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

#### MEDICAL RECORDS REVIEW

Reviewer:	Agency:	Abstraction Date :(mm/dd/yyyy):

PATIENT IDENTIFICATIO	<b>DN</b>
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		-	
Full Name (Last Name, First Name)	Hospital Name		Medical Record Number
Date of Birth (mm/dd/yyyy)	Sex	Race (check all	that apply):
	$\Box$ M	□Amer Ind/AK n	ative 🗆 Asian 🗆 Black/Afr Am
	□ F	□Native HI/other	PI DWhite
Phone/Home:	Age	$\Box$ Other (specify)	
		□ Not documente	ed
Phone/Cell:			
If not recorded, please enter 000-000-0000			
Address			Poison Control Center Number
			□ None
City/State/Zip			County

SPECIMENS			
Specimen(s) available? (earliest available specimen(s) preferred)  Ves Vos Vos Vos			
1 <sup>st</sup> Specimen			
Type of specimen: 🗆 Whole blood 🗆 Serum 🗆 Urine 🗆 Drug Sample/Specimen			
If yes, specify:   Sent to outside lab If sent, name of lab: State Specimen ID:			
Results Available : 🛛 Yes 🗆 Pending 🗆 Unknown			
If available, 🗆 Synthetic Cannabinoid (name):			
🗆 Illicit drugs (name):			
□ Other (name):			
2 <sup>nd</sup> Specimen			
Type of specimen: 🗆 Whole blood 🗆 Serum 🗆 Urine 🗆 Drug Sample/Specimen			
If yes, specify:   Sent to outside lab If sent, name of lab: State Specimen ID:			
Results Available : 🗆 Yes 🗆 Pending 🗆 Unknown			
If available, 🗆 Synthetic Cannabinoid (name):			
🗆 Illicit drugs (name):			
□ Other (name):			
2 <sup>nd</sup> Specimen			
Type of specimen: 🗆 Whole blood 🗆 Serum 🗆 Urine 🗆 Drug Sample/Specimen			
If yes, specify:   Sent to outside lab If sent, name of lab: State Specimen ID:			
Results Available : 🗆 Yes 🗆 Pending 🗆 Unknown			
If available, 🗆 Synthetic Cannabinoid (name):			
🗆 Illicit drugs (name):			
□ Other (name):			
Public reporting burden of this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road NE, MS D-74 Atlanta,			

Georgia 30333; ATTN: PRA (0920-1011)

Case 1	[D#:
Case 1	[D#:

MEDICAL RECORDS ABSTRACTION			
Type of Records reviewed (mark a □ Emergency Medical Services (EM notes* □ Emergency Department Notes □ Hospital chart**	••••	<ul> <li>Coroner/Medical Examiner Documentation***</li> <li>Poison Center Chart</li> <li>Other</li> </ul>	
*If patient not brought in or seen by EMS, complete disposition and <b>skip</b> to Section B. **If patient was admitted <b>also</b> complete Section C ***If patient is deceased <b>also</b> complete Section D.			
Mode of Presentation to ED:		ry  □ Friends/Family  □ Ambulance  □ Police  □ Transfer	
		ation & Disposition	
Date of presentation (mm/dd/yyyy):		□ Not Recorded	
Disposition (Check all that apply)		□ Not recorded	
5	ED OBS c Hospital d ICU c	Date: (mm/dd/yyyy) discharge date: (mm/dd/yyyy) discharge date: (mm/dd/yyyy) discharge date: (mm/dd/yyyy) Date of death: (mm/dd/yyyy) Date of death: (mm/dd/yyyy) Date of death: (mm/dd/yyyy)	
	habdomyolysis	Respiratory Failure	
Cardiopulmonary Arrest C O	ther:	eral Information	
Chief Complaint (first recorded by			
Synthetic cannabinoid use:			
Synthetic cannabinoid use details (product name, quantity, place obtained, etc.)         Name of synthetic cannabinoid product:       □ Not recorded         Time passed since last use:       ≤ 24 hours       > 24-36 hours       □ Not recorded         Other details:			
Mental Status prior to Medication Administration (mark all that apply, including those in chief complaint):		Obtained from:         □ Prehospital Records       □ ED Records         □ Transfer Records       □ Hospital Records         □ Medical Examiner / Coroner	

