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ADVERSE HEALTH EFFECTS ASSOCIATED WITH SYNTHETIC CANNABINOID USE — MISSISSIPPI, 2015

MEDICAL RECORDS REVIEW

Reviewer/Interviewer:_____Agency:_____Abstraction Date:(mm/dd/yy):_____
Emergency Department (ED):_____, or Coroner/Medical Examiner Name_____

PATIENT IDENTIFICATION		
Full Name (Last Name, First Name)	Medical Record Number	
Date of Birth (mm/dd/yy)	Age	Sex
Address		
City/State/Zip		
Phone/Home *If not recorded, please enter 000-000-0000*	Phone/Cell *If not recorded, please enter 000-000-0000*	

MEDICAL RECORDS ABSTRACTION	
Type of Records reviewed (mark all that apply): ☐ Emergency Medical Services (EMS)/Ambulance notes* ☐ Emergency Department notes ☐ Police documentation ☐ Medical Toxicologist consultation notes	☐ Admission History and Physical** ☐ Discharge Summary ☐ Coroner/Medical Examiner Documentation*** ☐ Other _____
If patient not brought in or seen by EMS, **skip to Section B.* ***If patient was admitted **also** complete Section C* ****If patient is deceased **also** complete Section D.*	
A. Prehospital Data (from EMS Records or ED Records)	
Date and (approximate) Time of Presentation to EMS (mm/dd/yy, hh:mm AM/PM): _____ ☐ Not Recorded	
Chief Complaint/ History (record narrative details, and indicate source(s) of information e.g. patient, friend/family, police, etc.)	
Initial EMS Vital Signs Date:_____(mm/dd/yy) Time:_____(hh:mm AM/PM) Temperature _____°(specify F or C) ☐ Not Recorded Heart Rate:_____/minute	

Blood Pressure:_____/_____

Respiratory Rate:_____/minute

Oxygen Saturation: _____%
Was the patient on supplemental oxygen? ☐ Yes ☐ No ☐ Unknown

Specific Mental Status Descriptors at Time of EMS Presentation (mark all that apply, including those in chief complaint):
☐ Confused ☐ Disoriented ☐ Delirious ☐ Anxious ☐ Tremulous ☐ Agitated ☐ Hallucinating ☐ Paranoid ☐ Psychotic
☐ Seizures ☐ Aggressive/Violent ☐ Hyperalert/Hypervigilant ☐ Unable to speak ☐ Somnolent ☐ Unresponsive
☐ Comatose ☐ Other_____ ☐ WNL ☐ Unknown

Interventions
☐ Yes ☐ No If yes, mark all that apply:
☐ Intubation, specify reason (e.g. hypoventilation, airway protection) _____
Date and Time _____
☐ Cardiopulmonary resuscitation
☐ Other(s) _____

Medications
☐ Yes ☐ No If yes, mark all that apply:
☐ Benzodiazepine (e.g. Ativan, Versed, Valium)
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
☐ Antipsychotics (e.g. Haldol, Geodon)
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
☐ Dissociative Anesthetics (e.g. Ketamine, Propofol)
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
☐ Antidotes (e.g. Glucose, Narcan, Physostigmine, Flumazenil)
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
☐ Other
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____
Name:_____ Dose:_____ Time of Administration_____

NB. If abstraction ends at this point, please go to last page to complete lab testing tier

B. ED Record Review

Mode of Presentation to ED: ☐ Self/Ambulatory ☐ Friends/Family ☐ Ambulance ☐ Police ☐ Other _____

Date and (approximate) Time of Presentation to ED (mm/dd/yy, hh:mm AM/PM):_____☐ Not Recorded

Chief Complaint/History (record pertinent narrative details, and indicate source(s) of information e.g. patient, friend/family, police, EMS personnel, etc):

Initial ED Vital Signs:

Date:_____(mm/dd/yy) Time:_____ (hh:mm AM/PM)

Temperature _____°(specify F or C); Heart Rate:_____/minute; Blood Pressure:_____/_____

Respiratory Rate:_____/minute

Oxygen saturation:_____% Was the patient on supplemental oxygen? ☐ Yes ☐ No ☐ Unknown

Specific Mental Status Descriptors at Time of Presentation (mark all that apply):
☐ Confused ☐ Disoriented ☐ Delirious ☐ Anxious ☐ Tremulous ☐ Agitated ☐ Hallucinating ☐ Paranoid ☐ Psychotic
☐ Seizures ☐ Aggressive/Violent ☐ Hyperalert/Hypervigilant ☐ Unable to speak ☐ Somnolent ☐ Unresponsive
☐ Comatose ☐ Other_____ ☐ WNL ☐ Unknown

Physical Exam Findings/Descriptors at Time of Presentation (mark all that apply):

