



Advisory 24-05 Post Return of Spontaneous Circulation Care Bundle

To: All EMS Agencies

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The first few minutes after EMS achieves ROSC (Return of Spontaneous Circulation) are critical to maximizing patient outcome. The Regional Medical Emergency Advisory Committee approved a new regional care bundle as a resource for providers and agencies as they engage in performance improvement activities to improve care of patients post cardiac arrest and maximize efforts to prevent rearrest.

MLREMS 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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Return of Spontaneous Circulation (ROSC)

Care Bundle

ROSC Management

Metric	Goal
Elevate Head of Bed	Head of bed at 30 degrees
Avoid Hyperventilation	Ventilation rate ≤ 12 /min and EtCO ₂ of 35-45 mmHg
MAP >65 mmHg	Maintain MAP >65 mmHg with push-dose or continuous infusion pressors as necessary
12-Lead EKG	Obtained around 8 minutes post-ROSC
Hospital Prenotification	Performed as soon as practicable

Theory/Evidence

Elevate Head of Bed

- In the absence of the need for spinal motion restriction or inherent limitations due to automated compression device placement, a post-ROSC patient should have the head of the bed elevated to 30 degrees regardless of whether they are intubated or not. This position will prevent the risk of aspiration, and support optimal cerebral blood flow.

Avoid Hyperventilation

- Avoiding hyperventilation by providing a ventilation rate of ≤ 12 /min and targeting EtCO₂ to 35-45 mmHg is essential to reduce cerebral vasoconstriction in the post-ROSC patient.

MAP > 65 mmHg

- In the post-ROSC patient, maintenance of MAP >65 is essential for both coronary artery and cerebral perfusion. Push dose epinephrine or continuous infusion (norepinephrine or epinephrine) should be used to maintain MAP >65 mmHg.

12-Lead EKG

- Obtaining a 12-lead EKG is essential in identifying a potential etiology for the arrest (eg STEMI). Immediately obtaining a 12 lead after ROSC is associated with a high false-positive STEMI rate, so 12 lead EKGs should be obtained around 8 minutes post-ROSC to minimize false positives while still obtaining a timely EKG.

Hospital Prenotification

- Timely prehospital notification aids in facility preparation for the post-ROSC patient.