin); Apixaban (Eliquis), Dabigatran (Pradaxa) and Rivaroxaban (Xarelto). Anti-platelet medications include Aspirin, Clopidogrel (Plavix), Edoxaban (Savaysa) and Ticagrelor (Brilinta).



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# Orthopedic Injury Immobilization Care Bundle

## Orthopedic Injury Immobilization

Metric	Goal
Assess neurovascular status	Assess CMS distal to the injury
Focused Physical Exam	Examine joints above and below the injury
Immobilize the Injury	Apply immobilization that limits the movement of the joints above and below the injury
Re-assess neurovascular status	Assess CMS in the extremity distal to the injury following immobilization
Analgesia	Provide BLS or ALS analgesic interventions
Spinal Motion Restriction	Implement SMR if indicated based on the history, mechanism of injury, and physical examination

### Theory/Evidence

#### Assess Neurovascular Status

- Absence of pulse or neurovascular compromise may require immediate alignment of the injury to restore adequate blood flow.

#### Focused Physical Exam

- Examine the injury, and joints, above and below the injury to determine if there are any further injuries.

#### Immobilize

- Use appropriate means (anatomic splint, board splint, traction splint, vacuum splint, sling, etc) to limit the movement of the joints above and below the injury to limit further injury, control pain, and maintain a neurovascularly intact extremity.

#### Re-asses Neurovascular Status

- Ensure the extremity has not become neurovascularly compromised as a result of immobilization.

#### Analgesia

- Provide BLS (Ice pack, position of comfort, distraction, etc) or if unsuccessful, ALS (ketorolac, opioid analgesia, etc) interventions.

#### Spinal Motion Restriction

- Spinal motion restriction should be performed when indicated and documented when not. Orthopedic injuries can be distractions from pathologic neck or back pain.