Skin: ☐ WNL ☐ Diaphoretic (sweating) ☐ Flushed ☐ Dry ☐ Other_____ ☐ Unknown
☐ Abrasions/ wounds If yes, specify where_____

Mucous Membranes: ☐ WNL ☐ Moist ☐ Dry ☐ Other_____ ☐ Unknown

Eyes: ☐ WNL ☐ Pupils dilated ☐ Pupils constricted ☐ Nystagmus ☐ Other_____ ☐ Unknown

Cardiovascular: ☐ WNL ☐ Tachycardia ☐ Bradycardia ☐ Irregular heart rhythm ☐ Other_____ ☐ Unknown

Respiratory: ☐ WNL ☐ Bradypnea ☐ Tachypnea ☐ Dyspnea ☐ Shortness of breath ☐ Other_____ ☐ Unknown

Gastrointestinal: ☐ WNL ☐ Hypoactive bowel sounds ☐ Other_____ ☐ Unknown
☐ Hyperactive bowel sounds ☐ Tender

Genitourinary: ☐ WNL ☐ Urinary retention ☐ Other_____ ☐ Unknown

Neurologic: ☐ WNL ☐ Hyperreflexia ☐ Hyporeflexia ☐ Clonus ☐ Other _____ ☐ Unknown

Musculoskeletal: ☐ WNL ☐ Rigidity ☐ Weakness ☐ Other _____ ☐ Unknown
If exam findings present, specify where (e.g., extremities, generalized)_____

Initial Basic Laboratory Evaluation:

Blood Chemistry:	**Date/Time**	**Not Done**
Na_____	_____	_____
K_____	_____	_____
Cl_____	_____	_____
HC03_____	_____	_____
BUN_____	_____	_____
Creatinine____	_____	_____
Glucose_____	_____	_____

Liver Panel:	**Date/Time**	**Not Done**
Total protein_____	_____	_____
Albumin_____	_____	_____
AST_____	_____	_____
ALT_____	_____	_____
Total bili_____	_____	_____
Alk Phos_____	_____	_____

Blood gas:	**Date/Time**	**Not Done**
pH_____	_____	_____
Pa02_____	_____	_____
PaC02_____	_____	_____
HC03_____	_____	_____

☐ Supplemental O2
If yes, Specify: _____L

Other:	**Date/Time**	**Not Done**
☐ CK (total serum) _____	_____	_____
☐ Lactate/lactic acid: _____	_____	_____

Toxicology / Drug Screen Evaluation:

Urine Drug Screen?
☐ Yes ☐ No *If yes, mark all positives*
☐ Barbiturates ☐ MDMA (Ecstasy)
☐ Benzodiazepines (BZD) ☐ Phenylpropanolamine

Blood:
☐ Yes ☐ No *If yes, mark all that apply*
☐ Ethanol (specify blood level);_____
☐ Salicylates (specify blood level);_____
☐ Acetaminophen (specify blood

☐ Cocaine (benzylecgonine) ☐ Opiates ☐ Methadone ☐ Phencyclidine (PCP) ☐ Amphetamine ☐ Methamphetamine	☐ Cannabinoids (THC, Marijuana) ☐ Methaqualone ☐ Trazodone ☐ Tricyclic Antidepressants ☐ Other(s) _____	level);_____ ☐ Other (specify)_____

Initial Electrocardiographic (ECG/EKG) or Telemetry Findings (e.g.):

EKG done ☐ Yes ☐ No If yes, specify date/time (mm/dd/yy, hh:mm AM/PM): _____

Abnormal EKG? ☐ Yes ☐ No

If abnormal, please specify:

☐ Arrhythmia (Specify_____)

☐ Long QT ☐ Short QT ☐ QRS interval abnormality ☐ Asystole

☐ Other, specify_____

Imaging Findings (e.g. head CT, brain MRI, Chest X-ray, others):

Imaging done ☐ Yes ☐ No If yes, check all that apply:

Head CT ☐ Yes ☐ No Abnormal? ☐ Yes ☐ No
Specific abnormal findings_____

Brain MRI ☐ Yes ☐ No Abnormal? ☐ Yes ☐ No
Specific abnormal findings_____

Chest X-ray ☐ Yes ☐ No Abnormal? ☐ Yes ☐ No
Specific abnormal findings_____

Other(s), ☐ Yes ☐ No Specify_____
Specific abnormal findings_____

Interventions (mark all that apply):

☐ Yes ☐ No

☐ Intubation/Mechanical ventilation Specify reason (e.g. hypoventilation, airway protection)
_____

☐ Extubation Date_____ Time_____

☐ Cardiopulmonary resuscitation

☐ Other(s) _____

Medications

☐ Yes ☐ No

☐ Benzodiazepine (e.g. Ativan, Versed, Valium)

