“Best Practice” is an attempt to define a treatment that has less than full scientific validation. In many cases, the best practice is not known even though many EMS textbooks and curricula may identify a single or best method. The Montana Board of Medical Examiners will provide guidance to EMT personnel and Medical Directors through the development of best practices for various treatments and or skills. Developed best practices will identify the Boards opinion and recommendations for utilization of the treatment or skill. It will be the responsibility of the Medical Director to incorporate best practices into performance expectations of the EMTs they supervise.

Background:
Excited delirium syndrome (ExDS) is a potentially life-threatening condition in which a person is in a psychotic and extremely agitated state, with psychomotor agitation and often with violent behavior. Mentally, the subject is unable to process rational thoughts or to focus his/her attention. This is not a mere psychiatric behavioral condition but is an extreme condition with neurologic, metabolic and cardiovascular features.

Presentation:
Excited Delirium is characterized by extreme agitation, confusion and hallucinations, erratic behavior, diaphoresis, tachycardia, dilated pupils, hyperthermia, hyper-aggression, unexplained strength and endurance and making unintelligible sounds. They may exhibit behaviors that include clothing shedding, shouting out, and extreme thrashing when restrained. It is often found in correlation with alcohol and illicit drug use (cocaine, amphetamine, hallucinogens), and in those patients with preexisting mental illness.

General Considerations:
The medical director should consider beforehand which medication algorithm will be utilized and counsel providers in advance. In this condition, a person can act erratically enough that he/she becomes a danger to self and to the public. Safety of you and your EMS crew cannot be over emphasized.
Other conditions may cause altered mentation, including hypoglycemia, hypoxia, seizures, head injury, stroke and sepsis. EMS providers must assess for and distinguish the patient with these conditions from the patient with ExDS. Approach patient care with a calm manner. Attempt verbal de-escalation. Remove or limit unnecessary stimulation whenever possible.

Patients who have received multiple rounds of energy from TASERs by law enforcement in order to be subdued may be experiencing ExDS. It is important to coordinate with law enforcement and be prepared to treat once law enforcement gains physical control of the patient. Never transport a patient who is restrained by police without a police officer present who can remove or unlock restraints. Patient should not be “hog-tied” or restrained in a fashion that interferes with the patient’s airway or breathing (such as prone position or “sandwiched”).

Medical Considerations and Treatment:
The patient with ExDS is at risk for sudden cardiovascular collapse, cardiopulmonary arrest and death. They must be closely monitored for evidence of hemodynamic instability or impending collapse. Often a period of cessation of struggle, even without sedation, may immediately precede cardiac arrest.

Patients with signs and symptoms of Excited Delirium (ExD) should not receive DIPHENHYDRAMINE or HALDOL as these drugs may exacerbate already existing hyperthermia or lower seizure threshold. Active cooling should be utilized if elevated body core temperature noted or suspected. The patient should be transported face up or in lateral recumbent position, never prone or face down to avoid positional asphyxia. Sedation drug therapy, though beneficial and appropriate, may increase the risk of airway compromise. Continuous aggressive monitoring of airway and breathing must occur and care rapidly initiated if necessary.

Special Considerations:
In the extremely agitated ExDS patient, IM KETAMINE may be administered to the lateral thigh through clothing. KETAMINE is available in multiple concentrations, increasing the risk of medication dosing errors. KETAMINE 100mg/ml allows for IM usage, but can NOT be administered IV without proper dilution. Rarely, laryngospasm has been noted in KETAMINE administration. Usually this can be treated with high flow O₂, airway maneuvers (e.g. jaw thrust), and positive pressure ventilation. Be prepared to aggressively manage the airway if necessary.

If KETAMINE is utilized, infrequently the patient may experience excess salivation requiring suctioning +/- the administration of ATROPINE. In the patient with ExDS, crystalloid fluids (NS/LR) 10-20ml/kg (up to 2 liters should be administered if the patient is tachycardic and/or hyperthermic. Active cooling of the hyperthermic ExDS patient should be undertaken as soon as possible.

If ExDS patient experiences cardiac arrest, administer SODIUM BICARBONATE (2 amps) during first line treatment and then follow appropriate ACLS algorithm.