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Normal     Not reco	prded
Agitated      Confuse	ed 🗆 Violent/Aggressive 🗆 Hallucinating 🗆 Paranoid
🗆 Anxious 🗆 Somnole	ent 🗆 Unresponsive 🛛 Seizures 🖓 Psychosis
Other	
Past Medical History	
□ No Past Medica	Il History 🛛 Yes (if yes, specify below) 🗆 Not recorded
□ High blood pres	sure
Heart disease	
🗆 Kidney disease	
Liver disease	
□ Diabetes	
Seizure disorde	r
☐ Mental illness	
□ Substance abus	Se
Review of Symptoms	at Time of Presentation
(mark all that apply):	
□ Not recorded	
□ Fatigue	Chest Pain  Abdominal Pain  Sweating
□ Nausea/Vomiting	Palpitations     Dark Urine     Confusion
□ Headache	$\Box$ Shortness of Breath $\Box$ Muscle pain
Other:	
Physical Exam Findin	gs/Descriptors at Time of Presentation
(mark all that apply):	
Skin:	□ Normal □ Not recorded
	Diaphoretic (sweating)     I Flushed     Other
Mucous Membranes:	□ Normal □ Not recorded
	□ Dry □ Other
Eyes:	Normal     Not recorded
	□ Pupils dilated □ Pupils constricted □ Nystagmus □ Injected Eyes □ Other
Cardiovascular:	□ Normal □ Not recorded
	🗆 Tachycardia 🛛 Bradycardia 🖾 Arrhythmia 🔅 Other
Respiratory:	□ Normal □ Not recorded
	🗆 Bradypnea 🛛 Tachypnea 🗋 Dyspnea 🖓 Other
Gastrointestinal:	□ Normal □ Not recorded □ Vomiting
	Abnormal bowel sounds     Tender     Other
Neurologic:	□ Normal □ Not recorded □ Altered Mental Status
	□ Hyperreflexia □ Hyporeflexia □ Tremor □ Other

Musculoskeletal:  Normal  Not recorded			
☐ Rigidity  ☐ Weakness   □ Other If exam findings present, specify where (e.g., extremities, generalized)			
Initial Basic Laboratory Evaluation:			
Blood Chemistry:  Not Recorded  Performed	Liver Panel:  Not Recorded  Performed		
Na 🛛 Normal 🖓 Abn Value:	Total protein		
K 🛛 Normal 🗆 Abn Value:	Albumin		
CI   Normal  Abn Value:	AST   Normal  Abn Value:		
HCO3   Normal Abn Value:	ALT		
BUN	Total Bili   Normal  Abn Value:		
Creatinine   Normal    Abn Value:	Alk Phos   Normal  Abn Value:		
Glucose  Normal Abn Value:	Other:		
Anion Gap 🗆 Normal 🛛 Abn Value:	CK/CPK		
	Lactate		
	Troponin 🗆 Not Recorded 🗆 Normal 🗆 Abn Value:		
Blood gas:  Not Recorded  Performed			
pH 🛛 Normal 🗆 Abn Value:			
PaO2   Normal Abn Value:			
PaCO2   Normal  Abn Value:			
HCO3   Normal  Abn Value:			
□ Supplemental O2 If yes, Specify:FiO2			
Urine Drug Screen	Blood Drug Screen:  Not recorded  Performed		
If performed, mark all that apply	If performed, mark all that apply		
Benzodiazepines (BZD)	□ Ethanol □ Positive □ Negative		
Amphetamine	□ Other(s) □ Positive □ Negative		
Cocaine (benzylecgonine)  Positive Negative			
Cannabinoids (THC)			
Opioids         □ Positive         □ NegativeBarbiturates         □ Positive         □ Negative			
Other(s)			
Electrocardiographic (ECG/EKG) or Telemetry Find	lings (e.g. rhythm strip) Physician Interpretation at Presentation:		

Case	ID#:
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Initial cardiac rhythm:  IN Not recorded  Normal sinus	5
□ Abnormal, please describe:	
Imaging Findings at Presentation	
□ Not Recorded □ Performed If performed, mark all that apply:	
□ Head CT □ Normal □ Abnormal Specific abnormal findings	
□ Chest X-ray □ Normal □ Abnormal Specific abnormal findings	
□ Other(s) Specify □ Normal □ Abnormal Specific abnormal findi	
	-
Prehospital Data	No Prehospital Data Available
Earliest Prehospital Vital Signs  Cardio Pulmonary Arrest  Not Recorded	
Date:(mm/dd/yyyy)	
Temperature° $\Box$ F $\Box$ C (Temp: $\Box$ Not Recorded) Heart Rate:/minute;	Blood Pressure:/
Respiratory Rate:/minute %O2 Saturation:% (O2 sat:  Not Recorded)	
Prehospital Interventions	
□ Not Recorded □ Performed	
If performed, mark all that apply:	
□ Intubation, specify reason (e.g. hypoventilation, all way protection)	
Prehospital Medications	
If performed, mark all that apply:	
Benzodiazepine Name (s):	
Antipsychotics Name (s):	
Antidotes     Name (s):	
B. ED Data	🗆 No ED Data Available
Earliest ED Vital Signs:  Cardio Pulmonary Arrest Not Recorded	
Date:(mm/dd/yyyy)	
Temperature°□F □C Heart Rate:/minute; Blood Pressure:/	/
Respiratory Rate:/minute % Oxygen Saturation: %	

