International Association of Chiefs of Police

118th Annual Conference

October, 2011

Chicago, Illinois

The Extremely Agitated Subject: A Multi-Disciplinary Response to a Multi-Faceted Problem

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The Extremely Agitated Subject

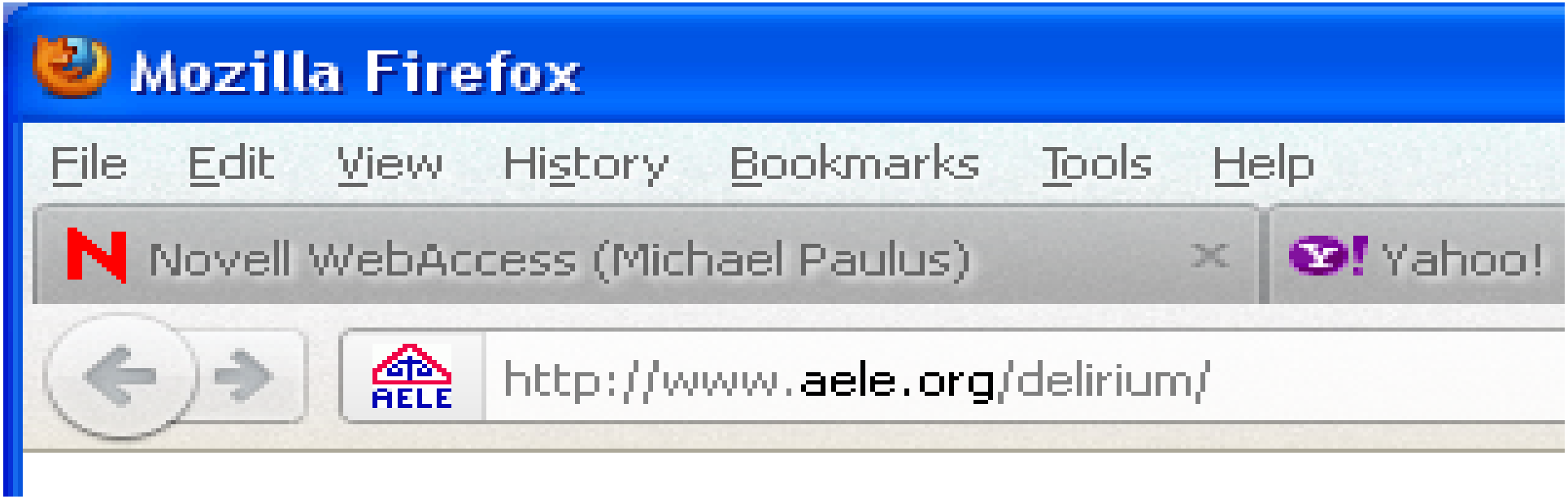
A Multi-Disciplinary Response to a Multi-Faceted Problem

Agenda

- Paradigm shift
- Multi-disciplinary response
- MOCT
- Medical response
- Defending sudden/unexpected sudden deaths
- Questions

http://aele.org/delirium/

- Presentation
- Policies
- Protocols



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Novell WebAccess (Michael Paulus) | Yahoo! | http://www.aele.org/delirium/