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

☐ Antipsychotics (e.g. Haldol, Geodon)

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

☐ Dissociative Anesthetics (e.g. Ketamine, Propofol)

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

☐ Antidotes (e.g. Glucose, Narcan, Physostigmine, Flumazenil)

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

☐ Other

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

Name:_____ Dose:_____ Time of Administration_____

Past Medical History

High blood pressure: ☐ Yes ☐ No ☐ Unknown

Heart disease: ☐ Yes ☐ No ☐ Unknown Specify_____
Kidney disease: ☐ Yes ☐ No ☐ Unknown Specify_____
Liver disease: ☐ Yes ☐ No ☐ Unknown Specify_____
Diabetes ☐ Yes ☐ No ☐ Unknown Specify_____
Seizure disorder ☐ Yes ☐ No ☐ Unknown Specify_____
Mental illness ☐ Yes ☐ No ☐ Unknown Specify_____
Substance addiction ☐ Yes ☐ No ☐ Unknown Specify_____
Other ☐ Yes ☐ No ☐ Unknown Specify_____

Emergency Department Disposition:

☐ ED Observation, specify duration _____(in HOURS) ☐ Deceased:
☐ Discharged _____(mm/dd/yy) _____(hh:mm) Date:_____(mm/dd/yy)
☐ Admitted to Hospital, specify admit date_____(mm/dd/yy) Time:_____(hh:mm)
☐ICU ☐General Medicine ☐Other_____
☐ Transferred to another hospital, specify date_____(mm/dd/yy) ☐ Unknown
☐ Left AMA _____(mm/dd/yy) _____(hh:mm)

Complications During ED Course

☐ None ☐ Respiratory failure ☐ Multi-organ failure
☐ Seizures ☐ Hyperthermia ☐ Acute Kidney Injury/ Failure
☐ Psychosis ☐ Rhabdomyolysis ☐ Coma
☐ Agitation ☐ Other, specify_____

Other Data/Notes:

SPECIMENS

Blood Specimen(s) available? (earliest available specimen(s) preferred) ☐ Yes ☐ No ☐ Unknown
If yes, specify: Type of specimen _____ Collection date _____ Collection Time _____
Type of specimen _____ Collection date _____ Collection Time _____

Urine Specimen(s) available? (earliest available specimen (s) preferred) ☐ Yes ☐ No ☐ Unknown
If yes, specify: Type of specimen _____ Collection date _____ Collection Time _____
Type of specimen _____ Collection date _____ Collection Time _____

Illicit substance/Product Specimen(s) available? ☐ Yes ☐ No ☐ Unknown
If yes, specify: Type of specimen _____ Collection date _____ Collection Time _____
Last known person or organization in possession of sample: _____

NB. If abstraction ends at this point, please go to last page to complete lab testing tier

C. Inpatient Record Review

Level of Care (during hospital stay):

☐ Intensive Care Unit Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ Step-Down Unit Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ General Medicine Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ Telemetry Unit Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ Psychiatry Unit Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ ED Observation Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ Other _____ Admit date_____ Discharge/ transfer date (if applicable)_____ (mm/dd/yy)
☐ Unknown

Peak Laboratory Evaluation:

Blood Chemistry:	**Date/Time**	**Not Done**	**Liver Panel:**	**Date/Time**	**Not Done**

Na_____	_____	_____			
K_____	_____	_____	Total protein_____	_____	_____
Cl_____	_____	_____	Albumin_____	_____	_____
HC03_____	_____	_____	AST_____	_____	_____
BUN_____	_____	_____	ALT_____	_____	_____
Creatinine____	_____	_____	Total bili_____	_____	_____
Glucose_____	_____	_____	Alk Phos_____	_____	_____

Blood gas:	**Date/Time**	**Not Done**	**Other:**	**Date/Time**	**Not Done**
pH_____	_____	_____	☐ CK (total serum) _____	_____	_____
Pa02_____	_____	_____	☐ Lactate/lactic acid: ____		
PaC02_____	_____	_____		_____	_____
HC03_____	_____	_____			
☐ Supplemental O2					
If yes, Specify: ____L					

Nadir Laboratory Evaluation:

Blood Chemistry:	**Date/Time**	**Not Done**	**Liver Panel:**	**Date/Time**	**Not Done**
Na_____	_____	_____			
K_____	_____	_____	Total protein_____	_____	_____
Cl_____	_____	_____	Albumin_____	_____	_____
HC03_____	_____	_____	AST_____	_____	_____
BUN_____	_____	_____	ALT_____	_____	_____
Creatinine____	_____	_____	Total bili_____	_____	_____
Glucose_____	_____	_____	Alk Phos_____	_____	_____

