

# The Pursuit



*“You are to appoint judges and officers for all your gates [in the cities] your G-d is giving you, tribe by tribe; and they are to judge the people with righteous judgment. You are not to distort justice or show favoritism, and you are not to accept a bribe, for a gift blinds the eyes of the wise and twists the words of even the upright. Justice, only justice, you must pursue; so that you will live and inherit the land your G-d is giving you.”*

**Deuteronomy 16:18 – 16:20**

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## About *The Pursuit* Journal

*The Pursuit*, a publication of the Criminal Justice Association of Georgia (CJAG) is a peer-reviewed journal that focuses on the broad field criminal justice. *The Pursuit* publishes scholarly articles relevant to crime, law enforcement, law, corrections, juvenile justice, comparative criminal justice systems and cross-cultural research. Articles in *The Pursuit* include theoretical and empirically-based analyses of practice and policy, utilizing a broad range of methodologies. Topics cross the spectrum of policing, criminal law and procedure, sentencing and corrections, ethics, juvenile justice and more, both in the United States and abroad.

Authors interested in submitting manuscripts for consideration should use the link on the CJAG website (<http://cjag.us>) or email the Editor of *The Pursuit* at [cjagjournal@gmail.com](mailto:cjagjournal@gmail.com)



# Acknowledgments

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## About the Criminal Justice Association of Georgia

The Criminal Justice Association of Georgia is a not-for-profit organization of criminal justice faculty, students and professionals. It exists to promote professionalism and academic advancement in all areas of inquiry related to the Criminal Justice field.

The Association holds its annual meeting in October. Those interested in presenting at the conference should contact Professor Lorna Alvarez-Rivera ([llalvarezrivera@valdosta.edu](mailto:llalvarezrivera@valdosta.edu)).

Readers are encouraged to follow us on Twitter ([https://twitter.com/cjag\\_of](https://twitter.com/cjag_of)) and “like” us on Facebook (<https://www.facebook.com/CriminalJusticeAssociationofGeorgia/>) and visit our website (<http://cjag.us>).

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Brittaney Dyer

# Case Review and Threshold Assessment: The Work of the Forensic Criminologist

Stan Crowder  
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## Abstract

The reexamination of a death investigation by a forensic criminologist often elucidates investigative failures. The case study seeks to provide investigative direction, equivocal observations, and hopefully motivate an investigator. By revealing investigative malfunctions, the forensic criminologist provides a hindsight observation that may result in a secondary hypothesis and practical implications to ensure the administration of justice.

*Keywords:* death investigation, case review, threshold assessment

## **Introduction to the Report**

The following assessment is offered as an unbiased example of how a death investigation was conducted and could have been vastly improved. The goal is to present the effort of a forensic criminologist working with a local law enforcement agency to provide a review and analysis of the previous work on a death investigation and offer investigative direction. It may appear the report criticizes the previous efforts in the death investigation, hopefully the lessons learned and insight reviewed will be passed on to the current investigators. While it is easy to be an arm-chair quarterback, the investigative failures examined are highlighted for learning and follow-up by an investigator.

The sensitive data of the case has been changed. Names, addresses, and other data on the agency, investigators, victim, witnesses, and other subjects have been changed to a pseudonym to protect the privacy of individuals and the on-going efforts of the law enforcement agency.

The format presented here is not the usual academic submission; rather, this is the format used by the author to provide a case review and threshold assessment. The reader will find some explanatory commentary in a font change following each section to help better understand the logic of the investigation, the author's assessment, and the importance of the methodology; hopefully, greater insight and understanding on how a proper death investigation should be conducted is elucidated. Writing rules of the Publication Manual of the American Psychological Association are modified in the report.

## Case Review and Threshold Assessment

Report by: Stan Crowder, Ph.D.

June 1, 2020

### Report for: Sheriff, Somewhere, Georgia

“In every case of violent or unattended death, a comprehensive medicolegal investigation is required to establish facts and circumstances surrounding it,”

(Turvey & Crowder, 2017, p. 222).

### Introduction

On May 19, 2020, Chief Deputy Able, asked me to review and assess a death investigation case from 2006: case number 06-XXXXX, victim Kathy Smith Holdbrook (KSH). This review and assessment based on the documents provided may be improved, altered, or rescinded based on new information.

### Purpose

A threshold assessment is an investigative report that reviews the initial physical evidence of crime scene related behavior, victimology, and crime scene characteristics to provide investigative direction. After reviewing the case materials, a determination was made by the examiner that an insufficient investigation and forensic analysis have been performed in this case.

### Case Materials

Chief Deputy Able provided case materials.

- Incident report
- Incident photos (small black and white photocopies)
- Incident sketches
- Investigator reports
- Fire Department reports
- Georgia Bureau of Investigation (GBI) reports
- GBI autopsy report
- Coroner Subpoenas
- Medical history report (1)
- Many documents apparently prepared by the mother of the victim and included in the case file

**Administrative Note:** The documents provided this examiner were not numbered and were not in an assembled order. There are many documents that appear to be notes provided by the mother of KSH. Those documents have been reviewed and considered; however, no information in the timeline is taken from the materials noted as “Victim’s Mother’s Notes.” The photos provided were of very poor quality and of little use in this analysis.

### ***Explanatory Comment***

*The first portion of the report provides information on what the forensic criminologist had to work with to produce the assessment. In dozens of cold cases reviewed by the author, there are always reports missing, photographs unavailable, or some other diagnostic materials lost. “Many crimes are not susceptible of solution by reason of the fact that the evidence is insufficient,” (O’Hara, 1976, p.6). O’Hara’s quote provides a prelude to the report.*

**Background**

**Victim:** Kathy Smith Holdbrook (KSH), Caucasian Female, Date of Birth: January 17, 1974.

Mrs. Holdbrook was found deceased in her home, 600 Old Brooks Drive, Candle, Georgia, in the bathtub near the master bedroom on August 29, 2006, by her husband, Lawrence Stacey Holdbrook (LSH) and reported at 1958 hours to 911.

**Timeline**

The following timeline was developed from documents in the case file.

<b>Date</b>	<b>Time</b>	<b>Event</b>
7/24/05	UNK	KSH completed a Physical Examination Medical History information sheet for Physicians’ Immediate Med of Candle.
6/--/06	UNK	Investigator Rayford was advised that KSH was seen by her doctor by LSH. Unverified.
8/24/06	UNK	LSH advised Deputy Cooper KSH had a seizure on this day. Unverified.
8/29/06	1545	Chase Holdbrook, brother of LSH, advised he picked up KSH at her place of work and brought her home at approximately 1545-1600 hours.
	1600	LSH advised Investigator Rayford he talked to KSH at this time.
	1950	LSH advised Deputy Cooper he arrived home.
	1958	LSH called 911 to report finding his wife in the bathtub.
	2000	Somewhere County Fire Department (SCFD) dispatched to incident location.
	2008	Deputy Cooper and SCFD arrive on scene. ***It is not clear in the incident report, but apparently Chase Holdbrook, brother of LSH, <i>was on the scene at this time.</i> See Investigative Suggestions.
	2030	Investigator Rayford arrived at the scene of the death. Investigator Rayford notes, “There was also some family at the residence...” Who this is and when did they arrive at the incident location is unclear.

	2050	Coroner Dunlap arrives on scene.
	2104	SCFD departs scene.
	2230	Investigator Rayford prepares Property Evidence Control Record Number 12345 listing twelve medications, one CD of photos, and one name bracelet from Southside Hospital Candle taken from the incident location.
8/30/06	UNK	Investigator Rayford contacted the Coroner, Eddie Dunlap, to ascertain the cause of death. Cause pending.
9/26/06	UNK	Georgia Bureau of Investigation (GBI) official report of no ethyl alcohol in the blood taken from KSH.
10/10/2006	UNK	GBI official report: only drug in KSH blood was diphenhydramine (lower than the lowest calibrator of 0.125 mg/L).
		Note: Diphenhydramine is an antihistamine that reduces the effects of natural chemical histamine in the body. Histamine can produce symptoms of sneezing, itching, watery eyes, and runny nose. Diphenhydramine is used to treat sneezing, runny nose, watery eyes, hives, skin rash, itching, and other cold or allergy symptoms. Diphenhydramine is also used to treat motion sickness, to induce sleep, and to treat certain symptoms of Parkinson's disease.
12/14/2006	UNK	GBI official report: autopsy final diagnosis catamenial epilepsy (anamnestic); cause of death - drowning due to submersion in bathtub due to catamenial epilepsy.
1/09/2007	2030	Investigator Rayford contacted the Coroner to seek assistance in obtaining medical records and doctor contact information on KSH.
1/09/2007	UNK	Coroner Dunlap issues subpoena for production of documents from Dr. James Hall - Neurology of Somewhere and Dr. Charles Crawford - Physicians Urgent Med of Candle.
1/10/2007	1645	Investigator Rayford attempts contact with doctors Crawford and Hall.
1/11/2007	1540	Investigator Rayford continues follow-up with Dr. Hall's office.
1/12/2007	1530	Investigator Rayford spoke with Dr. Hall.
4/01/2007	UNK	Investigator Rayford exceptionally cleared the death investigation based on, "Drowning due to submersion in bathtub due to catamenial epilepsy," a determination made by the Medical Examiner.



5/12/2008 UNK

James Gray with Saylor and Waters PC, Attorneys at Law,  
requests case file.

### ***Explanatory Comment***

*The purpose of creating a timeline is to examine the last known activities of the victim. The goal is to determine how the victim got to a place and time where the incident occurred. Other information is illuminated in the process of developing the timeline. Simply put, a chronological presentation of all known information shapes the case and the analysis.*

### **Forensic Victimology**

Forensic victimology is the process of learning everything there is to know about the victim: who they were, how they lived their life, and everyone in their life. This process of investigating, establishing and evaluating victim traits and history requires an extensive examination of the victim's lifestyle exposure and situational exposure to risk (Turvey, 2014). Forensic victimology in this case is woefully incomplete.

Name: Kathy Smith Holdbrook (KSH),

Race: White/Caucasian

Sex: Female

Date of Birth: January 17, 1974

Age: 31 years of age

Height: 5 foot 4.5 inches

Weight: 155 pounds

Eye Color: Brown

Hair Color: Blond

Family Legend:

Husband - Lawrence Stacey Holdbrook (LSH) (research by the examiner determined another name used as Stacey L. Holdbrook)

Father - Possibly David Floyd - Not recorded in incident report or investigator's report

Mother - Suzie - as noted in "Mother's Notes"

Siblings - Unknown

Residence Location: 600 Old Brooks Drive, Candle, Georgia 30555

### **Victim Exposure**

Lifestyle Exposure is the frequency of potential harmful elements that exist in a victim's everyday life because of biological and environmental factors; as well as, past choices.

There is insufficient data to evaluate victim exposure. There is only ONE item of harmful elements considered by the investigator and medical examiner: catamenial epilepsy.

Situational Exposure is the amount of actual exposure or vulnerability experienced by the victim to harm from environmental and personal traits AT THE TIME of victimization.

There is insufficient data to evaluate victim exposure. There is only ONE item of harmful elements considered by the investigator and medical examiner: catamenial epilepsy.

### ***Explanatory Comment***

*Often, victim information is lacking. While investigators gather the basic data, they fail to know the victim. Investigators should seek to examine, consider, and interpret victim evidence to understand and answer investigative and forensic questions (Turvey, 2014). The adage the author uses in the classroom: "If you know your victim and know your victim well, you will probably know your perpetrator."*

### **Findings and Discussion**

See essential protocols mandated in Death Investigations (NIJ, 1999) to include Sections C-F: Documenting and Evaluating the Scene; Documenting and Evaluating the Body; Establishing and Recording Decedent Profile Information; and Completing the Scene Investigation.

#### Investigative Failures

The investigator (Rayford) appears to have decided on the scene the cause and manner of death. He did not follow-up on many items he noted; he did not conduct recorded interviews; and based upon his report, he took no actions from 8/30/2006 to 1/09/2007 and took no actions between 1/12/2007 to 4/01/2007. It appears he waited for the autopsy report and then "exceptionally cleared" the case with no critical thinking, use of the scientific method, or the application of logic. "Cause of death must not be called without ALL evidence and certainly not until a thorough medico-legal death investigation has been completed," (Turvey & Crowder, 2017, p.230).

#### Forensic Victimology Failures

Everyone should be interviewed as people with important information often do not come forward. Many people wait for someone to approach them out of ignorance as is often quipped, "Well, it probably is not important."

The investigator failed to conduct investigation of:

A list of victim's daily routines, habits, and activities

A list of victim's family members with contact information

A list of victim's friends with contact information

A list of victim's coworkers/schoolmates with contact information

A TIMELINE of events using Witness Statements, digital evidence, and physical evidence

Medical history and physician insight: the investigator gathered only one document about the victim's medical condition which was completed by the victim on July 24, 2005. Investigator failed to examine current medical regimes; current treatment professionals; recent medical treatments/appointments.

