



# Excellence in Prehospital Injury Care in Montana

Emergency Medical Services & Trauma Systems Section

Department of Public Health & Human Services

## EPIC-MT AGENCY CERTIFICATION

*A Voluntary Recognition Program*

### MISSION

“To reduce death and disability of Montanans who experience traumatic brain injury (TBI) through evidence-based best practices, education, and continuous quality improvement.”

### BACKGROUND

Each year, over 300 Montanans die from TBI and another 800 are hospitalized. Nationally, TBI leads to 2.2 million emergency department visits, 280,000 hospitalizations and 52,000 deaths. Montana has an elevated injury and death rate from TBI compared to the nation. The Emergency Medical Services and Trauma Systems Section (EMSTS), in partnership with Montana’s EMS providers and trauma receiving centers is moving forward with participating in the EPIC protocol in attempt to improve the quality of care, and outcomes, that people suffering from TBI receive.

Excellence in Prehospital Injury Care (EPIC) for TBI is a treatment protocol and quality improvement initiative. In Arizona, where the program began, the protocol demonstrated a doubling of survival to discharge for patients with severe TBI and a tripling of survival for intubated patients with severe TBI. In children with severe TBI, the adjusted odds of survival are seven-fold. Similar results have been achieved by partner agencies across the nation.

### AGENCY CERTIFICATION

To be an EPIC-MT Certified agency, an EMS/hospital provider agency is making a commitment to meet minimum training standards, maintain necessary equipment, ensure adherence to the treatment protocol, and participate in submission of traumatic brain injury (TBI) patient care and outcome related data to the EMSTS Section. These factors are imperative in the success of the EPIC-MT program and improved outcomes of TBI patients across the state.


### REQUIREMENTS

1. Agency’s Medical Director authorizes us of the EPIC-MT treatment protocol for use in patients with suspected traumatic brain injury.
2. Agency agrees to train at least 80% of their EMS/hospital providers to the EPIC-MT Guidelines and provide annual (at minimum) refresher trainings/drills.
3. Front line vehicles will be equipped with at least one adult and one pediatric pressure-controlled bag-valve mask with ventilation rate timing light (i.e., SmartBag).

4. A front-line EMS vehicle is a vehicle that is fully ready to respond to an EMS call without moving equipment from another vehicle. This generally excludes command vehicles, utility trucks, and other support vehicles.
5. Agency actively uses the State ePCR system (ImageTrend) or submits EMS/trauma data to the EMSTS or Trauma Registry.

## BENEFITS

- ★ Recognition as an EPIC-MT Certified Agency.
- ★ Assistance with initial supply of pressure-controlled bag valve masks with ventilation rate timers for front line vehicles.
- ★ Inclusion in EPIC-MT related patient outcome and continuous quality improvement (CQI) reporting.
- ★ Knowing you are using current, evidence-based best practice to reduce morbidity and mortality for patients with TBI.

EPIC-MT AGENCY CERTIFICATION APPLICATION	AGENCY LINK
<p style="text-align: center;">To complete the application, please visit this link</p> <div style="text-align: center; margin: 10px 0;"> <a href="#">EPIC Form</a> </div> <p>The two-part application includes the following:</p> <ul style="list-style-type: none"> <li>✓ Chief or EMS Director commitment to meeting the program requirements</li> <li>✓ Medical Director Authorization to use the EPIC protocol</li> </ul> <p>Both parts may be completed together, or the Chief/EMS Director may complete their portion and forward their completed form to the Medical Director for authorization.</p>	<div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center; background-color: black; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">             SCAN ME           </div>

## CQI PERFORMANCE/PROCESS INDICATORS

Data for the following performance and process indicators is abstracted from the ImageTrend EMS database using self-reporting information on the EPIC-MT Worksheet data collection tool.

The following performance and process indicators have been selected for review in order to assess prehospital utilization of the EPIC guidelines:

1. Communication & Delegation: The potential for TBI is identified early in scene care and communicated to the team.

- a. A team member is assigned to the oxygen administration role within 1 minute of arrival at patient.
2. Oxygen Administration: High-flow oxygen is administered within 1 minute of arrival at patient.
  - a. Oxygen saturation is maintained at or above 92%.
  - b. Oxygen saturation is maintained at or above 90%.
3. Positive Pressure Ventilation: In patients receiving positive pressure ventilation, hyperventilation (ETCO<sub>2</sub> <35mmHg) is avoided.
  - a. If SGA/ETI airway is placed, hypoxia (SPO<sub>2</sub> <90%) does not occur during the intubation period.
4. Fluid Resuscitation: SBP is maintained at or above 90mmHg.
  - a. In patients where SBP falls below 90mmHg, IV/IO was placed within 3 minutes of arrival at patient and aggressive fluid resuscitation given.
5. Blood Glucose: Blood glucose value is documented.
  - a. Dextrose is administered for findings less than 70mg/dl.

For EPIC-MT Certified agencies, the performance/process indicators' performance threshold is 80% (minimum). These indicators shall be monitored for the duration of the EPIC-MT project, or until the thresholds have been met for a minimum of 3 consecutive months. An optional CQI tracking and trending tool (below) is available to assist agencies with monitoring application of the EPIC-MT protocols.

## EPIC-MT CQI TRACKING & TRENDING TOOL

This CQI tool is used to track and trend performance improvement activities related to the treatment of patients with suspected TBI.

INDICATOR	THOLD	MO 1	MO 2	MO 3	QTR
Suspected TBI Patients (N)	NA	#			
1. <b>Communication &amp; Delegation:</b> TM assigned to O2 admin role ≤ 1 min of arrival at pt.	80%	% ##	% ##	% ##	% ##
a. <b>V-EMT Role:</b> O2 admin role assigned < 1 min of arrival at pt.	80%	% ##	% ##	% ##	% ##
2. <b>Oxygen Administration:</b> High-flow oxygen admin ≤ 1 min of arrival at pt.	80%	% ##	% ##	% ##	% ##
a. <b>SPO2 maintained ≥ 92%</b>	NA	% ##	% ##	% ##	% ##
b. <b>SPO2 maintained ≥ 90%</b>	NA	% ##	% ##	% ##	% ##
3. <b>Positive Pressure Ventilation:</b> In pts with PPV hyperventilation is avoided (ETCO2 < 35mmHg).	80%	% ##	% ##	% ##	% ##
a. <b>SGA/ETI:</b> hypoxia (SPO2 ≥ 90%) does not occur during intubation.	80%	% ##	% ##	% ##	% ##
4. <b>Fluid Resuscitation:</b> SBP is maintained ≥ 90mmHg.	NA	% ##	% ##	% ##	% ##
a. <b>IV/IO ≤ 3 min if SBP &lt;90mmHg</b>	80%	% ##	% ##	% ##	% ##
5. <b>Blood Glucose:</b> BG value documented in vitals.	80%	% ##	% ##	% ##	% ##
a. <b>Dextrose admin if &lt; 70mg/dl</b>	80%	% ##	% ##	% ##	% ##
<b>Summary of Findings</b>					
<b>Corrective Action(s) Taken</b>					
<b>Effectiveness of Corrective Action(s)</b>					
<b>Recommendation(s)</b>					