http://www.aele.org/delirium/

2011 IACP Annual Conference
Police Physicians Section

The Extremely Agitated Subject

Eric Daigle, Esq., Southington, CT (Moderator)
Lt. Michael Paulus, Champaign, IL, Police Dept.
Thomas Scaggs, M.D., EMS Medical Director, Urbana, IL
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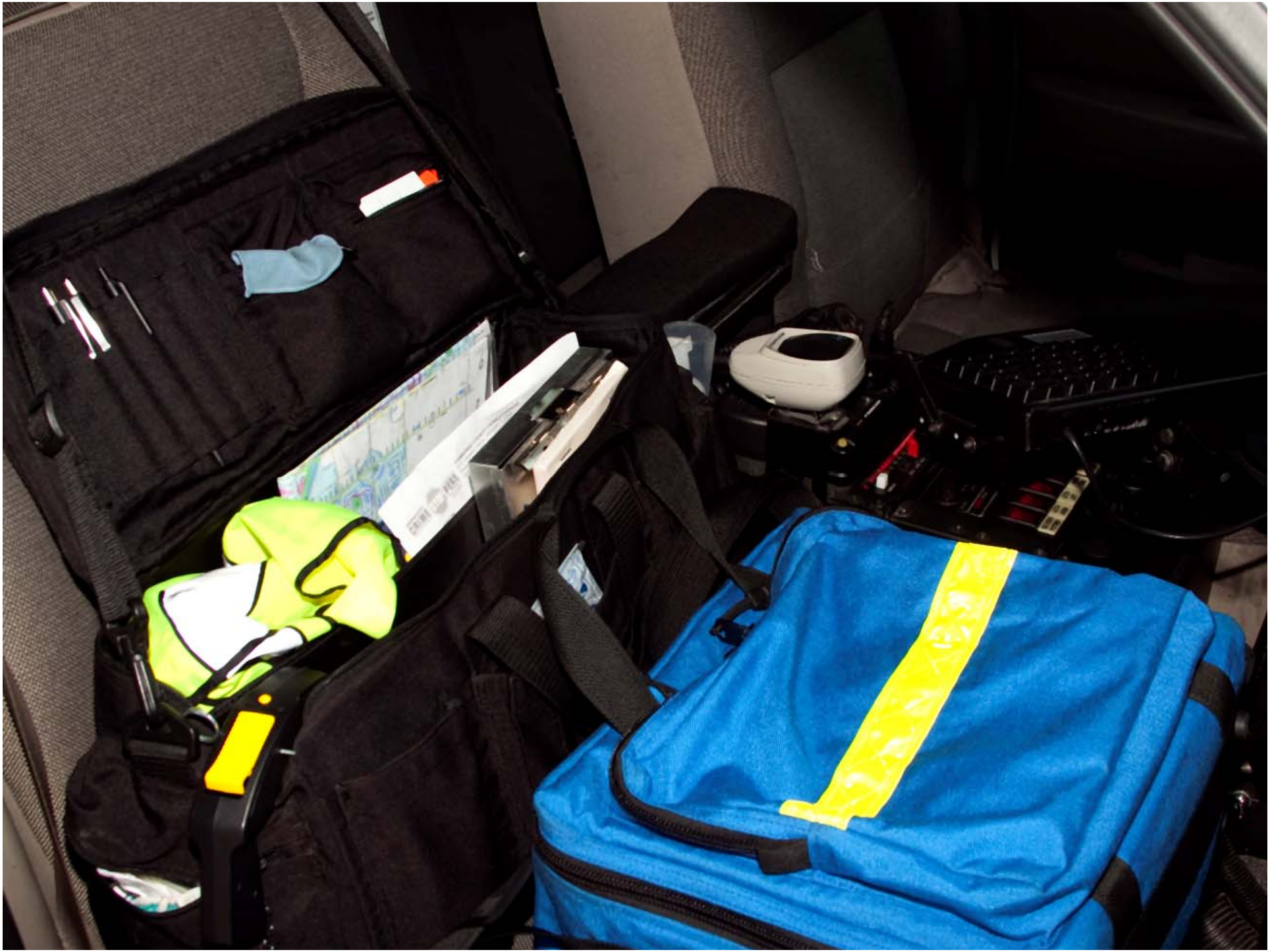
Visual Presentation – The Extremely Agitated Subject

Supplemental documents

- Agitated Patient EMS Run Log
- Champaign, IL, Police: Excited Delirium Response Protocol
- Champaign County, IL: Excited Delirium Policy
- Illinois Sedation Policy: Versed and Ketamine
- Urbana, IL, Police Excited Delirium Policy


Carle
Arrow Ambulance
EMS


MOTOROLA



What's The Problem?

- Imminently life-threatening medical emergency
- Criminal case can wait
- Medical emergency can not

Who Best to Address

- Emergency room physicians
- Advanced life support ambulance
- Law enforcement/Corrections
- Telecommunicators

Who Best to Address

- Mental health professionals
- Coroner
- Medical examiner
- State/District attorney
- Media

Decision Points

- Telecommunications
- Law Enforcement/Corrections
- ALS EMS
- Emergency Room Physicians

Decision Points

- Mental health professionals
- Coroner
- Medical examiner
- State/District attorney
- Media

A Multi-Disciplinary Protocol

- Dispatcher sends Law Enforcement, EMS, and Fire Rescue
- Law Enforcement wait to make contact, if possible
- Law Enforcement and EMS develop capture plan