Personal Items: contents of wallet, purse, handbag, backpack, briefcase, suitcase, or medicine bag

Recently Scheduled Events

Upcoming Scheduled Events

Cell phone, calls, chats, address book, GPS, photos, video

Laptop/desktop: emails, calls, chats, documents, address books, browser history, photos, video

Personal Web Sites: recent browser history, social networking activity, blogs, personal subscription sites

Financial Web Sites: payment history, stocks, mutual funds, 401K activity, credit cards, and on-line banking

Personal GPS Device: recent trips, destinations, bookmarked points of interest

Missing items (what is not there that should be there?)

Location/condition of personal vehicle

Hard-line phone calls (incoming and outgoing)

E911 calls and criminal history of residence  
Current and previous family members

Current and previous household members

Current and previous friends

Current and previous co-workers/classmates

History of relationship counseling

Place of employment/work schedule/supervisor

Employment history

Copy of job application/resume

Business cards kept handy by victim

Work email, browser history, photos, video on work computer

Credit cards/history

Bank accounts/history/safety deposit box

Property ownership (residences, land, vehicles)

Stocks, bonds, mutual funds, 401K, retirement benefits

Insurance policies

The clothing of KSH was not collected or examined. “The clothing of the deceased is an important article of evidence in the investigation of a homicide since it may be part of the corpus delicti and can yield valuable information concerning the manner of death,” (O’Hara, p. 525).

### ***Explanatory Comment***

*Demonstrating the actual limits of victim evidence and investigative efforts highlights the lack of supporting information and affects subsequent analysis. The lack of investigative effort in the case and the notation of such provide investigative direction.*

### **Equivocal Analysis of Autopsy Report**

Medical Examiner, Dr. Evan James, conducted the examination of KSH on August 30, 2006. Cause of Death is determined as Drowning due to submersion in bathtub to catamenial epilepsy. Final Diagnosis is listed as Catamenial Epilepsy (anamnesitic); Drowning; Pulmonary edema. (Anamnestic reaction: renewed rapid production of an antibody following second or later contact with the provoking antigen or with related antigens.)

Catamenial epilepsy refers to seizure exacerbation in relation to the menstrual cycle. In its purest form, a woman with catamenial epilepsy may have seizures only at the time of menstruation, but this form is not very common. More typically, the woman may tend to have more seizures at particular times during her menstrual cycle, usually just before or during the onset of menstruation or at the time of ovulation.

The following quoted material is offered as medical insight.

- “To establish the diagnosis of drowning it is of particular importance to correlate informations (sic) about the *circumstances preceding the death, the past medical history of the victim if known, the circumstances of the body recovery from the water, the external examination, the autopsy findings and the results of complementary analysis (histologic, biochemical, toxicological analyses and diatom test*” (Diagnostic of Drowning in Forensic Medicine).
- “*Death of a victim found in water should not always be related to drowning,*” (Knight, 1991, as noted in Diagnostic of Drowning in Forensic Medicine). “*It is assumed that 10% of the drowned humans die after laryngospasm or breath-holding without actually aspirating fluid,*” (Diagnostic of Drowning in Forensic Medicine).
- “One of the signs of drowning would be large amounts of froth present around the nostrils and mouth in freshly drowned bodies. This froth is also present in the upper and lower airways. *Froth can also be observed in cases of edema of the left ventricular failure but in drowning cases the volume of froth is generally much more abundant than in other origins,*” (Diagnostic of Drowning in Forensic Medicine).
- “*One of the signs of immersion is skin maceration becoming visible after various time internal depending on the temperature of the immersion water. The skin become wrinkled, pale and sodden like ‘a washer woman’s skin,’*” (Diagnostic of Drowning in Forensic Medicine).
- “Our results suggest that it is often difficult to distinguish drowning deaths in SUPED (Sudden Unexpected Death in Epilepsy) based on postmortem findings. Studies have shown that the incidence of SUPED is probably underestimated because of the under-recognition by medical examiners, coroners, and physicians because of misclassification of the cause of death,” (Cihan, E., Devinsky, O., Friedman, D., Graham, J. K., Hesdorffer, D. C., Brandsoy, M., Li, L., Fowler, D. R., Donner, E. J., 2018, p.1970).
- “*As both drowning and SUDEP are pathological diagnoses of exclusion, it is understandable that a death could be erroneously attributed to drowning based on limited circumstantial evidence,*” (Cihan, et al, 2018, p. 1970-1971).<sup>1</sup>

The GBI autopsy report indicates:

- There is white foam exuding from the nose and mouth.
- There is foam within the trachea.
- No froth in lungs.
- The bronchi contain white foam.
- No water in stomach.
- No edema of brain.
- *A fresh puncture, covered with a “band-aid,” is on the posterior lateral left buttock.*

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<sup>1</sup> NOTE: Font change here emphasizes the information for investigative analysis.

- The gastrointestinal system note indicates 350 ml of tan partially masticated food. \*Yet there is no toxicologic analysis of this material.\*

It is the opinion of the examiner that the autopsy conclusions are equivocal. O'Hara (1976) notes in his indications of true drowning the following: "Swelling of the lungs, signs of asphyxia, the nature of the water in the stomach, the mouth is usually found open, and a comparison of the chloride content and the magnesium content in the left and right ventricles of the heart," (p.539).

***Of special note, the autopsy report does not indicate a note found in the computer-aided design drawing of the crime scene. There is a note on this document, "abrasions to right elbow, top of left big toe, and on back of right shoulder."*** The preparer of this document is unknown. The autopsy report does not reference this "on the back of right shoulder" abrasion; this could be consistent with someone held under water. A review of the autopsy photographs is required.

**A fresh puncture, covered with a "band-aid," is on the posterior lateral left buttock. Amazingly, no one (investigator, M.E., or supervisor reviewing/approving reports) seems to notice or question this.** Although the toxicology screen showed nothing of significance in KSH's system, what is this; how did it get here; how does a Band-Aid stay on in a submerged body? No medical intervention by SCFD is noted in the materials provided.

There is no determination on time of death found in the file. A determination of the time of death should be attempted in all death investigations. The time of death determination corroborates or disputes alibis and clarifies the victim's actions and movements prior to death. "One of the first steps in an investigation of homicide is to determine the time of death," (O'Hara, 1976, p.533).

Investigator Rayford notes, "Lividity was present but not fixed and rigor was also present in smaller joints but not fixed also." Warm environments will hasten the onset of rigor and Investigator Rayford noted the bathroom was warmer than the other rooms in the house; "Upon entering into the bathroom the temperature was about 5 to 7 degrees warmer than (sic) the rest of the residence." Lividity will usually become apparent approximately 30 minutes after death and will be pronounced about 4 hours after death. Since lividity was present but not fixed, the time of death remains questionable.

No autopsy photos were available for review. No reports from the Coroner are in the case file; the examiner does not know the body temperature, etc. The death certificate was not provided the examiner.

### ***Explanatory Comment***

*To be clear, the author is not a medical expert. In examining any case, the author has found areas in which he lacks sufficient knowledge to opine. By providing the author's research on the subject (e.g. quoted material offered as medical insight), the reader has some understanding on why the author may find results questionable. In the case presented, the author asked a medical*

*doctor to peer review the medical examiner's report and the case assessment. As a result of that peer review, more information was included in the quoted material offered as medical insight. The notes in bold-type elucidate two of the author's most significant findings. In the next section, the author notes the requirement for medical professional input.*

## **Investigative Suggestions**

It is the opinion of the examiner that the death investigation of KSH was inadequately conducted and should be re-opened, thoroughly investigated, reviewed and evaluated by medical professionals, and crime scene analysts and a reconstruction completed to determine if this was in fact an accidental death or a homicide.

The following is a list of suggestions for further investigation to establish the facts of this case in addition to the requirements for examination previously missed in establishing victimology. The examiner will also pose questions for exploration by an investigator.

### **1. Review of 911 call, CAD# 9876543 created 8/29/2006 at 19:58:21**

Without listening to the call, the examiner is unable to apply forensic linguistics to the report (LSH speech, manner, and excited utterances). If the call can be located and provided this examiner, a forensic linguistics analysis can be completed.

The 911 operator comments typed into the CAD system are noted as:

19:58:49 Comment: The call to the incident location was dispatched as, Possible S48 Female is Poss Drown in the tub She is blu.

The dispatch of the call likely set the law enforcement response to identify the death as a drowning.

19:59:01 & 19:59:57 The operator notes LSH reports: he just got home.

There are no indications in the case file to verify the time of arrival of LSH. What time did LSH leave work? Are those time sheets available today? No neighbors were interviewed; no canvass was completed. We do not know when LSH got home.

19:59:12 Comment: Cannot get her out the tub.

This indicates LSH reported he tried but was unsuccessful in getting KSH out of the bathtub. This does not comport with reality. There are no indications LSH has any physical limitations so was it likely he could not get his wife out of the tub? Why could he not pull his wife out of the tub? Was Chase, the brother, at the location then? Chase was there when the first deputy was on the scene. Could not two men pull her out of the tub? If LSH *tried* to remove KSH from the tub, wouldn't he be wet from the bathwater? There are notes from the mother of KSH that LSH sleeves were down on his dress shirt at the scene and he was not wet. The re-interview of all persons at the incident location should be asked about the appearance and condition of LSH.

## **2. Review of Incident Report 06-82199 by Deputy Cooper.**

It is noted in the report narrative that Somewhere Fire/EMS (SCFD) arrived before Deputy Cooper.

The examiner found no statements by the SCFD personnel; only required reports from SCFD are in the file. All responding SCFD personnel should be interviewed to determine the condition of KSH, LSH, the crime scene, and every person on the scene upon arrival.

The incident report states, “Mr. Holdbrook stated he spoke to Kathy at approximately 1600 hours when she came home from work.”

Because no records were examined by the investigator for the cell phone of KSH or LSH or the hard-line phone, this cannot be verified. There is no determination if LSH called KSH from his work location or from his cell phone. Obtaining phone records now may not be possible.

The incident report states, “Mr. Holdbrook stated when he arrived home from work at approximately 1950 hours, he found her in the bathtub. Mr. Holdbrook stated Kathy was in the tub with the water running, and she was under the water, apparently deceased. Mr. Holdbrook stated he had turned off the water and drained the tub.”

If the water was running and she was under the water, the tub would have been filled or near filled. If LSH drained the tub, his arm would have had to go down through the water to loosen the drain plug. Yet indications from the mother’s notes reveal he was not wet and was still wearing his work apparel (long sleeve shirt). Again, interviews with SCFD personnel and others at the scene should include an examination of this.

LSH described the water running but did not say it had overflowed out of the tub. The victim’s mother ran the faucets and gave a time of 10 to 12 minutes for the tub to fill. That time estimate was without a body in it, so the tub would have filled more quickly. In any event, the death of the victim must have occurred within minutes of LSH discovering her *if* the “running water” story is true. Lividity will set within half an hour but is usually not visible for about 2-hours. Although the time of death was never established, Investigator Rayford noted lividity and rigor in the smaller joints. Clearly this indicates the timeline as reported in this case is not accurate.

The incident report states, “Mr. Holdbrook stated Kathy has a history of seizures and had last had seizure on Thursday 082406.”

This statement was not / has not been verified.

The report states, “Mr. Holdbrook stated Kathy takes several medications and her doctor is Dr. James Hall of Neurology of Somewhere. Mr. Holdbrook stated Kathy last saw her doctor in June.”

This statement was not / has not been verified.



***Explanatory Comment***

*By revealing the many shortcomings in the initial stages of the case investigation, the author poses questions and comments to guide a cold case investigator on steps to take. Certainly, memories have greatly diminished over the many years since the incident, but someone may remember something. Any information developed will help in reconstructing the crime scene.*

**3. Review of Investigator Reports**

The autopsy toxicology report does not reveal any of the medications collected by Investigator Rayford. Why was Kathy not taking any of the 12-medications collected by Investigator Rayford? The property evidence control record indicates the following drugs were taken from the home: Advair (inhaler), Cyclobenzaprine, Boric Acid, Phenobarbital, Ibuprofen, Qdall, Topamax, Zyrtec-D, Acetazolamide, Percocet, Guaphen II DM, and Biaxin. The victimology surrounding KSH and her medical status requires extensive investigation.

Investigator Rayford’s entry in his report for 1/12/2007 states, “Upon arrival at work this date (*note: this is 136-days after the death of KSH*) I called and spoke with Dr. Hall. He stated that he had not been treating Mrs. Holdbrook for the entire time but in her registration paperwork that she filed (sic) out herself she stated she had been having seizure since she was 11 years of age.”

There is *only one* medical report and it is not from Neurology of Somewhere. It is from Physician’s Urgent Med of Candle. Records from Neurology of Somewhere are required to verify claims made by LSH. The following *current information* on Dr. Hall is provided.