Case I	D#:
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ED Interventions						
□ Not Recorded □ Performed						
If performed, mark all that apply:						
Intubation, speci	fy reason (e.g. hypoventilat	ion, airway protection) _				
🗆 Cardiopulmonar	y resuscitation					
Defibrillation						
Hemodialysis						
□ Cooling Measure	es					
ED Medications (see instruction sheet for included medications)						
□ Not Recorded □ Performed						
If performed, mark all that a						
🗆 Benzodiazepine						
Antipsychotics	Name (s):					
Antidotes	Name (s):					
Vasopressor	Name (s):					
	•	oatient Data		No Inpatient Da	ta Available	
Most abnormal laboratory	values during hospitaliza	ation				
Blood Chemistry:  Not I	Recorded 🛛 Performed	Liver Panel: 🗆 No	t Recorded 🛛 Perfo	ormed	Highest	
lf abnormal, specify max va		If abnormal, specify	max values during h	nospitalization	Abnormal Value	
	Lowest Highest					
	Abnormal Abnormal	AST		Normal		
	Value Value	ALT		Normal		
Na 🗆 Norm		Total Bili		Normal		
K 🗆 Norm		Alk Phos		Normal		
HCO3 Dorm						
BUN 🗆 Norm		Other:				
Creatinine		CK/CPK	Not Recorded	Normal	·	
Glucose 🛛 Norm	al	Lactate/Lactic Acid	Not Recorded	Normal		
Anion Gap 🛛 🗆 Norm	al	Troponin	Not Recorded	Normal		
In potion tinto promition o						
Inpatient Interventions						
□ Not Recorded □ Performed						
If performed, mark all that apply:						
□ Intubation, specify reason (e.g. hypoventilation, airway protection)						
Cardiopulmonary resuscitation Defibrillation						
Cooling Measures Inpatient Medications						
Inpatient Medications						
If performed, mark all that apply:						
Benzodiazepine	Name (s) :					
□ Antipsychotics	Name (s):					
□ Antidotes	Name (s):					

Other Data/Notes:

-		D.	ME or Coro	ner Record Reviev	V 🗆 No Prehos	spital Data Avai	lable
	e of Death (mm		n:mm A.M./P.M	1.):			
	e of death is est		<b>B</b>				
Significant Po	ositive Gross A	utopsy Find	aings:				
Significant Po	ositive Histopat	hology Aut	opsy Findings	5:			
	stry: 🗆 Not Rec				t Recorded 🛛 Perf	ormed	
If abnormal, s	pecify max value	es during hos	spitalization	Highest If abnormal, specify max values during hospitalization Highest			
Lowest Highest						Abnormal	
		Abnormal	Abnormal				Value
		Value	Value	A OT			
Na K	□ Normal □ Normal			AST ALT		□ Normal □ Normal	
HCO3	$\Box$ Normal			Total Bili		$\Box$ Normal	
BUN	□ Normal			Alk Phos		□ Normal	
Creatinine	□ Normal		<u> </u>				
Glucose	□ Normal			Other:			
Anion Gap	□ Normal			CK/CPK	Not Recorded	Normal	
				Lactate/Lactic Acid	Not Recorded	Normal	
				Troponin	Not Recorded	Normal	<u> </u>

Case ID#:

				°			
Drug Screen:				Other Drug Screen:			
Not Recorded      Performed				□ Not Recorded □ Performed			
If performed, mark	all that apply			If performed, mark all that apply			
Ethanol	Negative	□ Blood +	🗆 Urine +	□ Other: □ Negative □ Blood + □ Urine +			
Opioids	🗆 Negative	□ Blood +	🗆 Urine +	□ Other: □ Negative □ Blood + □ Urine +			
Benzodiazepines	🗆 Negative	□ Blood +	🗆 Urine +	□ Other: □ Negative □ Blood + □ Urine +			
Cocaine	🗆 Negative	□ Blood +	Urine +	□ Other: □ Negative □ Blood + □ Urine +			
Barbiturates	🗆 Negative	□ Blood +	🗆 Urine +	Synthetic cannabinoid use:			
Methamphetamines□ Negative □ Blood + □ Urine +		🗆 Urine +	□ Not recorded □ Yes				
THC/cannabinoids □ Negative □ Blood + □ Urine +		🗆 Urine +					
				Synthetic cannabinoid use details (product name, quantity, place obtained, etc.) Name of synthetic cannabinoid: Other details:			
Other Data/Notes (please include any past medical history or any pertinent case history listed):							