A Multi-Disciplinary Protocol

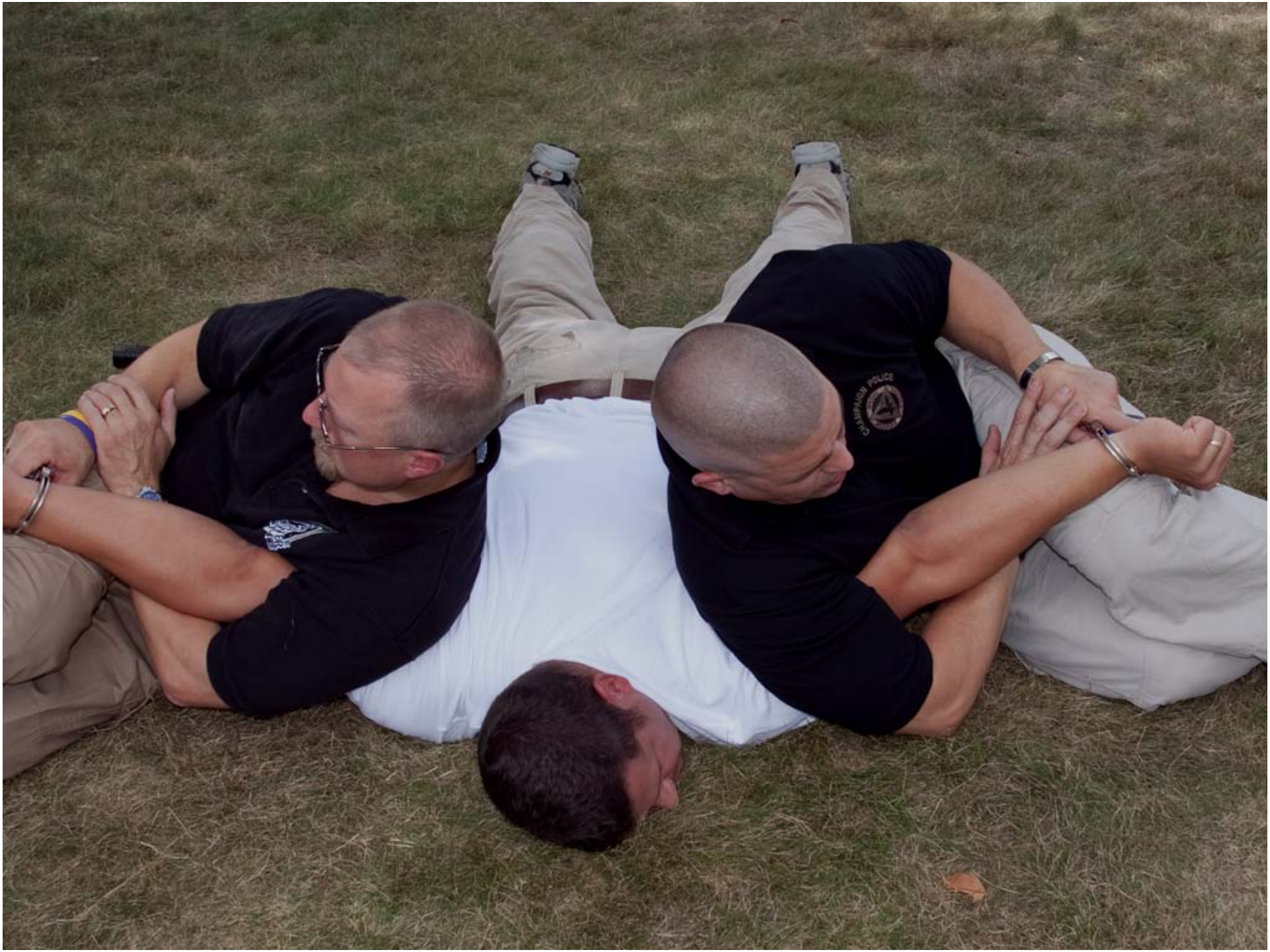
- Control subject by MOCT
- Sedation by EMS according to protocol
- Restrain using multiple handcuffs and leg hobble