Name: James M. Hall Designation: MD
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Lic #:	678912	Profession:	Physician	Subtype:	Full
Status:	Active	Issued:	6/9/2000	Expires:	10/31/2021
Specialty/Subspecialty	Certifying Board		Primary Specialty?		
Neurology	American Board of Psychiatry & Neurology		Y		
Clinical Neurophysiology	American Board of Psychiatry & Neurology		N		

Practice Address

Street Address: Health Touch	
7402 Holly Avenue	
Santa Cruz CA 93117	
County:	Santa Cruz
Country:	United States

The single medical report found in the file is dated July 24, 05 (*note: more than a year before the death of KSH*) KSH notes, "I have had cad epilepsy since age 13. No major problems. Treated with meds above and depo shot." KSH notes her current medications (some writing is unreadable and hence not reported here) as: phenobarbital, Tylenol, Topamax (also known as Topiramate) is used alone or with other medications to prevent and control seizures (epilepsy), Boric Acid (KSH notes for yeast infection - PRN), Depovera Shots Acid (Depo-Provera is a contraceptive method women get as an injection. It is a manmade hormone called medroxyprogesterone, which is similar to progesterone. The hormone works on the pituitary gland, causing ovaries to stop releasing eggs.\*\*\*See previously quoted materials on catamenial epilepsy.\*\*\*

Yet *none* of these drugs were found in the GBI toxicology report.

Dr. Charles Crawford is noted on documents within the case file; however, there is no indication that Investigator Rayford ever spoke with or obtained files from Dr. Crawford. The following *current information* on Dr. Crawford is provided.

Name: Charles Ralph Crawford Designation: MD
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Lic #: 93123 Profession: Physician Subtype: Full						
Status: Active Issued: 8/2/1992 Expires: 3/31/2021						
<table border="1"><thead><tr><th>Specialty/Subspecialty</th><th>Certifying Board</th><th>Primary Specialty?</th></tr></thead><tbody><tr><td>Family Medicine</td><td></td><td>Y</td></tr></tbody></table>	Specialty/Subspecialty	Certifying Board	Primary Specialty?	Family Medicine		Y
Specialty/Subspecialty	Certifying Board	Primary Specialty?				
Family Medicine		Y				

Practice Address

Street Address: 720 Well-Being Ave.

Candle GA

County: Somewhere

Country: United States

There is no verification of information given by LSH to Investigator Rayford that KSH was seen by her doctor in June of 2006 (see timeline).

Investigator Rayford noted, “Mr. Holdbrook stated that sometimes when she did not fell (sic) well or think she may be having a seizure she will take a bath and it sometimes helps her feel better.” This statement should be discussed with the mother and others. This examiner considers it illogical for a person that has a seizure disorder to want to put themselves in harm’s way by exposure to drowning in a tub of water.

***Explanatory Comment***

*Revealing investigative direction and providing current information (as noted in the files of the Composite Medical Board of Georgia) may motivate a cold case investigator. The victim toxicology (e.g. presence of drugs or alcohol in the victim’s body) was completed, but the lack of drugs in the case creates questions.*

**4. Investigative Suggestions as determined from documents noted as “Mother’s Notes.”**

Betty Burns, a friend of Chase Holdbrook (brother of LSH), would provide information, 404-123-4567. Ms. Burns should be interviewed.

In reviewing the credit card history of KSH and LSH, the mother suggests LSH spent \$10,000 to visit a psychiatrist. If possible, this should be verified and well as any intelligence gained from the work records of LSH.

A second mortgage note was due at Wachovia bank a month before the death of KSH. The loan amount was \$56,000. A complete credit history and actions of LSH before and after the death of KSH should be examined.

Katie Floyd, previously married to the cousin of KSH named Chris Floyd, should be interviewed. Apparently LSH visited her quite often without KSH.

All workmates of KSH should be interviewed.

As previously noted: the mother conducted a crime reconstruction and notes the tub in the home fills in 10-12 minutes. If the water was still running as LSH reported to Deputy Cooper, “Mr. Holdbrook stated Kathy was in the tub *with the water running*, and she was under the water, apparently deceased.” Hence, if the water was running and she was under water, why did it not overflow? Although the time of death was never established, Investigator Rayford noted lividity and rigor in the smaller joints. A crime reconstruction is in order.

The mother notes that the date of the death is the only day LSH has worked late. LSH work/timesheet should be examined if possible. Interviews with previous workmates of LSH is in order.

The mother notes several drugs that LSH was taking: Ambien, Valium, and, “He also made the comment he was trying to come off of steroids.” Current and past drug use of LSH should be examined. If LSH was using illegal schedule III anabolic steroids, he could be prone to: “Rapid mood swings and erratic behavior; And absences of good or rational judgment” and other indicators (Turvey & Crowder, 2015, p.73).

### ***Explanatory Comment***

*This is the first case in which the family analysis was included in the materials provided the examiner. It appears that the frustration of the family, particularly the mother, with the investigation efforts ensured the family proceeded to attempt a crime reconstruction and equivocal analysis. This reinforces the lack of forensic victimology conducted by the investigator.*

### **5. Other Investigative Suggestions by Examiner**

All girlfriends or ex-wives of LSH should be located and interviewed to determine his personality and if he ever said anything about KSH and her death. Relationships change and what may have been “protected” before may not be protected now.

Workmates of LSH should be interviewed. He has worked many locations, sometimes for just a few months, but insight on his personality and if he ever said anything about KSH or her death is important. A Department of Labor work history is suggested.

Chase, brother of LSH, should be investigated and re-interviewed. Why did he pick her up at work and why did KSH leave work earlier than usual that day? He was the last person to see KSH alive. Where did he go after dropping off KSH. His movements and calls must be examined. Deputy Cooper notes in the incident report, “Mr. Holdbrook’s brother, Chase Holdbrook, advised he picked Kathy up from her job at Fair Oaks Elementary and brought her home at approximately 1545-1600 hours. Chase stated Kathy complained of feeling tired and not feeling well.” With Chase Holdbrook providing this information to the first responding deputy, he was there upon her arrival possibly. Chase’s actions from 1600 to 1958 hours require clarification.

Investigators must consider a profit motivation for the death of KSH. LSH was apparently heavily in debt with credit cards and a second mortgage payment due near the date of the death of KSH.

There is a very old criminology hypothesis worth exploring with the family. “Every layman knows an epileptic if he sees him in convulsions; but it is not sufficiently known that an epileptic after the fit may still remain for a time in a state of clouded consciousness...” (Hollander, 1923, p.195). If KSH did have this “state of clouded consciousness,” she would be very vulnerable during that time.

Lastly, while the cause and manner of death as determined by the medical examiner cannot be ruled out, the failures to thoroughly investigate the death abound.

### ***Explanatory Comment***

*Investigative questions and comments appear in various sections of the report. The final thoughts and directions offered by the examiner are provided in this section.*

### **Conclusion**

The author has examined dozens of cold homicide cases and death investigations. In every case examined, forensic victimology is near non-existent. Forensic victimology training for criminal investigators is severely lacking. The author has conducted many seminars on forensic victimology for law enforcement officers over the years and found renewed motivation by investigators for cold cases once educated on the importance of this aspect of criminal investigation.

Evidence assists in proving or disproving any theory about any element of the crime. Yet, the author has found investigators failing to consider staging. “Staging of a crime scene is a specific type of precautionary act intended to deflect suspicion away from the offender by manipulating the physical evidence. Staging often involves the addition, removal, or alteration of items in the crime scene to change the appearance of motive...” (Chisum & Turvey, 2011, p.138). Again, this element for consideration is simply a lack of training.

Realizing that the case examined may have been one of dozens the investigator was attempting to resolve, the observations and suggestions of the hindsight critic can be tough for an investigator to accept. The author attempts to motivate a reexamination of the case.

Lastly, as a consultant in the case examination, the author has no expectation nor right of inclusion of any follow-up or case development. This can be frustrating as there is no feedback on any issue, concern, or direction offered; hence, the author is often left wondering if the work was successful or even considered. One can only hope.

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# A Pathologist's View of a Valued Medicolegal Death Investigator

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## Abstract

The death investigation system in the United States lacks in uniformity from one jurisdiction to another. Though, there is one commonality to become a medicolegal death investigator, death investigation certifications. Employment postings for medicolegal death investigator positions often indicate that a death certification from the American Board of Medicolegal Death Investigators (ABMDI) is either required prior to gainful employment or required to be obtained within a year or two after employment. To find out how important death investigation certifications are, a survey was distributed to the National Association of Medical Examiners (NAME) to determine what pathologists valued most in medicolegal death investigators to assess the actual value of death investigation certifications. The survey questions asked pathologists how they valued death investigation experience, death investigator certifications, education level, and any related professional experience (i.e. police, medical, crime scene technician). Overwhelmingly, 61.86% (N = 73) of the 119 respondents indicated that professional experience was the most valued trait in a medicolegal death investigator. The second most agreed upon value was death investigator certifications at 22.03% (N = 26) followed by related professional experience at 11.86% (N = 14), and lastly educational level at 4.24% (N = 5).



## **A Pathologist's View of a Valued Medicolegal Death Investigator**

The profession of medicolegal death investigations is an anomaly in the field of criminal justice. The career is often thankless and involves dealing with individuals during the worst time of their lives. Medicolegal death investigators are the extension of a coroner or medical examiner's office for the forensic pathologist. The primary goals of a medicolegal death investigator are assessing a death scene by interviewing witnesses, collecting evidence, photographing the scene, examining the body, and so forth to assist in determining the possible manner of death. The information gathered by the medicolegal death investigator is reviewed by the forensic pathologist to supplement the autopsy and any other ancillary examinations to determine the cause of death.

In 2016, the National Science and Technology Council Committee on Science (NSTCC) (Medicolegal Death Investigation Working Group (MDI WG)) published recommendations on strengthening the medicolegal-death-investigation system through accreditation and certification. As a component of recommendations, one suggestion was certification of medicolegal death investigators. According to the NSTCC (2016), a certified death investigator would be credentialed that proves qualifications and requisite knowledge, skills, and abilities to perform their job. Currently, there is only one certification program for medicolegal death investigators in the United States. The certification program is the American Board of Medicolegal Death Investigators (ABMDI).

ABMDI offers two levels of certifications. The first level is registry certification and the second level are board certification. According to ABMDI (2020a), there is a total of 1,958 individuals in the directory for the level of registry certification. The individuals consist primarily of medicolegal death investigators and forensic pathologists. To be eligible for registry

certification, the candidate must have a minimum of a high school education, employment with a medical examiner or a coroner's office, a minimum of 640 hours of experience, agree to the ABMDI Code of Ethics, and pass the registry examination (NSTCC, 2016).

The number of individuals designated as board certified is 266 (ABMDI, 2020b). Similar to registry certification, the individuals consist primarily of medicolegal death investigators and forensic pathologists. The qualification for board certification requires registry certification, an associate degree, a minimum of 4,000 hours of experience, and pass the board certification examination.

The exams for registry and board certification can be completed online or at a designated testing center. Occupational Research and Assessment (2020) does have online practice tests for the registry and board certifications. The questions for both are very similar to the actual exams. According to the NSTCC (2016), approximately 75% of the candidates pass on the first attempt. There is a range of 5,000 to 8,000 total medicolegal death investigators in the United States (NSTCC, 2016). Within the first or second year of employment, many medical examiners and coroner's offices do require the medicolegal death investigator to pass the registry examination as a condition of employment. Does passing an examination necessarily translate to competency as a medicolegal death investigator? Is too much weight being placed on a certification exam? What is the value of education, experience as a medicolegal death investigator, and related investigative experience to be a competent investigator?

In an attempt to better understand what qualifications for medicolegal death investigators are most sought, a 10-question survey was created and to be completed by pathologists. With the assistance of the National Association of Medical Examiners (NAME) Data Committee, the

survey was distributed to the pathologists on their email list serve. The results of the survey underwent a qualitative analysis.

## **Background**

In the United States, the medicolegal death investigation profession is generally comprised of three major personnel categories: medicolegal death investigators, coroners, and medical examiners.

As previously discussed, accreditation of medical examiner and coroner offices and certification of medicolegal death investigators were proscribed methods for strengthening the medicolegal death investigation system in the United States.

Coroner's offices can obtain accreditation through the International Association of Coroners and Medical Examiners (IACME). Medical examiner offices can become accredited by the National Association of Medical Examiners (NAME) or IACME. Accreditation is achieved by meeting a list of standards set by each organization.

The IACME (2020) requires that investigation staff meet the following standards:

- “The “chief/lead investigator” shall be registered by the American Board of Medicolegal Death Investigators (ABMDI) or its equivalent.
- The majority of the coroner/medical examiner (C/ME) investigators should be registered by the American Board of Medicolegal Death Investigators (ABMDI) or its equivalent” (p. 10).

NAME has similar standards for investigators in a medical examiner's office. According to the National Association of Medical Examiners (NAME) (2020), the following are the established criteria to meet their standards:

- “Is the office's chief investigator or is at least one principal investigator a Registered Diplomate of the American Board of Medicolegal Death Investigators?

- Are a majority of the medical investigators who have worked in the office for over 5 years Registered Diplomates or Board Certified Fellows of the American Board of Medicolegal Death Investigators?” (p. 29).

According to NAME’s (2020) most current information, seven coroner’s offices, 67 medical examiner’s offices, and four medical examiner/coroner’s offices were fully accredited.