#### Cause of Death:

#### SPECIFIC MENTAL STATUS DESCRIPTORS:

<u>Normal</u>

AAOx3 Alert and Oriented

#### Agitated-Delirium

AGITATION or EXCITATION PLUS one of following: Delirious Delirium Confused Altered / Altered mental status

#### Violent

Violent Angry Agitated (but not delirious)

#### **Hallucinating**

Visual hallucinations Auditory hallucinations

<u>Paranoid</u> Paranoid / Paranoia

Anxious

Nervous

Somnolent

Fatigued Sedated Sleeping Depressed mental status Difficult to arouse

#### <u>Unresponsive</u>

Unresponsive Comatose / Coma GCS-3

#### <u>Seizures</u>

Seizures Seizure-like activity Epileptic activity

#### **Psychosis/Psychotic**

Psychosis Psychotic Out of touch with reality

#### <u>SPECIFIC MEDICATION DESCRIPTORS:</u> Do not include medications used in CPR/ACLS/code

#### **Benzodiazepines:**

Lorazepam (Ativan) Diazepam (Valium) Midazolam (Versed) Alprazolam (Xanax) Clonazepam (Klonopin) 8

#### Antipsychotics:

Haldoperidol (Haldol) Chlorpromazine (Thorazine) Droperidol (Inapsine) Prochlorperazine (Compazine) Aripiprazole (Abilify) Olanzapine (Zyprexa) Quetiapine (Seroquel) Ziprazidone (Geodon) Risperidone (Risperdol)

#### Antidotes:

Naloxone (Narcan) Flumazenil (Romazicon) Physostigmine (Antilirium) N-acetyl cysteine (Acetadote) Activated charcoal Calcium Dantrolene Bromocriptine High-dose insulin

#### Intralipid

#### Vasopressors:

Epinephrine (Adrenalin) Norepinephrine (Levophed) Vasopressin (Vasostrict) Dopamine (Intropin) Dobutamine Milrinone

#### SPECIFIC COOLING MEASUES:

Active cooling Fans / Fans Cooling Removing all clothing Ice bath Ice pack

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

## PATIENT (OR SURROGATE) INTERVIEW

Interviewer:

\_\_\_\_\_ Agency: Date:(mm/dd/yyyy):\_\_\_\_/\_\_/

# NARRATIVE #1 – For Adults

My name is (YOUR NAME) and I'm from the Mississippi health department. We have recently seen an increase in people getting sick from synthetic marijuana. We want to learn why you and other people are getting sick, and how we can help prevent others from getting sick. You are free to choose if you want to participate in this survey. Also, you are free to skip any questions you do not wish to answer, and you may decide to end the interview at any time. Everything you say is confidential. Your name is not attached to any of your answers, and we do not report any of your information to the authorities. Would you be willing to take a few minutes to talk with us? (If asked will take approximately 15-20 minutes to complete.)

□ Yes □ No; *If "Yes," start questionnaire with Question 1*.

If "No," then read the Closing Statement on the last page.

## NARRATIVE #2 – For Minors

My name is (YOUR NAME) and I'm from the Mississippi health department. We have recently seen an increase in people getting sick from synthetic marijuana. We want to learn why (PATIENT'S NAME) and other people are getting sick, and how we can help prevent others from getting sick. We would like your permission to ask (PATIENT'S NAME) a few questions about this hospital visit. (PATIENT'S NAME) is free to choose if they want to participate in this survey. Also, (HE/SHE) is free to skip any questions they do not wish to answer, and (HE/SHE) may decide to end the interview at any time. Everything (HE/SHE) says is confidential. (HIS/HER) name is not attached to any of the answers, and we do not report any of their information to the authorities. Would you be willing to take a few minutes to talk with us? (*If asked will take approximately 15-20 minutes to complete.*)

 $\Box$  Yes  $\Box$  No; If "Yes," start questionnaire with Question 1.

If "No," then read the Closing Statement on the last page.

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# SYNTHETIC MARIJUANA USE (GENERAL)

Now I am going to ask you questions about synthetic marijuana or *Spice* and other recreational drugs you may have used.