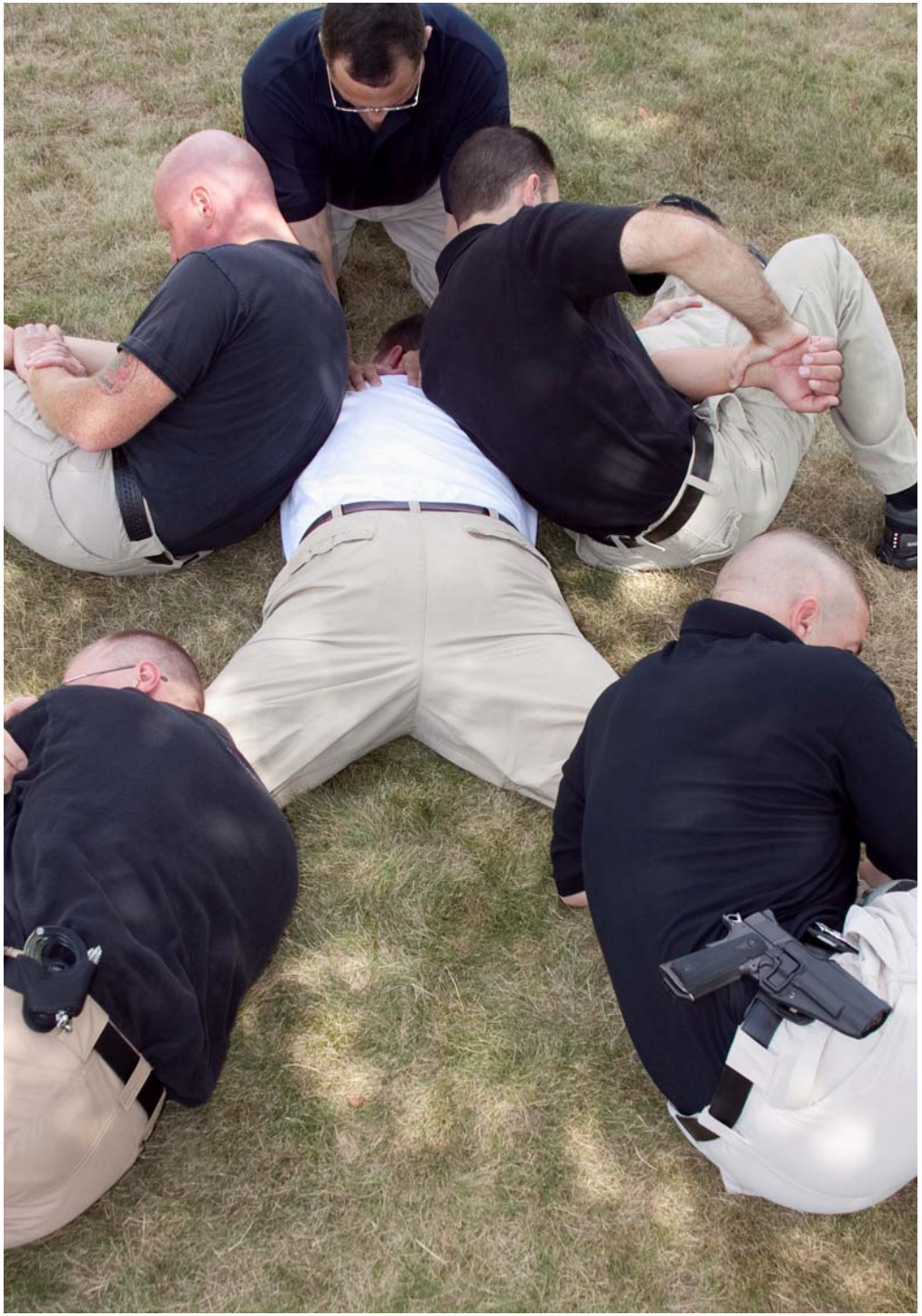
A Multi-Disciplinary Protocol

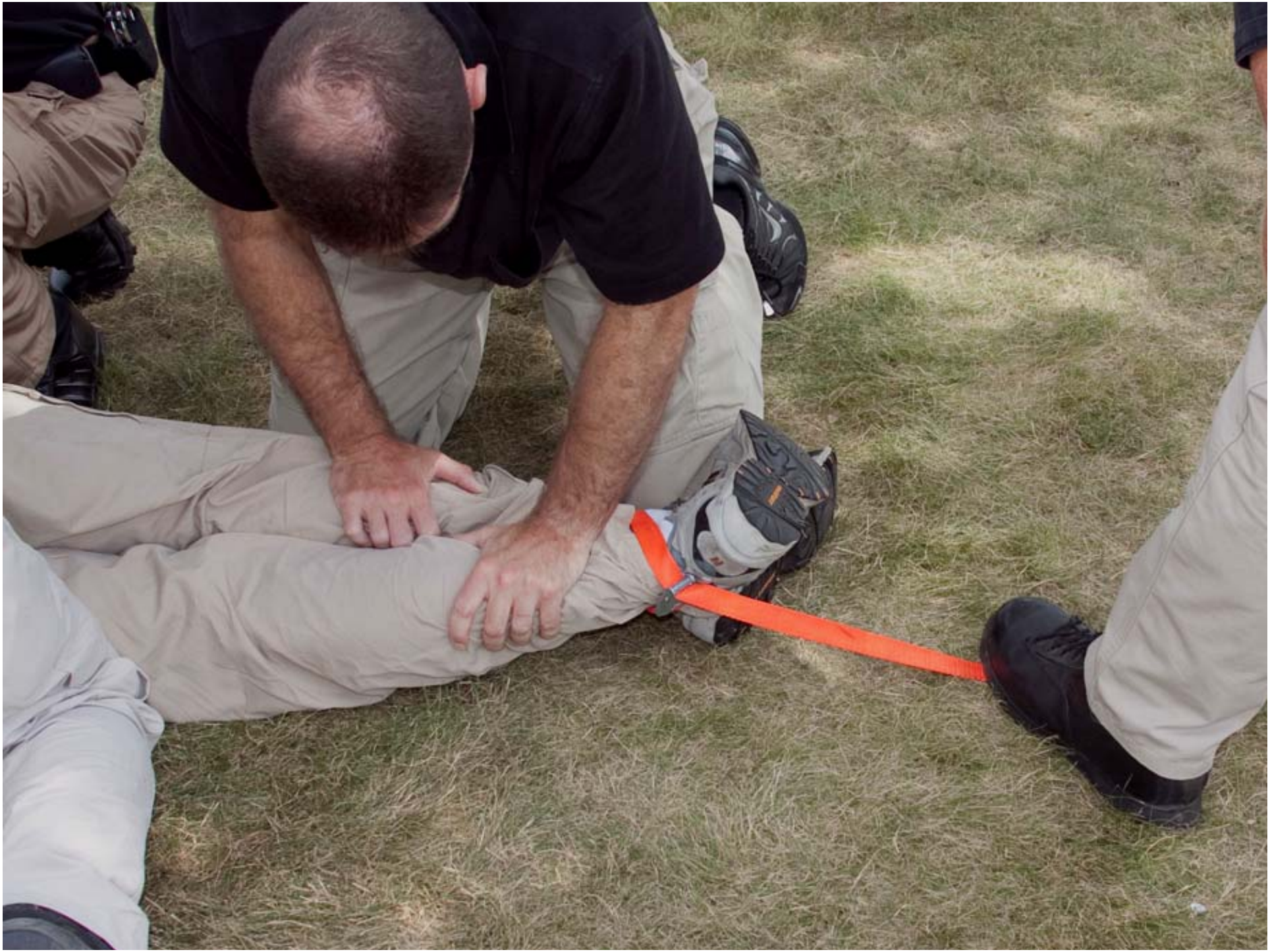
- Subject loaded into ambulance
- Law Enforcement rides with EMS
- Document incident