Certification generally refers to training and educational credentialing for individual practitioners. Certification is a basic credential for individuals practicing within a particular industry. Currently, the only recognized certification program for medicolegal death investigators is ABMDI, which was certified by the Forensics Specialties Accreditation Board (FSAB). The ABMDI certification program was first accredited by the FSAB in 2005 and has subsequently been reaccredited three times in 2010, 2015, and 2020 (FSAB Accredited Conformity Assessment Bodies (CABs), 2020). The FSAB was formed in 2000 to develop a voluntary program to objectively assess forensic specialty boards seeking accreditation. (FSAB History, 2020).

A recent online search found one other organization offering certification for medicolegal death investigators and that is the Death Investigation Training Academy (DITA) located in Cuba, Missouri. They offer in person and online training that are prerequisites to taking their medicolegal death investigator certification exam. Their website noted “Many professionals currently working in death investigations or those wanting to enter the field of death investigations do not yet qualify for other national certification programs ... (t)his certification is intended to fill the gap in certification of basic knowledge of death investigations not previously available” (Death Investigation Training Academy, 2020, para. 2).

Both ABMDI and the Death Investigation Training Academy state that their certifications are based on the tasks deemed necessary for a successful death investigation in the National Institute of Justice publication *Death Investigation: A Guide for the Scene Investigator* (ABMDI, DITA 2020).

There are also other organizations involved in the process of setting standards for certain specialties in the forensic sciences. The Organization of Scientific Area Committees (OSAC) for Forensic Science is administered by the National Institute of Standards and Technology (NIST). OSAC's stated goal is development of technically sound standards and guidelines and encouraging their use throughout the forensic science community (Organization of Scientific Area Committees (OSAC) for Forensic Science, 2020). OSAC has a medicolegal death investigation subcommittee that has published guidelines for an organizational and foundational standard for medicolegal death investigation (OSAC, 2019). They have also published surveys of medical examiners on the Scientific Working Group of Medicolegal Death Investigation (SWGMDI) documenting comments on the proposed standard for certification of medicolegal death investigation personnel (Scientific Working Group on Medicolegal Death Investigation (SWGMDI), 2012).

SWGMDI (2014) published their own report outlining their recommendations for medicolegal death investigator certification. Howe (2011) noted ABMDI's contributions to the SWGMDI was promoting standardized medicolegal death investigation.

So, while there have been numerous reports and working papers calling for mandatory accreditation and certification, little research has been done on the perceived value of those certifications by others. Domino, et al. (2017) studied the various certifications of forensic

accountants and their perceived value by academics and the “end users” of their expertise, the defense attorney, who utilizes accountants as expert witnesses during litigation.

In our study, the authors limited their focus on the perceived value of ABMDI certification of medicolegal death investigators by the end users of their product, the pathologists, who rule on cause and manner of death.

## **Methods**

### *Sample*

Participants were recruited through an e-mail distribution list maintained by NAME. Information was unknown to how many pathologists were on the distribution list. A 10-question survey was reviewed and approved by the NAME Data Committee. The survey aimed in addressing demographic information of the pathologists and identifying what pathologists valued most in medicolegal death investigators. A total of 119 pathologists responded to the survey. Participation in the survey was voluntary and anonymous. Eligible participants for the study included all pathologists recruited through the e-mail distribution list maintained by NAME.

Of the 119 pathologists that responded to the survey, 70.59% (N = 84) worked in a medical examiner’s office and 57.14% (N = 68) had greater than 15 years of experience as a pathologist. Approximately 93% (N = 111) of the respondents were board certified in forensic pathologists and most participants (N = 114, 95.80%) practiced in the United States. Fifty-five percent (N = 66) of the pathologists practiced pathology in a NAME accredited death investigation office.

### *Procedure*

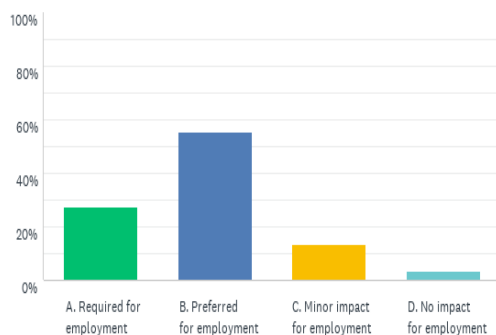
The survey was developed using Survey Monkey. The survey was screened by the NAME Data Committee. The survey questions included only multiple-choice responses. The survey questions were intended to address what pathologists valued most in medicolegal death

investigators. The survey questions addressed four specific areas of interest to determine what pathologists valued most in medicolegal death investigators. The four areas included: Certifications Related to Death Investigations (i.e. American Board of Medicolegal Death Investigators), Educational Levels, Professional Experience in Death Investigations, and Related Professional Experience (i.e. police, medical, coroner, crime scene technician, forensic scientist).

## Results

### *Certifications Related to Death Investigations*

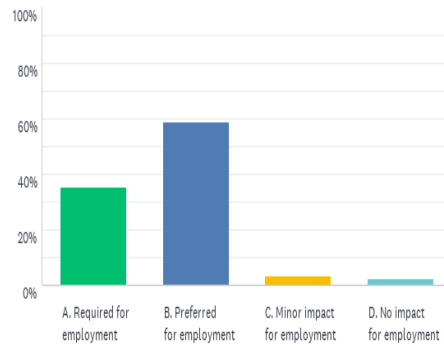
Q7 As a pathologist, how do you value the certifications related to death investigations?



Approximately 55% (N = 66) of the respondents preferred certifications in death investigations while 27.73% (N = 33) required certifications for employment, and 13.45% (N = 16) indicated that death certifications had minor impact on obtaining employment as a death investigator. A small number (3.36%, N = 4) of respondents thought certifications had no impact on gainful employment as a medicolegal death investigator.

## *Educational Levels*

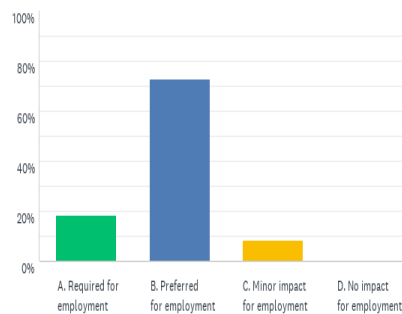
Q8 As a pathologist, how do you value the educational levels of death investigators?



The question with regard to education did not differentiate between a high school diploma or other advanced degrees, just education in general. Of the 119 respondents, 58.82% (N = 70) preferred education as a value for a medicolegal death investigator. Thirty-five percent (N = 42) required education and a total of seven respondents thought that education had either a minor or no impact for employment.

## *Professional Experience in Death Investigations*

Q9 As a pathologist, how do you value the professional experience of death investigators?

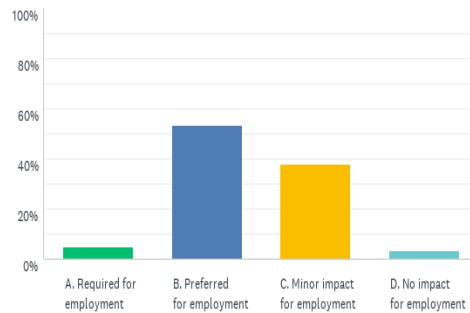




Of all the four categories, the respondents agreed most (73.11%, N = 87) that professional experience in death investigations was preferred for employment. Eighteen percent (N = 22) and 8.4% (N = 10) agreed that professional experience as a death investigator was required or had a minor impact on obtaining employment as medicolegal death investigator, respectively.

### ***Related Professional Experience***

Q10 As a pathologist, how do you value related professional experience such as policing, medical, coroner, a forensic scientist, or a crime scene technician?

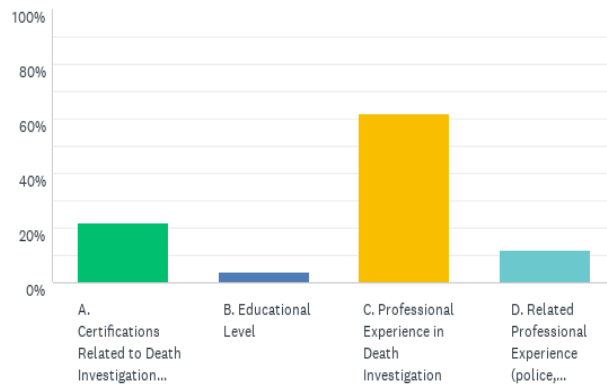


Over 50% (N = 63) of the 119 respondents agreed that related professional experience is preferred for employment while 38.14% (N = 45) thought the experience had minor impact in obtaining employment as a medicolegal death investigator. At the opposite ends of the spectrum, 5.08% (N =6) required related professional experience while 3.39% (N = 4) agreed that the related professional experience had no impact on employment.

### ***Overall Results***

The pathologists were asked a question combining all four categories to determine what they valued most in medicolegal death investigators. Overwhelmingly, 61.86% (N = 73) of the 119

## Q6 As a pathologist, what do you value most in a death investigator?



respondents indicated that professional experience was the most valued trait in a medicolegal death investigator. The second most agreed upon value was death investigator certifications at 22.03% (N = 26) followed by related professional experience at 11.86% (N = 14), and lastly educational level at 4.24% (N = 5).

### Discussion

The results clearly show that the pathologists value professional experience in death investigation over board certification for medicolegal death investigators. Although many national organizations related to the improvement of forensic science lobby for mandatory investigator certification, it does not appear that is a high priority among the “end users” of the investigators’ work product, the pathologist.

Medical examiner surveys consistently show, not surprisingly, that funding is the overwhelming issue when it comes to improving medicolegal death investigation systems. It would seem impossible to have uniformity in medical and coroner’s systems meeting performance standards given that these systems are funded at the state and local level.

It would seem that a strong federal mandate towards either accreditation of medical examiner and coroner’s offices or certification of individual practitioners would be the only way

to achieve national uniformity. And it goes without saying that providing funding at the national level is the best way of making that happen.

Since the study revealed that professional experience in death investigations was valued most, the authors suggest the development of a nationwide robust internship program with medical examiner and coroner's offices similar to a forensic pathology fellowship. The internship program would provide on-the-job training for those that do not have the minimum requirements to take a death investigation certification examination through ABMDI. The weight placed on the certifications from ABMDI for employment is eliminating many potentially successful medicolegal death investigators.

## **Conclusion**

While numerous forensic science working groups have made the case for mandatory across the board certifications for practitioners in the forensic sciences, there is no local, state, or national requirement for medicolegal death investigators.

The results of the study showed that pathologists valued most (61.86%, N = 73) professional experience in death investigations for medicolegal death investigators. The 119 respondents valued experience in death investigations over certifications in death investigations (22.03%, N = 26), related professional experience (11.86%, N = 14) and lastly educational levels (4.24%, N = 5).

As indicated by employment postings on ABMDI's website, agencies place a heavy weight on certification by ABMDI. Based on this study, less than a fourth of the pathologists agreed with certifications as a valued skill. Until standards are established nationally, the quality of death investigations will remain in limbo thus having discrepancies from one death investigation office to another.

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# **Kratom**

## *What Criminal Justice Practitioners Need to Know*

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### **Abstract**

An obscure drug, kratom, may have an impact on various facets of the criminal justice system. Law enforcement officers, attorneys, and judges are often uninformed about this drug and unaware of its underlying influence within the criminal justice system. The purpose of this paper is to educate practitioners and provide useful information about the drug. An increase in knowledge and awareness about kratom will assist practitioners with investigative and forensic procedures and outcomes in the criminal justice system.

*Keywords:* kratom, drug use, herbal supplements

## **Kratom: What Criminal Justice Practitioners Need to Know**

Kratom is a substance that most criminal justice practitioners are completely unaware of that could significantly affect the outcome of various types of investigations; while obscure, it has garnered the attention of the National Institute on Drug Abuse and generated a multi-million-dollar study at the University of Florida (Roberts, 2019). It has been touted as an herbal supplement that can help those addicted to opioids, yet it is blamed for deaths in many states, including the death of a police officer (Axelson, 2017). The purpose of this study is to educate professionals in law enforcement, corrections, the judiciary, and attorneys about kratom.

Understanding kratom is important as it may affect victims, offenders, and witnesses. Narcotic agencies in Indonesia and America consider kratom a drug on par with heroin, yet, “even most emergency room physicians and nurses have no idea of what kratom is,” (G. Lopez, personal communication, December 18, 2019).<sup>2</sup> The substance can affect everything from mood to sleep. When the substance is being used, the user’s sobriety and ability to reason may be questioned. Clearly, this could affect the veracity of victims, offenders, and witnesses. Further, many deaths have been associated with kratom use making knowledge of the drug vital in investigations.

Kratom has been used in southeast Asia for many years as a recreational and medicinal drug but has only recently come to the attention of researchers and users in the United States. This analysis will report on previous work and research by multiple disciplines, as well as guide the criminal justice professional to a clear understanding of the drug and application of that knowledge within the field.

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<sup>2</sup> Dr. Gaylord P. Lopez, PharmD, DABAT, is the Director of the Georgia Poison Center.

