PSYCHIATRIC EMERGENCIES
EXCITED DELIRIUM SYNDROME - Addendum

Purpose:
The purpose of this protocol addendum is to provide treatment parameters for the medical management of a subset of psychological emergency patients who present with symptoms suggestive of Excited Delirium Syndrome (ExDS).

Defined:
Excited Delirium Syndrome (ExDS) commonly presents with a request to law enforcement for the management of a person acting hostile, aggressive or violent while displaying symptoms of delirium. Symptoms of ExDS include:

1. **Delusional behavior -** nonsensical speech, auditory or visual hallucinations, confusion or disorientation, paranoia
2. **Pain tolerance** – to the point of not or barely responding to acutely painful situations (Taser)
3. **Tachypnea** – often associated with increased activity but suggestive of acidosis
4. **Sweating** – indicative of catecholamine release
5. **Agitation –** inability to remain still, easily excited
6. **Tactile Hyperthermia** – increased activity and potential metabolic responses
7. **Noncompliance with police**
8. **Lack of tiring** - beyond normal capacities, indicative of drugs or catecholamine release
9. **Unusual strength** – beyond normal capacities, indicative of drugs or catecholamine release
10. **Inappropriately clothed** – often shedding clothing due to hyperthermia
11. **Mirror or glass attraction** (infrequent)

There are several different potential underlying causes including stimulant drug use, psychiatric disease, psychiatric drug withdrawal and metabolic disorders.

Pre-Medical Control
PSAP/Medical Dispatch
If evident from initial caller information that a patient is presenting with symptoms suggestive of ExDS, both law enforcement and medical should be sent to the call. Responders should be instructed to meet near the incident to formulate a take-down and sedation plan.

Law Enforcement

1. Regardless of the underlying cause, there is a high incidence of cardiac arrest in these patients. Request medical very early if the situation is suggestive of ExDS.
2. A coordinated take-down strategy coupled with sedation of the patient is indicated. Arrange a meeting with medical before the take-down if at all possible.
3. Avoid physically engaging the patient, if at all possible, until sufficient resources are at the ready to conduct a quick take-down with immediate sedation.
4. The intense physical struggle during attempts to restrain the patient may exacerbate physical changes which may lead to cardiac arrest.
5. Use of electronic control devices (ECD) for the take-down is appropriate and has not been linked as a cause of cardiac arrest in ExDS. “Controlling under power” should be attempted to minimize the number and duration of ECD applications.

MFR/EMT/SPECIALIST/PARAMEDIC

1. Ensure ALS response
2. Coordinate with on scene law enforcement before any physical patient contact
3. Obtain history when possible and perform a visual patient assessment looking for symptoms of ExDS. If an alternate cause of the behavior is likely, transition to the **Altered Mental Status Protocol**.

PARAMEDIC

1. Following restraint by law enforcement:
    a. Sedation **(Ketamine 5mg/kg IM)**. A safety needle **must** be used – deploy the safety feature as the needle is withdrawn.
2. Obtain temperature
    a. If hyperthermic, provide cooling – ice packs to neck, axilla and groin; fluids to skin
3. Provide fluid bolus of up to 2 L of NS
4. Administer **Sodium Bicarbonate 50mEq/IV**
5. Restrain patient per the **Physical Restraint Procedure** in anticipation of the sedation wearing off.
    a. Do not restrict breathing in any way
    b. Use soft restraints
6. Evaluate for other causes of Altered Mental Status including: **A**lcohol, **E**pilepsy/Seizure, **I**nsulin, **O**verdose, **U**remia/Under dose, **C**ardiac, **H**ypoxia, **E**nvironment, **S**troke, **S**epsis, **T**rauma, **I**ngestion, **P**sych, **P**henothiazines, **S**alicylates
    a. (AEIOU CHESS TIPPS)
7. Monitor EKG, consider 12-lead if any evidence of hyperkalemia (peaked T waves, prolonged PR, widened QRS)

P.R.I.O.R.I.T.Y. M.E.D.I.C.A.L.
P - Psychological issues
R - Recent drug/alcohol use
I - Incoherent thought processes
O - Off (clothes) and sweating
R - Resistant to presence/dialog
T - Tough, super-human strength
Y - Yelling

M - Make an informed decision
E - Enlist backup
D - Disturbance-resolution model
I - Intervene
C - Contain
A - Attend to medical needs
L - Least amount of force necessary

Post-Medical Control:

Possible orders post radio contact:

1. Additional sedation as needed, per **Sedation Procedure.** Benzodiazepines may be indicated if time from ketamine administration to hospital management of patient will be near 30 minutes. Benzodiazepines have been effective in reducing symptoms of emergence reactions.
2. Additional **Sodium Bicarbonate 50mEq** in 500 – 1000mL NS over 20 minutes for s/s of acidosis (expired CO_2 ≤ 29mmHg (expect lower values in the presence of tachypnea), Kussmaul respirations, widened QRS complexes)**
3. **Calcium Chloride 1Gm IV** for hyperkalemia – do not administer through IV running sodium bicarbonate.

** Note – $EtCO_2$ values will decline in a number of physiological conditions including metabolic acidosis, states of poor perfusion (shock), HHNK, pulmonary embolism, etc. Thus, one may see rapid breathing with low CO_2 values: do not assume hyperventilation syndrome before ruling out other causes.