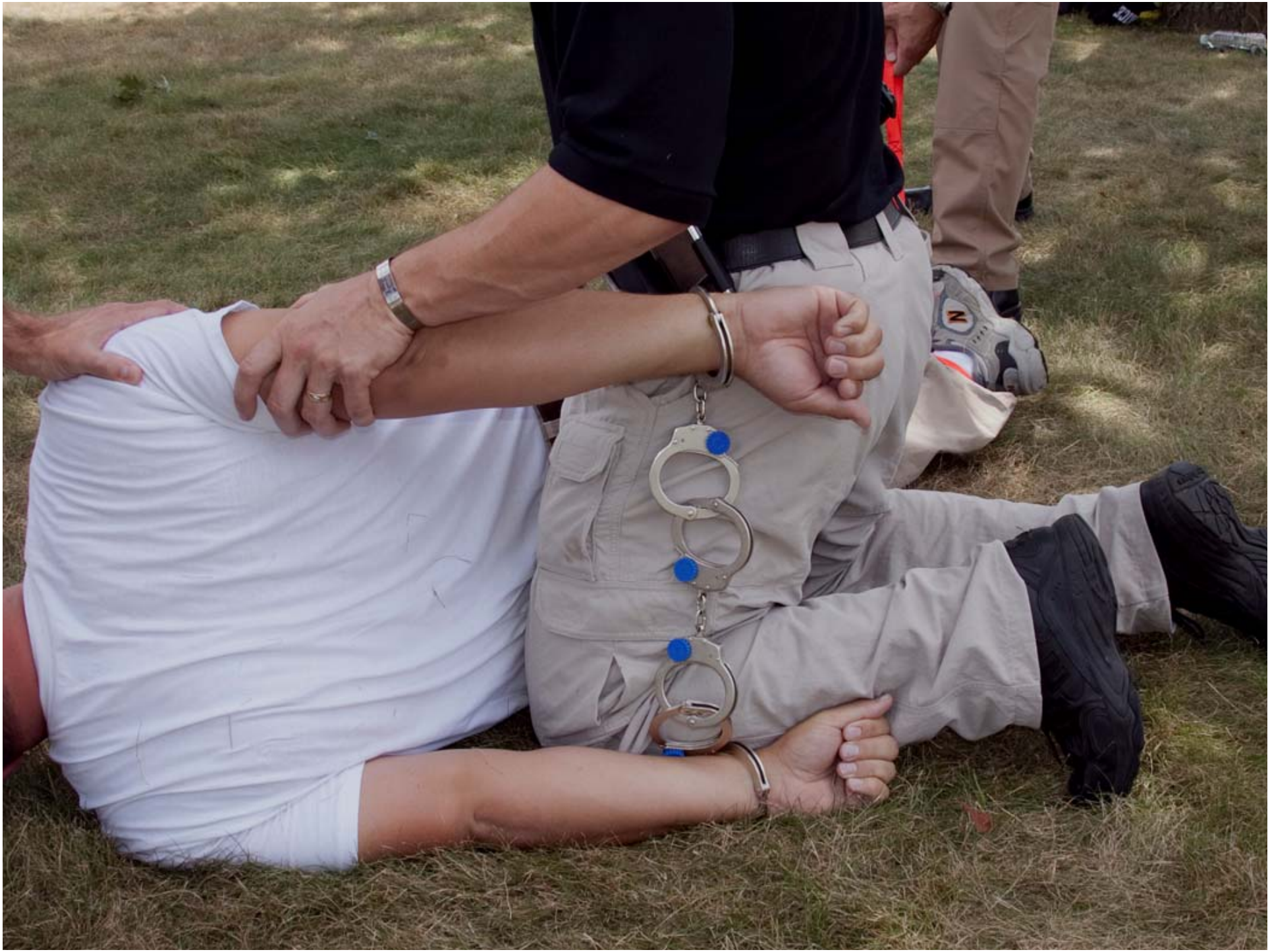
Multiple Officer Control Tactic

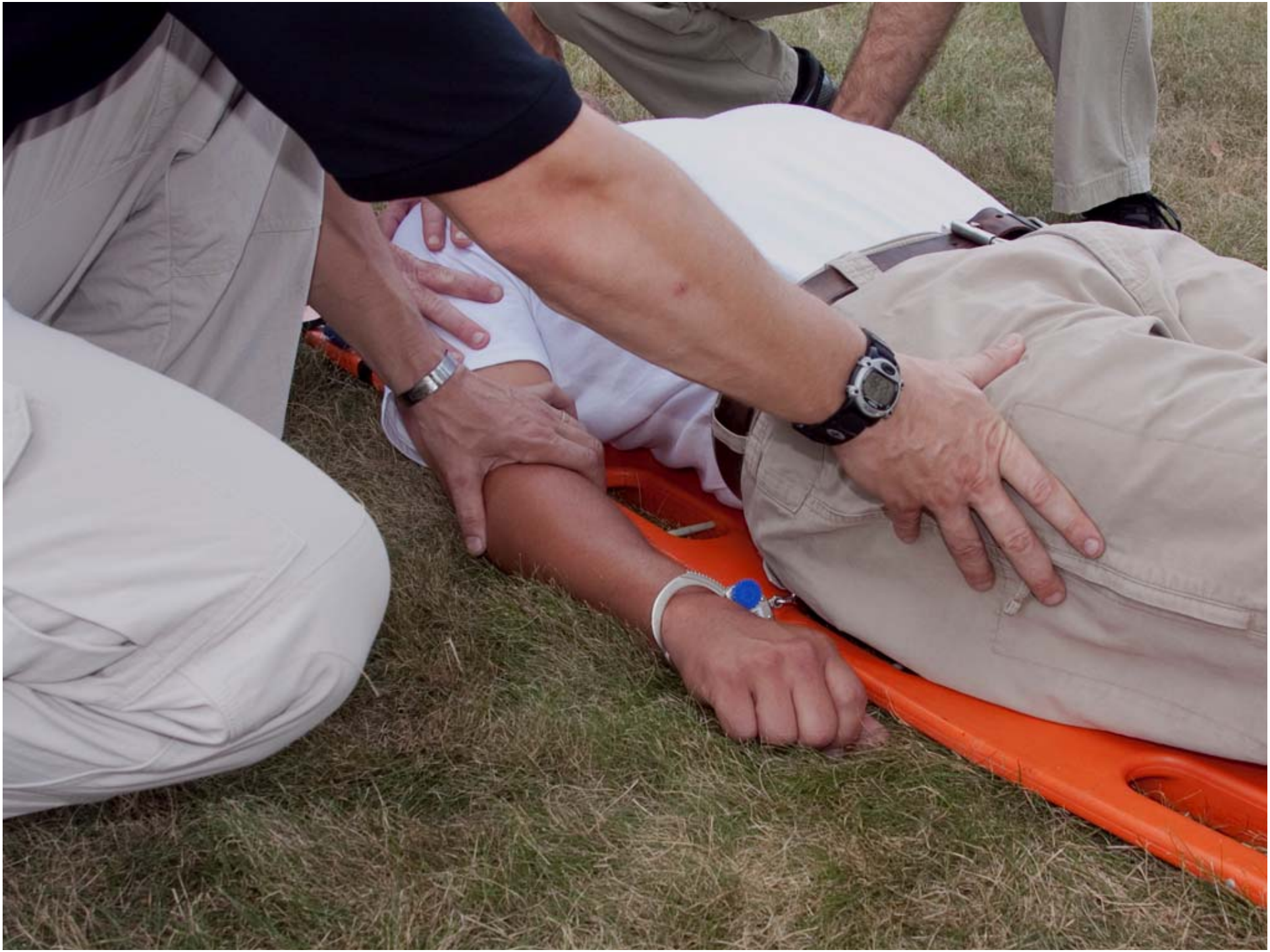
- Gross motor based
- Restrain appendages
- No weight on back
- Works for anyone trained


CHAMPAIGN POLICE










EMS

Further Contact Information

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Carle EMS Medical Director
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Urbana, IL

Excited Delirium

- Extreme combative/violent/aggressive/agitated behavior
- amazing physical strength, struggle despite futility, unlimited endurance, pain insensitivity
- constant yelling, aggression toward inanimate objects, running for no reason
- Negotiation is not an option!

  (patient is unable to rationalize/talk down)
- delusional/paranoid/irrational/bizarre behavior
- inability to maintain attention, disorientation, disorganized thinking, incoherent speech
- naked/semi-clothed

Excited Delirium
Common Causes

- Cocaine intoxication
- Intoxication with other sympathomimetics
- Bipolar Disease (↓ or ↑ meds)
- Chronic Schizophrenia (↓ or ↑ meds)
- Alcohol intoxication or withdrawal
- Combinations of the above

Excited Delirium

- Usually caused by sympathomimetics (e.g. cocaine, methamphetamine, PCP)
- Sudden tranquility leading to cardiac arrest – unclear etiology
- Differential diagnosis: meningitis, head injury, thyroid storm, hyperthermia

Excited Delirium Deaths

- Majority of “in-custody” deaths
- First sign of impending death
- Virtually never successfully resuscitated
- ~200 deaths per year (? Incidence)
- 1970’s: “Natural” deaths
- 1980’s: “Undetermined” deaths
  - Consistent features: violent/erratic behavior, use of multiple restraints, component of drug intoxication

Excited Delirium

- Historically, every method of restraint has been implicated in death
  - 1970's: nightstick, lateral vascular neck restraint
  - 1980's: positional asphyxia
  - 1990's: pepper spray
  - 2000's: Taser
- No evidence of causality

Excited Delirium
Causes of Death?