## What Is This?

Scientifically referred to as *Mitragyna speciosa*, kratom is a tropical evergreen tree in the same family as the coffee tree that grows in southeast Asia and Africa. The first scientific reference to kratom was in 1836 (Griffin & Webb, 2018; Griffin, Daniels, & Gardner, 2016; Swogger, M.T., Hart, E., Fire, E., Erowid, E., Trabold, N., Yee, K., Parkhurst, K.A., Priddy, B.M., and Walsh, Z., 2015) as it was mentioned as an opium alternative. “Kratom is the most common term in the U.S. for the leaves (whole, chopped, or powdered) and leaf extracts (e.g. tea-like brews, and commercially prepared liquids) of the *Mitragyna speciosa* tree indigenous to Southeast (SE) Asia, Malaysia, and the Philippines,” (Henningfield, Fant, & Wang, p. 573). Mitragynine (the alkaloid) was first isolated in Edinburgh in 1921 and discussed in an article, *Kratom Eaters* (as cited in Corkery, J. M., Streete, P., Claridge, H., Goodair, C., Papanti, D., Orsolini, L., Schifano, F., Sikka, K., Korber, S., & Hendricks, A., 2019).

The leaves of the plant contain over 20-alkaloids (organic compounds of plant origin) which have physiological effects on humans. Many alkaloids also have psychoactive properties. A psychoactive drug is a chemical substance that acts on the central nervous system and alters brain function, resulting in temporary changes in perception, mood, consciousness and behavior. The primary psychoactive alkaloids of the plant are mitragynine which has one-fourth the potency of morphine and another minor alkaloid, 7-hydroxymitragynine which is 10-times as potent as morphine (Griffin & Webb, 2018; Griffin, et al., 2016). Kratom’s content of two different psychoactive chemicals which have both a stimulant and narcotic properties make it unique (Griffin, et al., 2016). Many sources agree that in smaller doses, kratom acts as a stimulant, while in larger doses kratom acts as an opiate.



Kratom can be ingested in many ways by users; powdered leaves may be encapsulated or pressed to pill form, leaves can be brewed into teas, or the leaves can be smoked or chewed. A liquid kratom is advertised on-line, but the ingredients it contains are unclear. As with many other drugs, medicines, or herbal remedies, unknown substances or adulterants, can be added to kratom and increase the effects and danger. Kratom is also sold or known as Biak, Ketum, Kakuam, Ithang, and Thom and sold under various names by importers, such as: Green Vein Malay Kratom and Red Vein Maeng Da Kratom.

In a study examining the substance use in Thailand and Malaysia, respondents rationalized the drug for social and recreational needs, stamina, physical endurance, pain relief, and improved sexual performance (Griffin, et al., 2016). Historically the drug was used in the treatment of malaria, cough, hypertension, diarrhea, depression, pain relief, fever, and opioid withdrawal (Griffin, et al., 2016). The dual effects of kratom, a stimulant and opioid, make it attractive to users in the U.S. In Swogger, et al. (2015), several effects experienced by users were reported: the most positive of these were euphoria and relaxation (often described as like that of opiates) and the most negative themes included nausea and alternating chills and sweats.

Still, various reports document seizures, and seizure-like movements, fever, aspiration pneumonia, jaundice, and pruritis with kratom consumption in short-term use (Swogger, et al, 2015). Long-term use noted withdrawal symptoms, anorexia, hyperpigmentation, psychosis, constipation, insomnia, poor concentration, and tolerance (McWhirter & Morris, 2010). There is documentation that kratom can cause dependency and withdrawal symptoms in some individuals attempting to stop the use of kratom. To be clear, use of this drug has serious effects that must be considered by professionals in the criminal justice arena.

## **Lack of Knowledge**

Kratom is a controlled substance in many countries<sup>3</sup>. Kratom is not, however, illegal in most of the United States. Short of living in a state or city that has outlawed the local sale and use of kratom, it is understandable why the criminal justice establishment may not have heard of this drug. The authors compare kratom knowledge to that of illegal anabolic steroids.

“Additionally, most law enforcement leaders or administrators either did not know about the signs and dangers of steroid use or they did not care,” (from the foreword by Jeff Pearce, in Turvey & Crowder, 2015, p.IX). Some states and cities have acted on kratom most probably prompted from some publicized case about Kratom linked to illness or death. Kratom is banned in Alabama, Arkansas, Indiana, Tennessee, Wisconsin and Vermont (U.S. FDA, August 4, 2016, News Release; Griffin, et al. (2016).

Except for Sarasota county where it was banned by county ordinance as a designer drug in 2014 (Kraoma, 2019), Kratom sales and use continues to attract attention in Florida cities as noted in the article in Tampa Bay Newspapers “Clearwater (Florida) researching possible ban on kratom sales and possession,” (Guerra, 2019). Despite the ban by the health department in the city of Denver, kratom is still sold in Colorado (Roberts, 2019). Therefore, educating the criminal justice actors about this substance is paramount.

In the United States, the hue and cry regarding kratom use first came from a report from the Centers for Disease Control and Prevention (CDC) in July, 2016 (Griffin & Webb, 2018). “Kratom use appears to be increasing in the United States and the reported medical and health effects suggest an emerging public health threat,” (Anwar, M., Law R., & Schier, J., MMWR,

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<sup>3</sup> Kratom is controlled in Thailand and Malaysia (two countries of origin), Australia, Sweden, Germany, Finland, Lithuania, Denmark, Poland, Myanmar, and Bhutan (Griffin, et al., 2016).

2016, p.748). In the study by Anwar, Law, and Schier, it was determined between January 2010 to December 2015 United States poison centers received 660-calls about kratom exposure with health care providers making over seventy-five percent of those calls and 487-exposed persons reported intentional exposure and ninety-percent reported ingestion of the drug. As noted in the Drugs Identified in Deceased Persons by Florida Medical Examiners 2018 Annual Report published by the Florida Department of Law Enforcement, November 2019; “Reporting of mitragynine was not specifically requested by the Commission in 2018; however, many districts voluntarily reported deaths with mitragynine. A total of 85-occurrences of mitragynine were reported for January – December 2018. Due to reporting deadlines, reporting of mitragynine by all districts will begin with the 2020 Drugs Identified in Deceased Persons reports (p.iii).”

### **Details**

Because kratom is legal in most of the United States usually without age restriction on purchases, there is an increase in the need to know and understand this drug and its effects. Available for purchase on the internet, in smoke shops, and in gas stations, kratom use and sales are increasing (Griffin, et al., 2016). Why are people so attracted to this drug? It is the stimulant and opioid effects. “Two compounds in kratom leaves, mitragynine and 7-a-hydroxmitragynine, interact with opioid receptors in the brain producing sedation, pleasure, and decreased pain, especially when users consume large amounts of the plant,” (NIDA, Drug Facts, 2019). But there is danger in using this drug.

Kratom has known public health implications, including a risk of infectious disease such as Salmonella and chronic disorders such as liver disease. “Salmonella infection (salmonellosis) is a common bacterial disease that affects the intestinal tract. Salmonella bacteria typically live in animal and human intestines and are shed through feces. Humans become infected most

frequently through contaminated water or food, “ (Mayo Clinic, 2019). From January 2017 to May 2018, a multistate outbreak of Salmonella infections occurred. Evidence developed by epidemiologic and laboratory testing revealed kratom was the likely source of this outbreak (Multistate Outbreak, CDC, Investigation of Outbreak, 2018, para 1). Seventy-four percent of the people interviewed reported taking kratom in pills, powder, or tea and purchasing it from retail and on-line sources (Multistate Outbreak, CDC, Investigation of Outbreak, para 2). “Salmonella poisoning may be fatal, and the U.S. Food and Drug Administration has linked more than 35 deaths to Salmonella-tainted kratom,” (Consumer Health, 2019). With forty-one states reporting during this outbreak, the ubiquitous use of kratom is revealed.

While the most commonly associated liver injury noted by Navarro, et al. (2017), was illegal anabolic steroids, sixteen percent were attributed to products such as green tea, kratom, and black cohosh. Dr. Tyler Oesterie at the Mayo Health Clinic Health System states, “We also know that it (kratom use) can lead to things like liver failure, lead to excessive use like overdosing, which can again lead to respiratory suppression and then death,” (Sparks, 2018). When discussing liver injury with Dr. Gaylord Lopez at the Georgia Poison Center, he advised the trend and correlation of the impact of kratom on liver injury requires more study (G. Lopez, personal communication, December 18, 2019). “Chronic use of kratom recreationally has been associated with rare instances of acute liver injury. The onset of injury is usually within 2 to 8 weeks of starting regular use of kratom powder or tablets, with symptoms of fatigue, nausea, pruritus and dark urine followed by jaundice,” (LiverTox, 2018, April 10). While there is certainly the possibility of liver injury, the impact and long-range affects are unknown.

Nevertheless, users are attracted to kratom because at low doses it acts as a stimulant, a higher dose may bring on euphoria, and an even higher dose brings on sedative affects

(Consumer Health, 2019). Further, the claim that kratom can be used to avoid the symptoms of opioid withdrawal is very attractive to some users. “It (kratom) does have some opioid-like properties and, so, you’re replacing an opioid for an opioid-like substance,” says Dr. Tyler Oesterie (Sparks, 2018). “If you take a substance that is opioid-like and it activates those opioid receptors, the receptors say, ‘Ok, we’ve got opioid again.’ It becomes something else you have to withdraw from again,” according to Dr. Oesterie (Sparks, 2018). It stands to reason that too much kratom can cause all the same issues that too much opium would cause.

### **The Crux of Kratom**

The possibility of a victim or offender using kratom is substantial with the current ease of availability via the Internet, smoke shops, and convenience stores. Depending on the amount ingested and the users acquired tolerance of the drug, the behaviors and actions of both victims and offenders may be strongly influenced. Therefore, law enforcement’s duty of care dictates consideration and examination of the use of kratom by victims and offenders. To be competent custodians of victims, any criminal investigations initiated and any evidence that supports or refutes allegations of criminal activity should consider kratom use (Turvey & Crowder, 2013).

The duty of care requires an examination of crime victims. Forensic victimology is the investigative and forensic issues involves the thorough, critical, and objective outlining of victim lifestyles and circumstances, the events leading up to their injury, and the precise nature of any harm or loss suffered (Turvey, 2014). Therefore, law enforcement officers and particularly criminal investigators must seek clarity on the possible use of kratom by a victim. If a victim is using kratom a variety of affects may be found. Cases of psychosis resulting from use of kratom have been reported, where individuals addicted to kratom exhibited psychotic symptoms, including hallucinations, delusion, and confusion (Drugs of Abuse, p.84). The possibility of

false allegations and reports is obvious. Kratom use is contextual information vital for accurately inferring the most reasonable behaviors to have taken place in relation to a crime, (Turvey, 2014). The same examination or considerations must be applied to offenders.

Interviewing a suspected offender who may be under the influence of kratom could be problematic. While the stimulant effects of kratom may produce alertness, physical energy, and talkativeness, this may lead investigators astray. Kratom users may be motivated to use the drug before an interview or polygraph examination. Several websites advertise that kratom can be used for the treatment of panic attacks (Griffin, et al., 2016). Kratom may affect the mind and nervous system, leading to dizziness, drowsiness, hallucinations and delusion, depression and delusion, breathing suppression, seizure, coma, and death (Sparks, 2018).

Whether victims or offenders, it must be considered that an individual may be using kratom for recreation or as an opium substitute. Perceived sensations reported by kratom users must be considered by interviewers. Swogger, et al. (2015), reported the experiences of Kratom users as follows. The top three positive experiences reported were euphoria/sense of well-being, relaxation, and enhanced sociability/empathy. The top three negative experiences included nausea/stomachache, alternating chills/sweats, and dizziness/unsteadiness. Interviewers and investigators should be alert for individuals who exhibit these indicators for possible kratom use.

Galbis-Reig (2016) provides a case study examination of a 37-year-old female who had used Kratom for two years. “Despite its effect on her health (weight loss, insomnia, cravings, and decreased energy level) and the conflict that her use had been creating in her marriage, she had continued to take the kratom extract,” (Galbis-Reig, 2016, p. 49). Although the opioid withdrawal protocol was started, the patient withdrawal symptoms include muscle aches, bone pain, abdominal cramping, nausea, and blurred vision (Galbis-Reig, 2016). In

addition, Galbis-Reig (2016) reported kratom withdrawal symptoms may include pupillary dilatation (dilated pupils).

Finally, death investigators must consider kratom use. It is possible to overdose on kratom. The Center for Disease Control and Prevention (CDC) analyzed overdose deaths in which kratom was detected on postmortem toxicology testing and deaths in which kratom was determined to be a cause of death in eleven states from July 2016-June 2017 and in twenty-seven states between July to December 2017 (O'Malley, et al., 2019). One hundred fifty-two (152) decedents tested positive for kratom (O'Malley, et al., 2019). "Kratom was determined to be a cause of death (i.e. kratom-involved) by a medical examiner or coroner for 91 (59%) of the 152 kratom-positive decedents, including seven for whom kratom was the only substance to test positive on postmortem toxicology, although the presence of additional substances cannot be ruled out (O'Malley, et al., 2019). Most of the decedents (80%) had a history of substance misuse and multiple drugs were detected in nearly every kratom-related death (Kuehn, 2019). In a study of 156-cases examined in a state-of-the-art international review, kratom alone was identified or implicated in 23% of the cases (Corkery, et al., 2019). A case study from Texas provides insight.