		5.	What was the brand/street name of the synthetic
1.	Were you aware that over the past month many		marijuana product that you used in the past 24
	people in Mississippi have been getting sick after		hours? 🗆 Spice 🗆 K2 🗆 Crazy Monkey
	using synthetic marijuana?		🗆 Black Mamba 🛛 Mojo 🖓 Skunk
	Don't know     Refused		☐ Moon Rocks
	1a. If yes: how did you find out? (Read options and		□ AK-47 □ Other
	check all that apply)		
	$\Box$ TV/Radio,		
	specify		□ Refused
			Do you remember what the neckering looked
	Social media (e.g. Facebook, Twitter, Instagram),	0.	Do you remember what the packaging looked like?:
	specify		$\Box$ Yes,
	□ Internet website,	sp	 becify
	(specify)		
			🗆 No 🛛 Don't Know 🖓 Refused
	Friend	-	
	□ Family member	1.	Have you ever used <insert brand="" from="" name="" q5=""></insert>
	□ Other,		before? □ Yes □ No □ Don't Know □
	(specify)		Refused
			If No/Don't Know/Refused, skip to question 11
2.	Why do you choose to use synthetic marijuana?		7a. If yes: how many times have you ever used
			<pre><insert brand="" from="" name="" q5="">?</insert></pre>
			5 times $\Box$ > 5 times $\Box$ Don't Know $\Box$ Refused
			Keiuseu
3.	How long have you been using synthetic		8. Other than this time, have you ever gotten
	marijuana?		sick after using <insert brand="" from="" name="" q5="">?</insert>
	□ First time □ Less than 1 year □ More than 1		🗆 Yes 🛛 No 🔅 Don't Know 🛛
	year 🛛 Don't Know 🗆 Refused		Refused
4.	How often did you use synthetic marijuana in the		9. Did you notice anything different about this
	past 30 days?		<insert brand="" from="" name="" q5=""> (such as the</insert>
	$\Box$ One time only (this episode) $\Box$ Less than once a		appearance,
	week   Once a week  Several times a week		taste, or smell) compared to other times
	□ Daily □ Don't know □ Refused		you've used <insert brand="" from="" name="" q5="">? <math>\Box</math> Yes</insert>
_			□ No
	ETAILS OF SYNTHETIC MARIJUANA USE		🗆 Don't Know 🛛 Refused
	low I am going to ask some questions related to		9a. If yes: What did you notice was
	the synthetic marijuana product you used		different?:
	in the past 24 hours.		
			10. Did you notice anything different about how
			this <insert brand="" from="" name="" q5=""> made you feel</insert>
			compared to other times you've used <insert< th=""></insert<>
			brand name from Q5>? $\Box$ Yes $\Box$ No $\Box$ Don't
			Know
			□ Refused
			10a. If yes: What did you notice was
			different?:

11. Why do you think you got sick this time?	17. What should we tell people about synthetic
	marijuana?
12. How did you use this product in the past 24	
hours? ( <i>Read options and check all that apply</i> ) □ Smoke □ Vaping □ Eat or Swallow □	
Snort Intravenous	
Other	
Don't Know DRefused	
	18. What's the best way to get the word out?
13. Was this different than the way you usually use it?	
$\Box$ Yes $\Box$ No $\Box$ Don't have normal method	
🗆 Don't Know 🛛 Refused	
14. Without giving a specific name, where did you get this product? (Read options and check all that	19. Notes or comments:
apply) □ Convenience store/Gas station □	
Tobacco store/Head shop	
□ Bought from a dealer □	
From a friend or family member	Closing Statement:
	Thank you for your time. For your information,
Party or Rave	there have been reports of people getting sick
□ Other,	after using synthetic marijuana in Mississippi. I
specify	you would like more information about
Don't know CRefused	synthetic marijuana, please contact Mississippi
	Poison Control Center at 1-800-222-1222, or go
15. Do you know if anyone else who used the same	to the website -
product as you got sick? □ Yes □ No □ Don't Know □ Refused	http://msdh.ms.gov/msdhsite/_static/23,16273,1 95.html
15a. If yes: Did they have to go to the hospital because of it? □ Yes □ No □ Don't Know □ Refused	<u>35.mm</u>
<ul> <li>16. In the past 24 hours, did you also use any street drugs or prescription drugs recreationally?</li> <li>□ Yes, specify</li></ul>	
□ No □ Don't Know □ Refused	
Regarding Question 16 – Data entry team will categorize the drug name: Alcohol  Tobacco  Regular Marijuana Heroin or Opioids  Cocaine  Methamphetamines Bath Salts  Benzodiazepines  Other, specify:	
CLOSING QUESTIONS/COMMENT	