- Metabolic Acidosis (Lactate)
- Cocaine induced MI/arrhythmia
- Post exercise potassium shift
- Rhabdomyolysis
- Profound hyperthermia

Excited Delirium Critics

- “Most of the people who die in police custody die not from drugs or some mysterious syndrome but from police abuse”
  - Van Jones, Ella Baker Human Rights Center, San Francisco

Ketamine

- Synthesized in 1962
- Used as a field anesthetic during the Vietnam War
- Recreational drug use began in the 1970's
- Structurally related to PCP
- Antagonizes the NMDA receptor causing sedation →hallucination→dissociation→unresponsive (others: EtOH, Nitrous Oxide, PCP, Methadone)

Ketamine (Effects)

- Range from conscious sedation to unresponsive; amnesia
- Reflexes, including airway protection, are maintained (no cardiopulmonary depression)
- No contraindications in the Excited Delirium patient* (Ketamine does not cause “harm” in patient’s with another diagnosis in the differential)

Ketamine (Complications)

- Deep anesthesia requiring airway control (usually only at much higher doses)
- Laryngospasm (rare, usually infants only, self-limited < 1 minute)
- Salivation (suction, atropine 0.01-0.02 mg/kg PRN)
- Slight HR and BP increases
- Increased muscle tone and petit mal seizure-like activity (treat with BZD PRN)
- Emergence reactions: extreme agitation, fear, confusion, vivid dreams, extracorporeal experiences, illusions (treat with BZD PRN)

Ketamine (Dose)

- 5mg/kg IM (may be given via a “dirty stick”)
- Ketamine 50mg/ml, 10ml vial
  - $4.71 per vial, box of 10
  - No refrigeration necessary
  - Up to a 5 year shelf-life
- 1.5mg/kg IVP
- VanishPoint syringes (10cc, 20G, 1.0-1.5”)
  - Box of 100/Case of 1000

Ketamine

- IM onset of action = 5 minutes
- IM duration of action = 2-6 hours
- Why Ketamine??
  - IM
  - Fast onset
  - Effective
  - Reliable
  - Safe
- We are one of only 2 EMS systems in the nation with Ketamine in the hands of paramedics!!

Sedation Protocol

NOTE:

- **Primary consideration should be given to EMS provider safety.**
- **Notify police. Approach patient only when safe to do so.**
- **Talk in an even, reassuring tone; only one provider should speak.**
- **Restrain as needed if patient has a life-threatening emergency or suicidal/homicidal behavior.**
- **Patient must be 14 years of age or older.**

Sedation Protocol

CRITERIA: Any may be present

- Extreme psychological and physiological excitement/agitation
- Aggressive or hostile combative behavior marked by incoherence
- Superhuman strength with near complete tolerance to pain
- Impaired thinking and perception, paranoia
- Relative inability to “talk down”

Sedation Protocol

TREATMENT:

- Initial Medical Care. Sedate patient as necessary (as per #5 or #6 below) based on patient's presentation and potential for self-harm. Contact medical control prior to sedation if questions/concerns exist regarding care.
- Airway and OXYGEN 15 L NRB.
- Assessment and history:
- Look for medical or traumatic causes of the patient's behavior.
- Note (and later document) behavior and mental status in detail.
- Obtain medical history, alcohol and psychiatric history if able.
- IV of NS or saline lock if able.
- Administer KETAMINE 5 mg/kg IM or 1.5 mg/kg IV.
- Alternative chemical sedative: VERSED 0.05mg/kg IVP Q3-5 minutes up to a total of 3 doses as needed or maximum 10mg.

Sedation Protocol

- Treat any potential allergic complications as per Region 6 “Allergic Reaction” protocol. Manage airway as necessary.
- Determine blood glucose.
- If glucose <60 mg/dl, administer DEXTROSE 50% 25g IV. If no IV access, administer GLUCAGON 1 mg IM.
- If history of alcoholism or alcoholism is suspected, administer THIAMINE 100 mg IV/IM.
- Transport. If restrained, have police accompany patient.
- Contact Medical Control.

Sedation Protocol

- Ketamine will be given at the discretion of the EMT-P on the scene, not law enforcement.

ED Scale* (Scaggs Scale!)