Bexar County (Texas) Medical Examiner's Office encountered a death case involving a 17-year-old white male (Neerman, Frost, & Deking, 2013). The decedent showed no signs of trauma and only a small amount of vomit was found on his face and the floor. In the decedent's personal items, investigators found a box of Bali Kratom (brand name) and an empty bottle of liquid Kratom. A mitragynine analysis revealed a kratom level of 0.60 mg/L (the [mass concentration](#) that notes how many [grams](#) of kratom are present in one [liter](#) of blood). "In this

case, no other compelling cause of death was evident on investigation and examination of the decedent” (Neerman, et al., 2013, p.S279).

The issue that surrounds death cases involving Kratom is the lack of studies on fatal intoxication blood concentration levels. In another case reported by Neerman, et al. (2013), a 64-year-old man suffered seizures and a urine analysis found a concentration level of 167ng/ml (nanograms per milliliter, abbreviated ng/mL, is the unit of measure most commonly used to express drug testing cut-off levels and quantitative test results in urine and oral fluid)<sup>4</sup>. Neerman, et al. (2013) summarized it best, “However, in any drug intoxication-related death case, the absolute concentration of the drug in the blood or other tissues is of secondary importance to the correlation of that concentration with the scene investigation, medical history, autopsy findings, and all other data.” As has been illustrated, criminal justice professionals must be aware of and seek forensic testing in cases where kratom use is indicated, suspected, or admitted by victims, subjects, suspects, and offenders.

## **Testing**

Determining whether a witness, subject, suspect, or offender may be under the influence of kratom is an important step in ensuring justice is served as drug use influences recollection, the ability to reason, and attempts at deception. Limited research with animals indicates that for the long-term kratom user “it would take around a full day for someone to eliminate fifty-percent of the kratom in their body. It would take just over five days for kratom to be fully cleared from the system of the user, based on this half-life information” (“How Long Does”, 2019). Someone who has used kratom less frequently or uses lower doses would eliminate the substance more

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<sup>4</sup> 167ng/L = .000167 mg/L. This is a much smaller amount than in the previous case.



quickly than long-term and habitual users (“How Long Does”, 2019). Other factors that impact the length of time kratom stays in a person’s body includes, age, body fat, and genetics which impact renal function, urinary pH, and metabolic rate (“How Long Does”, 2019).

The standard drug test, SAMHSA-5 (Substance Abuse and Mental Health Services Administration, 2020) is designed to detect alcohol, illicit drugs, and some prescription drugs. Drug testing commonly includes amphetamines, cocaine, marijuana, opiates, and phencyclidine. Kratom does not show up on these tests; however, a kratom 10-panel drug test can be administered via urine testing. “For someone who doesn’t use kratom often or uses low doses, it would probably be detectable in their urine after a week,” (“How Long Does”, 2019). Kratom is easily detectable in blood tests, which can reveal its concentration level. Hair follicle testing evidence is not yet available. Redwood Toxicology Laboratory in California conducts kratom urine drug testing noting, “advanced liquid chromatography - tandem mass spectrometry (LC-MA/MS) equipment provides definitive test results” (redwoodtoxicology.com, 2020). Therefore, the criminal justice practitioner must order specific testing to determine kratom use and possible influence. Research on kratom continues.

“In December 2018, the US National Institute on Drug Abuse (NIDA) awarded researchers at the University of Florida (UF) College of Pharmacy a \$3.5 million, two-year grant to study the therapeutic and abuse potential of alkaloids from the leaves of the Southeast Asian tree kratom,” (Yearsley, 2019). A total of \$6.9 million to study the various effects of kratom and its alkaloids has been awarded to Christopher McCurdy, the lead investigator, at UF. To ensure the testing is free of contaminants or adulterants, McCurdy revealed, “We’ve started growing trees at the University of Florida,” (Roberts, 2019). McCurdy stated, “I think the FDA and the

DEA and the CDC are doing what they need to be doing to protect the public. We don't understand the science behind the products on the market," (Roberts, 2019).

### **DEA Scheduling Actions on Kratom**

In August of 2016, the DEA "announced its intention to place the active materials in the kratom plant into Schedule 1 of the Controlled Substances Act in order to avoid an imminent hazard to public safety," (DEA, press release, 2016). Substances listed in schedule one have a high potential for abuse, have no current accepted medical use, and have a lack of accepted safety for use (Federal Register, August 2016). This action brought about public demonstrations, petitions, and calls by Congress to overrule the decision (Gianutsos, 2017). In October 2016, DEA withdrew its notice and kratom is not a controlled substance under the CSA (Controlled Substances Act) and remains a legal substance under federal law (Sacco, 2016).

### **Criminal Justice Practitioners**

The impetus for the research and production of this effort resulted from questioning many police officers and attorneys. When asked the questions, "What is kratom and how does it impact investigations and cases," the authors always received the same response, "What's that?"

Criminal justice practitioners must expand their knowledge and understanding of kratom. The possible influence of this substance on victims, witnesses, offenders, and ultimately on criminal investigations must be considered. During a crime scene search, investigators must examine the possession and use of kratom by victims or offenders. Forensic interviews with family and friends of a victim must include questions about natural substances used by the victim and inquire about observations of effects that kratom may cause. A determination of kratom use by a missing person may provide investigative leads. Past narcotics violations by a victim or offender may lead to information on kratom use and again provide investigative direction.

Clearly, when no other compelling cause of death is indicated the investigator must consider and examine the use of kratom.

Kratom toxicity may be accidental or not; without the proper toxicology examination the investigator may miss vital information. Kratom use and effect must be considered and investigated in serious motor vehicle accidents. Infanticide with a positive finding of kratom in the toxicology screen clearly indicates poisoning and a possible murder charge. Suicide investigations must include the examination of kratom use and toxicity. Clearly, blood and other bodily fluids collection and examination must include screening for kratom. While not the focus here, the civil issues and liability are worthy of examination also, as cases such as premise liability and wrongful death may involve the use of kratom on the part of a party to such suits.

The legality of kratom is a moving target; states and cities examining the issue come to very different conclusions. The future of kratom is unknown, but the University of Florida study may well be the impetus for moving the drug back on the Drug Enforcement Administration schedule.

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# **Accelerating Problems from Within:**

## *Transformations in the Realm of Illicit Drug Trafficking*

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### **Abstract**

The author will assess the illicit narcotics market to appraise the variance amid narcotics derived from transnational drug trafficking organizations to medical professionals. Throughout the history of the United States, the level of illicit narcotics being trafficked across the nation has increased dramatically (Jenner, 2011). President Richard Nixon initially deemed illicit drug use a national epidemic. However, this was only the beginning of an epidemic that would progress into a transnational and commercial empire. For the U.S., counternarcotic efforts have focused on hindering international drug trafficking through aggressive interdiction operations. The United States is deemed the leading nation struggling with both illicit and licit narcotics (Thompson, 2014). Specifically, the illicit drug market has become more sophisticated as a multifaceted transformation ensues through the types, amount, and resources used to traffic illicit narcotics to numerous destinations. While the adversarial nature of the United States' criminal justice system was developed to target various transgressions in a cohesive manner, research notes that this type of functionality is not straightforward (Freedman, 1998). Likewise, as we progress into the twenty-first century, medically prescribed opioids have become a problematic factor. While significant problems associated with illicit narcotics have diminished, lawmakers must consider how to reform policies and reduce criminal sanctions among the prescription drug market. This



does not mean that the illicit drug market should receive no less attention. This should warrant attention toward legislative tactics addressing the globalized nature of both domestic and international illicit drug trafficking channels alike.

*Keywords:* trafficking, United States, pharmaceutical, globalization, black market, prescription, physicians, opioids, medical professionals, abuse

## **Transformations in the Realm of Illicit Drug Trafficking**

No country is immune from criminal or drug-related activities. Americans have had a longstanding addiction to illicit narcotics. Whether it be minor criminal transgressions or aggressive illicit narcotics trafficking, there is sufficient evidence denoting transformations expanding throughout the realm of illicit drug trafficking. The illicit drug market has undergone various changes including the flow of narcotics and the degree to which narcotics are obtained (Keck & Correa-Cabrera, 2015). In the past, illicit narcotics were obtained through intricate, organized crime groups, operating within foreign nations, outside the borders of the United States. However, it has become easier for individuals to obtain powerful narcotics without seeking foreign sources. Inside the America's borders, medical professionals have become one of the most powerful players in the field of narcotics trafficking. These licensed professionals have the power to prescribe prescription opioids to aid with pain management for those in need. Without carefully informing a patient of the addictive properties, medical professionals are loosely prescribing prescription strength opioids to naïve patients (Winingar, 2004). When physicians frivolously write prescriptions, it is likely that unintended consequences will result if care is not taken to address all drug side effects, beneficial and harmful. Even though prescription narcotics, such as OxyContin, fentanyl, and heroin, seem harmless, a nationwide epidemic has stemmed from prescription painkillers being trafficked and abused (Dismukes, 2018). As such, what was once viewed as a national problem transpiring from foreign, drug-prone countries has transformed into a multi-million-dollar, national and transnational drug industry.

Initially, it was believed that illicit narcotic sales were only problematic in specific regions of the international spectrum such as Mexico, Columbia, South-East and Western

Europe, and Asia. However, at the national level, the United States has had a longstanding problem with illegal narcotics activity (Gerstein & Green, 1993). Since the establishment of the nation, individuals have been experimenting with natural, psychedelic resources of the land. Some of these mind-altering resources were considered vital in nutritional value (Crocq, 2007). Though, other resources, such as peyote and psilocybin, were not appreciated with the same regards. Around the late 1800s, the illicit drug market remained high within the United States. This high level of globalized, illicit drug trafficking can be credited to the high level of opium use that was transpiring. In 1848, the first federal drug act, the Drug Import Act, was passed into law by President James K. Polk (Worthen, 2018). Through the Drug Import Act, imported medications were assessed by Customs for suitable potency and purity standards. When imported drugs were found to be impure, Customs was given authority to seize the drugs and thwart shipment to the United States. As time passed, subsequent U.S. Presidents, including President Nixon and President Reagan, sought to create and administer drug enforcement policies to reduce and eliminate the international illicit drug smuggling market (Keck & Correa-Cabrera, 2015). However, the effectiveness of these policies has undergone a high level of debate since the quantity of illicit drugs being smuggled into the United States still continues to rise. With the number of drug-related deaths increasing each year, is it factually valid to blame illicit narcotics entering the United States solely on international black markets, organized drug trafficking organizations, or globalization?

To fully understand the degree that drug trafficking organizations and medical professionals are contributing to unlawful narcotic markets, focus should be given to the historical aspects, imposed sanctions, rate of prescription obtainment, and ready availability of illicit narcotics today in comparison to past associations. With an increased rate in medically

prescribed narcotics, no one stage of the illicit drug trade can be blamed on a single source. To this day, the United States remains the highest rated country in the world that is undergoing the toughest battle with illicit drug use (Thompson, 2014). Despite various countries being involved in the illegitimate, global drug market, Mexico dominates the drug trafficking operations of the southern U.S.-Mexican border. From this point, consideration should be given to assess the foundation for this persistent dilemma. Likewise, drug trafficking tactics should assess whether the United States' War on Drugs debate has been successful at limiting the negative influences made by Mexican drug cartels. Specifically, the United States must evaluate whether additional measures are needed to reduce the amount and types of drugs being trafficking domestically or internationally. This can aid in understanding whether more narcotics are being acquired through legal routes, such as those obtained from authorized medical professionals, or illegal routes encompassing transnational drug trafficking organizations.

### **Literature Review**

Little consideration has been given to the degree that physicians are prescribing addictive narcotics, such as opiates, stimulants, and depressants, to patients. Policymakers have long considered international, organized drug trafficking groups as a predominant source for opiates (Johnson, 2003). But, this is not enough to counteract the accelerating transformations within drug abuse. With hardcore drugs being cultivated and refined in rural, underdeveloped countries, wholesale drug syndicates are able to advance their profit through transnational smuggling routes within wealthy nations, such as the United States. While there are numerous international sources that individuals can obtain illicit narcotics from, such as the black market or drug trafficking organizations, domestic drug networks are capable of providing an equal quantity of narcotics to American citizens. Johnson (2003) suggests that professionals in the field of

medicine are beginning to undermine the distribution channel of illicit narcotics formulated by drug syndicates. More hardcore narcotics are being obtained in a lawful manner from personal physicians or emergency rooms. Thus, America is enduring a growth of nonmedical, non-pharmacotherapeutic drug users. Roughly twenty-seven percent of opioid drug abusers acquire their drugs from a prescription (Dineen & DuBois, 2016). Individuals addicted to prescription-strength opioids find it easier and more affordable to obtain prescriptions from numerous doctors rather than looking for narcotics on the street. This has led to the term doctor shopping. Licensed medical professionals are prone to violate the Controlled Substance Act by unnecessarily prescribing oxycodone and fentanyl to patients with no legitimate medical need (Dineen & DuBois, 2016). With a relentless narcotic supply chain, attention must shift toward understanding where suitable modifications are needed to reduce the amount of legally obtained prescriptions, authorized by medical professionals, and illicit drugs, trafficked by domestic organizations, alike.