Blood gas:	**Date/Time**	**Not Done**	**Other:**	**Date/Time**	**Not Done**
pH_____	_____	_____	☐ CK (total serum) _____	_____	_____
Pa02_____	_____	_____	☐ Lactate/lactic acid: ____		
PaC02_____	_____	_____		_____	_____
HC03_____	_____	_____			
☐ Supplemental O2					
If yes, Specify: ____L					

Electrocardiographic (ECG/EKG) or Telemetry Findings

EKG done ☐ Yes ☐ No If yes, please specify date/time (mm/dd/yy)/(hh:mm A.M./P.M.)_____

Abnormal EKG? ☐ Yes ☐ No Date_____ Time_____

If yes, please specify:

☐ Arrhythmia (Specify_____)

☐ Long QT ☐ Short QT

☐ QRS interval abnormality ☐ Asystole ☐ Other, specify_____

Interventions (mark all that apply):

☐ Yes ☐ No

☐ Intubation/Mechanical ventilation Specify reason (e.g. hypoventilation, airway protection) _____

☐ Extubation Date_____ Time_____

☐ Cardiopulmonary resuscitation Date_____ Time_____

☐ Other(s) _____

Medications

☐ Yes ☐ No

☐ Benzodiazepine (e.g. Ativan, Versed, Valium)

Name:_____ Number of Times Given_____

Name:_____ _____ Number of Times Given_____

☐ Antipsychotics (e.g. Haldol, Geodon)

Name:_____ Number of Times Given_____

Name:_____ Number of Times Given_____

☐ Dissociative Anesthetics (e.g. Ketamine, Propofol)

Name:_____ Number of Times Given_____

Name:_____ Number of Times Given_____

☐ Antidotes (e.g. Glucose, Narcan, Physostigmine, Flumazenil)

Name:_____ Number of Times Given_____

Name:_____ Number of Times Given_____

☐ Other
Name:_____ Number of Times Given_____
Name:_____ Number of Times Given_____
Name:_____ Number of Times Given_____
Name:_____ Number of Times Given_____

Complications During Hospital Course

☐ None
☐ Seizures
☐ Psychosis
☐ Agitation
☐ Respiratory failure
☐ Mechanical Ventilation
☐ Hyperthermia
☐ Rhabdomyolysis
☐ Acute Kidney Injury/ Failure
☐ Multi-organ failure, etc.)
☐ Coma
☐ Other, specify_____

Outcome:

☐ Discharged Date of Discharge _____(mm/dd/yy)
☐ Discharge diagnoses, specify_____
☐ Discharged against medical advice, specify_____
☐ Discharge diagnoses, specify_____
☐ Still hospitalized
☐ Deceased Date and time of death _____ (mm/dd/yy)/(hh:mm A.M./P.M.)
☐ Unknown

Other Data/Notes:

D. ME or Coroner Record Review

Date and Time of Death (mm/dd/yy)/(hh:mm A.M./P.M.):
☐ Check if time of death is estimated

Significant Positive Gross Autopsy Findings:

Significant Positive Histopathology Autopsy Findings:

Significant Positive Laboratory Autopsy Findings
(please include both positive and negative toxicologic laboratory findings)**:**

Source of Blood Samples
☐ Core ☐ Peripheral ☐ Other (specify) _____

Time specimen obtained (if available) (mm/dd/yy, hh:mm AM/PM):_____

Other Data/Notes (please include any past medical history or any pertinent case history listed)**:**

Case Definition Determination & Lab Testing Tier

Is the case:
☐ Probable
If probable, select lab testing tier: ☐ 1 ☐ 2 ☐ 3
Please see reference below
☐ Suspect

***Case Definition:**

Probable

Self-reported or other suspicion of synthetic cannabinoid (synthetic marijuana) use within 24 hours of onset of illness with or without other recreational substances

--OR—

Suspect

Suspected use of unknown recreational drug(s) within 24 hours of onset of illness, based on clinical presentation

Only use this lab testing tier system to stratify patients who meet our PROBABLE CASE definition

Tier 1:

- ICU admitted patients
  -**OR-**
- Patients with symptoms consistent with synthetic cannabinoid exposure WITH environmental (drug) samples available for testing, regardless of admission status.
- Percentage of patients in this category that will have specimens tested = 100%

Tier 2:

- Patients admitted to Ed observation, step-down unit, general medical, or telemetry unit
- Percentage of patients in this category that will have specimens tested: 50%

Tier 3:

- Patients seen in the ER and discharged
- Percentage of charts in this category that will have specimens tested: 25% or number of additional specimens that will add up to 50
    - CO can only test 50 specimens. For example if we have 25 patients from tier 1, 10 patients from tier 2, then we will only be able to test 15 specimens from tier 2, regardless what percentage of Tier 3 patients this is.
    - Our priority of testing is primarily on patients in tier 1 and 2.