+4 Excited Delirium

a) Extreme combative/violent/aggressive/agitated behavior, amazing physical strength, struggle despite futility, unlimited endurance, pain insensitivity, constant yelling, aggression toward inanimate objects, running for no reason;

b) delusional/paranoid/irrational/bizarre behavior, inability to maintain attention, disorientation, disorganized thinking, incoherent speech, naked/semi-clothed

+3 Extremely Agitated

a) Severe combative/violent/aggressive/agitated behavior, significant physical strength, struggle despite futility, significant endurance, pain insensitivity, constant yelling/screaming;

b) displaying no signs of delirium

+2 Moderately Agitated

Moderate violent/agitated behavior, frequent yelling

+1 Restless

Anxious or apprehensive but movements are not aggressive or vigorous

0 Alert, Oriented, Calm

ED Scale

-1 Drowsy

Not fully alert, but has sustained (more than 10 seconds) awakening, with eye contact to voice

-2 Light Sedation

Briefly (less than 10 seconds) awakens with eye contact to voice

-3 Moderate Sedation

Any movement (but no eye contact) to voice

-4 Deep Sedation

No response to voice, any movement to physical stimulation

-5 Unresponsive

No response to voice or physical stimulation

***Modified from the Richmond Agitation Sedation Scale (RASS)**
Am J Respir Crit Care Med, Vol 166, pp 1338-1344, 2002

EMS Form

- Patient Temperature
- ED Scale
- Medic safety scale

  Restraining: 0 = no threat to self
  1 = mild threat
  2 = moderate-severe threat
  3 = mild injury occurred
  4 = moderate-severe injury occurred

  Drug administration: 0 = no threat to self
  1 = mild threat
  2 = moderate-severe threat
  3 = mild injury occurred
  4 = moderate-severe injury occurred
- Potential cause of excited delirium (drug use, alcohol withdrawal, psych, pscyh meds, etc).
- Was trauma involved Y N
- Actions of police/bystanders PTA

EMS Form

- Adverse affects of ketamine (airway, vomiting, oral secretions, increased muscle tone, emergence reaction)
- Pupil Size and Reaction
- Time period of physical restraining process (to chemical restraint or arrest).
- Any injuries to patient during process
- Was med administration a dirty stick or clean stick (if dirty, describe)
- Circle those behaviors the patient possessed: Agitation, Violent, Aggresion towards objects, Superhuman strength, Unlimited endurance, Screaming, Talks to invisible people, Decreased pain sensation, Naked or partially dressed, Paranoia, Disorientation, Hallucination, Delusional, Easily distracted, Running for no reason

Further Contact Information

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Defending Sudden and Unexpected Death Cases

Introductions

Defending Sudden and Unexpected Deaths

- Policy;
- Education/Training;
- Preservation of necessary evidence.

Defending Sudden and Unexpected Deaths

Defending Sudden and Unexpected Deaths

Defending Sudden and Unexpected Deaths

Defending Sudden and Unexpected Deaths

- He who has the “most” or “best” evidence wins.

Defending Sudden and Unexpected Deaths

- We now know that science is playing a major role in the defense of many "controversial" police use of force cases.
  - *People v. Mehserle;*
  - *Lorena Lopez v. City of Los Angeles;*
  - *Tina Lee-Vogt v. City of Los Angeles.*

Defending Sudden and Unexpected Deaths

- Science is a necessary component in the defense of in-custody deaths.
- In most cases, defense (police) will rely on expert testimony
  - Police procedures expert;
  - Forensic investigator/expert;
  - Medical examiner/expert.

Defending Sudden and Unexpected Deaths

- To assist experts, key pieces of evidence must be collected immediately.
- Without the critical pieces of evidence, the defense will be hindered and may be lost.
- Need to educate law enforcement and medical response personnel on the importance of essential evidence.

Defending Sudden and Unexpected Deaths

- The following information is to assist investigators;
- It is not a standardized protocol, nor is it a legal or medical standard.

Defending Sudden and Unexpected Deaths

- Body
  - Location
  - Position
  - Clothing
  - Sweating?
  - Core body temperature

Defending Sudden and Unexpected Deaths

- Toxicological evidence
  - Presence
  - Amounts or levels which are often overlooked

Defending Sudden and Unexpected Deaths

- Pre-death information
  - Heart rate
  - Blood pressure
  - Respirations
  - CO_2 levels
  - ph levels
  - Temperature
  - These pieces of information are often neglected after a person dies

Defending Sudden and Unexpected Deaths

- Other critical evidence
  - Types of restraints, if any
  - “Crack” thumbs
  - “Crack” hands
  - Medical intervention drugs

Defending Sudden and Unexpected Deaths

- Forensic autopsy
- Are your medical examiners and coroners familiar with the information that is necessary to defend sudden and unexpected deaths?

Defending Sudden and Unexpected Deaths

- University of Miami is instrumental in standardizing the collection of key pieces of autopsy evidence in cases involving sudden and unexpected deaths.
- Can request a “Specimen Kit”
  - 1-800-UM-BRAIN (862-7246)
  - mbasile@med.miami.edu (Margaret J. Basile)

Thank You!

Please feel free to contact me with any additional questions or concerns at:

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or

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