### **Street-Level Drug Sales to Medically Prescribed Narcotics**

Illicit narcotic sales transpire throughout an elaborate channel. Whether consideration is given to private or public distribution channels, one problem remains: A street-level drug dealer is not capable of supplying a high level of narcotics within an expansive geographic area. The types of drugs that are found on the streets of the United States include controlled opioid analgesics such as methadone, oxycodone, and hydrocodone (Brady et al., 2014). These hardcore narcotics have led to the development of elaborate, lucrative drug cartels taking hold throughout major U.S. cities. Whether emphasis is placed on Boston, Massachusetts or Atlanta, Georgia, street-level drug deals are prominent throughout the inner-city districts. With street sales comes the challenge of marketing sales in public and private areas alike (Johnson, 2003). As a domestic

drug cartel begins to establish their status and expand their sales network, they must redefine territorial, distribution boundaries. Turf wars, among conflicting drug channels, are apt to occur should a street dealer make one wrong sale outside of their territory. According to Johnson (2003), expanded law enforcement presence and interdiction efforts produce a dramatic reduction in street-level drug deals. But, this may not be enough to counteract the recurring problems stemming from illicit, hardcore drug abuse. In the United States, approximately one hundred and thirty people are dying every single day as a result of an opioid overdose (National Institute on Drug Abuse, 2019). Synthetic opioid misuse is the most common correlate driving these extreme statistics. Nonetheless, opioid overdose deaths are becoming more common as a result of prescription pain relievers.

Medical professionals have the ability to prescribe narcotic medications without being heavily scrutinized. For some time, opioid analgesics have been linked to an increased number of deaths related to prescription drug abuse. Specifically, the mortality rate linked to prescription abuse has surpassed the number of deaths linked to cocaine and heroin combined (Brady et al., 2014). A majority of misused morphine milligram equivalent opioids are obtained in a legal manner, from a licensed medical professional. As members of society turn to legalized prescription drugs, the risk for drug-induced overdose escalates. In comparison to past practices, medical professionals are increasing their rate of prescribing opioids. Many scholars tend to associate this increase to profits being made from the pharmaceutical companies (Winger, 2004). Prescription opioid analgesics are known for their highly addictive properties. When a medical professional prescribes a highly addictive and abusive prescription opioid to a patient, there is a thin line of professionalism that must be evaluated: At what point can the prescription medication become a hazard to both the patient and society. The manner that prescription opioids

interact with the dopaminergic systems within the brain are similar to neurobiological response produced by heroin and cocaine (Kreek et al., 2012). Medical professionals deem these narcotics necessary to control pain following a recent injury or an acute illness. But, it is the long-term implications that present an area of concern. Immediate action should be taken by law makers to create reformative legislation focused on prescription drug monitoring and dispensing programs, the types of controlled prescription drugs being prescribed, and the frequency that these drugs are being prescribed. Quantitative data analysis, pertaining to sources of national and international narcotics, could aid legislatures in understanding the overall impact of controlled narcotics and their legitimate medical benefits (Wininger, 2004). Not only does the individual suffer as a result of an opioid addiction, but society suffers as a result of the increasing economic burdens incurred at the local, state, and national levels.

### **Early Suggestions of Addiction**

Historically, the United States and other nations viewed illicit narcotics with little concern. The introduction of tobacco, nicotine, and cocaine into the New World can be traced back to the Old World practices (Crocq, 2007). The use of these psychoactive substances was permitted for many years with little to no government regulations in effect. From the manufacturing plants of Coca Cola to paramilitary field operations, early settlers ingested psychoactive substances for different purposes. Cocaine extracts were mixed into the original Coca Cola formula as an advertisement ploy to relieve headaches, stomach aches, and fatigue (Crocq, 2007). Little was known of the dependency of cocaine at this time. With access to a free-flowing supply, national citizens chose to liberally ingest these cocaine-laced beverages in a recreational manner. Beginning in the Far East regions of the globe, the illegal distribution of cocaine, heroin, and marijuana led to widespread dispersion, acceptance, and ingestion

throughout the United States (Johnson, 2003). Commercial sales of these illicit narcotics led to a national addiction epidemic. For example, as members of the medical industry devised the isolate form of morphine from opiates, commercial applications became more prominent (Johnson, 2003). Medical professionals turned to morphine for its pain-relieving properties both on the battlefield and in domestic surgeries alike. Thus, a society dependent on illicit substances was pioneered.

The coca plant has historical roots in illicit usage despite originally being viewed as a harmless shrub. Native to the South American regions of Mexico, Indonesia, and the West Indies, the leaves of the coca shrub were cultivated for many religious and cultural beliefs (Biondich & Joslin, 2016). During daily work schedules, Andean workers would seek out the leaves of the coca shrub to counteract strenuous work fatigue and curb their appetite throughout long work hours. In addition to the chemical compounds contained within the leaves of the coca shrub, alternate sources of energy and nutrients could be found including carbohydrates, minerals, calories, and vitamins (Biondich & Joslin, 2016, p. 2). To many, the coca shrub is perceived as an innocuous plant. But, in reality, this shrub contains an elaborate toxicological profile. The chemical compounds within the leaves of the coca shrub contain several powerful alkaloid compounds such as cinnamoylcocaine, benzoylecgonine, methylecgonine, pseudotropine, benzoyltropine, tropacocaine,  $\alpha$ - and  $\beta$ -truxilline, hygrine, and cuscohygrine (Biondich & Joslin, 2016). When broken down, these pure isolate compounds create cocaine. As time passed and advancements in research began to divulge the underlying addictive compounds associated with cocaine, concerns began to arise which led to coca importations being banned within the United States. This is just one example of how public perceptions toward a drug can change over time as underlying problems begin to emerge.



## **Modern Sources of Narcotics**

As time passed and individuals began to seek out illicit drug sources, the international drug trafficking industry emerged. During the late 1960s, the United States began to experience a surge in social rebellion as citizens began to support recreational drug use (Jenner, 2011). This rebellion was driven by increased restrictions being placed on narcotics by the government. During this time, it became apparent that transnational drug trafficking would flourish as individuals throughout the nation began to pursue their illicit, recreational drugs of choice. Thus, the illicit drug market began to flourish in correspondence to criminalization being placed against illicit narcotics (Gerstein & Green, 1993). In turn, this furthered the economic globalization for international drug trafficking organizations. The demands placed upon drug trafficking organizations flourished since supply and demand increased and cross border trade barriers decreased (Jenner, 2011). Highly organized Mexican drug cartels began to expand their territorial boundaries and looked to international sources for transactions. Mexican and Columbian drug trafficking organizations are responsible for trafficking illicit narcotics across the United States-Mexico border including methamphetamine, heroin, cocaine, fentanyl, and marijuana (Beittel, 2018). With these highly addictive substances reaching U.S. soil, it became apparent that the narcotics industry was going to become problematic. Likewise, research notes that twenty-five percent of cocaine used in the United States comes from Columbia (Jenner, 2011). This cocaine reaches the United States after it travels an elaborate path from Columbia to Mexico and finally the United States. There are endless possibilities as to how drug traffickers attempt to conceal their illicit shipments into the United States. Understanding the intricate methods used can aid with transnational counternarcotic strategies.

Transnational drug trafficking organizations will stop at nothing until their product reaches its destination. Poly-drug cartels make use of elaborate, cross-border smuggling routes in addition to advanced concealment protocols (Beittel, 2018). Rather than simply shipping their illicit narcotics supply through the postal service, these cartels are employing drug mules. Drug mules are individuals that are employed by an organized drug cartel and used to smuggle illicit narcotics through various methods of concealment, such as ingestion or transportation. Drug mules have been known to swallow or conceal small baggies of illicit substances in their body cavity in an effort to avoid interdiction efforts by border patrol agents (Jenner, 2011). As a result, it has become extremely difficult for border patrol agents to identify and locate illicit narcotics being smuggled across the U.S. border. If caught, the mule is going to be the one that faces all felonious, drug trafficking charges for the illicit narcotics. This reduces the chances of identifying the originating source of these drugs. Furthermore, some tactics that have been recognized by Customs and Border Patrol agents include concealment of narcotics within the fender wells, door panels, ceiling liners, vents, gas tanks, air bag compartments, and spare tire wells (Valdez & Kaplan, 2007). Even though these tactics take a considerable amount of time to complete, they are essential to avoid detection by Customs and Border Patrol. In comparison, it takes a considerable amount of time and effort for Customs and Border Patrol agents to complete border checkpoint security protocols. Thus, it should come as no surprise that challenges remain persistent among transnational drug trafficking organizations.

### **Legislative Action to Counteract Drug Trafficking**

Various presidents have sought to implement legislative action to hinder further progression of illicit narcotics. During 1971, President Richard Nixon was the first U.S. president to initiate the war on drugs and set forth an interdiction policy emphasizing border

patrol enforcement (Keck & Correa-Cabrera, 2015). President Nixon's goal was to create an effective national policy which would specifically target the suppliers of illicit narcotics as well as the transportation of such narcotics. Essentially, the goal was to create a team of border patrol agents who could enforce interdiction efforts and target elusive drug cartels along the Mexican border. As a result, Operation Intercept was created which placed thousands of border patrol agents at the U.S.-Mexican border with the sole purpose of fighting illicit drug smuggling activities aimed at the United States (Keck & Correa-Cabrera, 2015). These efforts included the establishment of border checkpoints in which all vehicles and persons crossing the U.S.-Mexico border were subject to intrusive searches for illicit contraband. This was the first major transnational approach to reducing the supply of illicit narcotics entering the United States. Once President Nixon left office, this initiative did not cease.

President Reagan's administration sought to implement a stringent interdiction policy as Regan's revised war on drugs approach deemed illegal drugs a national security threat (Keck & Correa-Cabrera, 2015). President Regan chose to place interdiction resources at the Southeast border of the United States where the need for counternarcotic pursuits was deemed greatest. Here, marijuana and cocaine from the Caribbean were being trafficked across the U.S. border and into Florida at an intensified rate. Referred to as the South Florida Task Force, intensified collaborative efforts were implemented as the United States' Coast Guard, Customs Service, and military worked to disclose and eradicate smuggling routes used by Caribbean traffickers to move illicit narcotics through Mexico and into the United States (Keck & Correa-Cabrera, 2015). Rather than relying on a single entity to combat this transnational problem, President Reagan chose to implement a collaborative tactical approach to identify and isolate any and all smuggling routes possible. Even though this is nearly impossible to achieve, the South Florida

Task Force was able to identify new smuggling routes being established from Mexico to the United States. At this point, it became apparent that additional efforts were needed to combat the growing problem of cross-border drug smuggling.

The concept of addiction has remained elusive as many believe that society remains addicted to illicit narcotics such as marijuana, cocaine, heroin, or meth. In 1986, a change in legislation, through the Anti-Drug Abuse Act, led to the development and application of mandatory minimum prison sentences proportional to precise federal drug trafficking offenses such as crack cocaine, marijuana, and powder cocaine (Sacco, 2014). Rather than charging all drug-related offenses in the same manner, the Anti-Drug Abuse Act created mandatory minimums relative to the type and amount of drug in one's possession. Hence, the ultimate goal was to reduce the supply and demand of illicit narcotics by equating the charge proportionate to the drug seized. The United States continues to place a great level of emphasis on interdiction enforcement and eradication of transnational drug trafficking operations. This approach is in response to thwart the endless battle with transnational sources of illicit narcotics. Yet, continued corruption, violence, and unintentional death remain as mounting concerns (Coyne & Hall, 2017). Policymakers have failed to consider all impending costs such as economical, societal, and transnational. In 2015, the National Drug Control Strategy report was released which suggested that illicit drug use is no longer an economic issue, but rather a national health problem. As such, degradation has become evident within several sectors including unemployment, criminal activity, and addiction (Coyne & Hall, 2017). The social and economic welfare of the United States is deteriorating from a grave, national crisis that many remain unaware of: Prescription opioid painkillers.

## Medical Professionals

Highly addictive prescription narcotics are sought out by individuals for a variety of reasons such as pain or stress relief, experimentation, or an addiction. Prescription drug abuse encompasses an array of choices from stimulants to depressants. According to Volkow (2009), 4.7 percent of high school seniors have reported ingesting the psychotherapeutic drug OxyContin for nonmedical use. Such narcotics are frequently acquired from a family member or relative's medicine cabinet, a friend, or a stranger. Unaware of the negative and adverse consequences, adults and teens alike will seek out prescription narcotics to test what adverse effects incur. Out of 15.4 million prescription stimulant users, approximately 30.9% were individuals aged eighteen years of age and older (Lipari, Williams, & Van Horn, 2017). Teens may take unused prescription stimulants stored in household medicine cabinets of family or friends, unaware that a single use, for experimentation, could lead to a lifetime of dependency or death. In an effort to counteract and regulate the amount of unused prescription medications readily accessible in one's home, citizens need to be proactive and understand that they have a role in hindering drug abuse. Specifically, when it comes to the properly securing medications, adults must embrace safety measures and lock up their medications from the reach of others. Likewise, proper disposal of any unused medications in household is key to hindering teen abuse. The home medicine cabinet has become the modern-day distributor when seeking to experiment with prescription-strength psychotherapeutic drugs. As such, deterrents should begin within the home.

Medical professionals routinely prescribe prescription opioid pain-relieving drugs to patients following a major surgery, acute or terminal illness, or chronic pain. During the late 1990s, pharmaceutical companies began to support the use of prescription opioids arguing that individuals, under the care of a licensed medical professional, would not become addicted to

prescription opioid painkillers (National Institute on Drug Abuse, 2019). Little did these medical professionals know, these narcotics possessed an elusive toxicological profile that could lead to problematic substance abuse and dependency disorders. During this time, medical professionals began to increase the rate at which opioid pain relievers were being prescribed to patients claiming persistent pain. But, what was unknown was that this rate of prescribing would drive the national drug epidemic we are experiencing today. When assessing implications affecting public health, research has noted that prescription drugs are the second most common type of illicit drug used in the nation (Lipari, Williams, & Van Horn, 2017). Despite numerous intervention efforts, cases that involve prescription opioid abuse continue to rise and claim the lives of many innocent Americans. Approximately one hundred and thirty Americans are dying every single day from a prescription opioid overdose (CDC, 2018). It can be argued that these addicted individuals knew the consequences of beginning to take a prescription opioid. But, blame can also be placed on the prescribing doctor as well as the pharmaceutical company for unlawful marketing practices. Failure to disclose the known, negative side effects relating to prescription pain-relieving medications can be equally problematic for a patient as well as a developing nation.

### **Adverse Results of Prescription Opioid Abuse**

Essentially, consideration must be given to the degree of harm that prescription pain-relieving opioids has caused on our nation. According to the CDC (2018), more than seven hundred thousand people died, between 1999 to 2017, as a result of an opioid overdose. This number is startling as consideration is given to the fact that the United States has poured out millions of dollars to combat the transnational drug epidemic. Legislatures and lawmakers have been shielded from the problematic narcotics situated within the nation's own borders. This is a

response to the permissibility of medical-grade narcotics. Physician negligence has been interrelated to the overpromotion of prescription-strength opioids in rural communities (Wininger, 2004). When individuals seek out a pain suppressing prescription from a medical professional, the favored medication is an opioid. As such, prescription pain-relieving opioids are frequently deemed as medically necessary to treat the most insignificant injury. A patient may have no input in the category of pain-relieving medication prescribed to them. As a result, they may return as an addicted patient who is seeking out multiple pain-relieving, prescription opioids. A study performed by Wininger (2004) suggested that sales representatives for Purdue Pharma market OxyContin heavily to medical professionals in rural, Appalachian regions of the nation. Rather than following FDA guidelines in prescribing OxyContin for moderate to severe pain management only, medical professionals tend to disperse prescriptions for any practical pain ailment. The result has generated widespread abuse and the greatest per capita sales for OxyContin throughout the southern portion of the United States. Medical professionals continue to employ negligent, aggressive prescribing practices, despite indicative warning signs of patient abuse, dependency, and degradation in one's health. Ultimately, as time passes, and users begin to plateau in dependency, they may begin to seek out higher drug dosages since they are unable to achieve the original euphoria.

Opioid users may seek out additional prescriptions from multiple medical professionals or frequently visit emergency rooms to acquire prescription-grade medications to alleviate severe pain. This is where the initial problem begins to arise. Addiction is caused within the brain as the neurotransmissions and interactions are impeded. Rather than functioning normally, the frontal cortex and connections between the frontal cortex and circuit of the brain cannot process rewards, motivations, and memory in a fundamental manner. As alterations in impulse control,

judgement, and reward dysfunction result, prescription opioid users no longer have the mental capability to control their behavioral response. This is a result of brain abnormalities impacting the cerebral circuits within the brain (Kosten & George, 2002). Deemed a mental disease of the brain, addiction negatively impacts more entities than just the user. The user is going to experience physical changes within the brain relative to areas critical for judgement, decision-making, learning, memory, and behavioral control (NIDA, 2018). As a result, the drug addict's ability to respond to rewards, based on memory, is no longer achievable.

Comparatively, the drug user's family is going to struggle with the physical, biological, and social changes that their family member endures. As opioid dependency builds, the user is going to present an array of symptoms including jitters, anxiety, muscle cramps, and diarrhea (Kosten & George, 2002). This is related to a lack in noradrenaline present within the brain. There are numerous neurotransmitters that regulate daily bodily functions. Noradrenaline is a natural chemical that is produced in the brain and peripheral nervous system to arouse and regulate blood pressure, sleep, and mood (Kosten & George, 2002). Once dependency to an opioid medication formulates, the brain's ability to function in a normal manner is disrupted. Thus, the only way that the body's chemical compounds can compensate for neuron interferences is to adapt to the effects induced by opioid narcotics. Medical professionals are failing to consider the adverse consequences of mesolimbic imbalances when prescribing an opioid treatment. Prescription narcotics are often obtained for legitimate medical purposes; however, nonmedical use remains a growing concern.

### **Counteractive Drug Monitoring Programs**



The predominant question remains who should be held liable in relation to the nation's prescription opioid epidemic: The medical professional, the pharmacy, the pharmaceutical company, or the user. There are numerous drug monitoring programs and training courses for medical professionals highlighting the adverse signs and symptoms possible when dealing with patients addicted to prescription opioid medications. However, the effectiveness of opioid pain management strategies, patient education pamphlets, urine drug tests, prescription drug monitoring programs, and pill count monitoring tactics are insufficient to reducing outcomes related to overdose, addiction, abuse, or misuse (Dowell, Haegerich, & Chou, 2016). It is not certain as to whether these drug monitoring programs and training courses are being utilized to their fullest potential. More often than not, law-abiding citizens visit their local pharmacy to obtain an over-the-counter sinus medication. Following the passage of the 2015 Combat Methamphetamine Epidemic Act, the FDA set forth enhanced guidelines for the sale of over-the-counter medications (McBride et al., 2008). Over-the-counter medications, such as pseudoephedrine, became regulated and were placed behind the counter for adequate dispensing and monitoring. As a result, limitations were placed on the quantity and frequency that over-the-counter sinus medications could be obtained and led to societal stigmatization. Primary intentions were to only regulate the sale of precursor chemicals correlated to methamphetamine production, including red phosphorous, white phosphorous, iodine, and anhydrous ammonia (McBride et al., 2008). However, adverse consequences arose among the national populous as law-abiding citizens faced unforeseen violations in their privacy rights.

Each entity plays an active role in the rising death rate from cases of opioid overdose. In 2014, data from the Centers for Disease Control suggested that forty-seven thousand overdose deaths occurred throughout the United States, a rate of 14.7 per 100,000 residents (Coyne &

Hall, 2017, p. 7). The pharmacist and prescribing doctor are capable of evaluating patient records and considering key indicators that prescription drug addiction is present. These factors include, and are not limited to, falsifying an illness or injury to receive pain medication, doctor shopping, frequent emergency room visits, possessing numerous prescriptions for the same narcotic, and consumption doses over the prescribed amount. Due to the lack of sufficient cures, many consider opioid addiction a chronic medical disorder relative to hypertension, schizophrenia, or diabetes (Kosten & George, 2002). While little can be done to end prescription opioid addiction, proactive efforts can be implemented to reform legislative policies aimed at dispensing prescription medication in a negligent manner.

Driven on similar goals, support from local, state, and federal leaders can proactively fight against the opioid epidemic. The first major step is to identify the source for which opioid users are obtaining their drug of choice. Once this source has been found, it is crucial to take into consideration all variates influencing opioid usage. This can include illicit, street-level manufacturing agencies producing cocaine, heroin, counterfeit pills, and synthetic opioids such as fentanyl (CDC, 2018). Many presume that only pharmaceutical fields are sources for opioid induced dependency. However, should a dependent opioid user fail to obtain additional prescriptions from medical professionals, their next resort will be a street dealer. Referred to as domestic mules, these street dealers are marketing under an illicit manufacturer funneling synthetic opioids into the streets of the United States. Street-level drug sales yield a negative influence on the economy of the United States. Since the beginning of the war on drugs forty years ago, the United States has spent more than one trillion dollars in designing interdiction policies to counteract the relentless drug war (Coyné & Hall, 2017). American taxpayers have also suffered financial hardships as roughly fifty-one billion dollars are spent on public

assistance programs, designed to treat drug abuse, every single year. Despite numerous resources being poured into funding treatment and prevention programs for licit or illicit narcotic addicts, the war on drugs continues.

### **Looming Legislative Concerns**

Reform to current controlled narcotics enforcement legislation can be prepared and utilized throughout the nation. The primary motive for the Center for Disease Control is to focus on enhancing the use of prescription drug monitoring programs within the clinical and public health perspective, intervention tactics among the insurer and community, state-level policies, and state strategies (CDC, 2018). Prescription drug monitoring programs have proven to be beneficial since their implementation at the national level. Specifically, prescription drug monitoring programs have unveiled the inconsistencies present among prescription drug dispensing and outpatient insurance claims (Brady et al., 2014). Through the use of electronic drug monitoring programs, pharmacies within the United States have the ability to monitor prescriptions being filled and identify prescription drug abuse patterns such as doctor shopping, frequent refills, and passing similar prescriptions (Brady et al., 2014). Such programs have been effective with minimally reducing the level of opioid abuse and highly abusive, over-the-counter drugs throughout the states. However, the implementation of monitoring programs can negatively impact citizens who purchase regulated medications such as pseudoephedrine, codeine, oxycodone, and hydrocodone. Here, the individual is required to produce a valid license prior to receiving these regulated medications over the counter. This allows all entities, linked to the prescription monitoring program, to review the frequency, type of drug, and location in which the drugs are purchased (Brady et al., 2014). In turn, limitations can be placed on the patient preventing a prescription from being filled too soon, flagging a forged prescription, or

identifying nonmedicinal prescribing practices. For some, stigmatization from society can postulate.

The CDC created a state opioid overdose surveillance program specifically tailored to target opioid addiction. Through this approach, surveillance strategies target fatal and nonfatal opioid overdose cases in an effort to promote states to monitor the progression of opioid overdose cases over time. As a result, preventative resources, reliant on evidence-based data from healthcare providers and health systems, can be developed, reformed, and applied appropriately into problematic communities. We must take into consideration the estimated 2.1 million American citizens currently suffering from a substance dependency disorder relative to prescription opioid pain relievers (Volkow, 2014). Without identifying key failures, future policies will only modify persistent failures. Validated reform efforts must focus on the inconsistencies to thwart subsequent policy failure. In turn, opioid-dependent citizens will continue to plummet into an endless cycle of addiction and ultimately die as a result of an opioid overdose. Ultimately, lawmakers must consider the overall trends among various societies, rural and metropolitan, to determine whether prescription opioid overdose cases can be reduced.

Assessment of abuse treatment programs is needed to determine what has worked and failed. Numerous variates must be brought to the forefront if nationwide prevention is to be accomplished. Brady et al. (2014) suggests that monetary controls be placed upon Medicaid recipients to decrease doctor shopping probabilities, enhanced training among health-care providers to promote evidence-based pain management protocols, and improved access to drug and harm-reduction treatment programs. Simply treating the addicted patient is only one part of an effective treatment program. In addition, enhanced, data-driven treatment and prevention programs are needed which are specifically tailored to opioid-dependent individuals. It is

essential for medical personnel, emergency room departments, first responders, public safety officials, mental health and substance abuse treatment providers, pharmacists, public health officials, community-based organizations, and members of society to work together and coordinate preventative efforts encouraging awareness and safe practices for prescription opioids (CDC, 2018). If the national prescription opioid epidemic is not improved on a collaborative effort, then misuse, abuse, and death rates will continue to rise.

### **Future Reform**

No single approach can combat a longstanding, global drug crisis. Advancements have been made to educate members of society as to the signs, symptoms, and response protocols for opioid abuse. At the national level, efforts focus on improving treatment and recovery services, promoting overdose-reversing drugs such as Naloxone, strengthening the understanding of the opioid epidemic through public health surveillance, and providing alternatives for pain management (NIDA, 2019). Through teamwork and collaboration, U.S. lawmakers must implement policy reform focused on motivating personnel, from medical institutions and legal systems alike, to adopt proficient opioid prevention strategies. Also, public citizens must take a stance and assist in fighting back against this national drug epidemic. In situations where members of society have shunned an opioid addict, feelings of worthlessness may ensue and result in the addict deeming their self as an economic and societal burden (NIDA, 2018).

Whether addicts lack personal motivation to begin a treatment program or deem drug treatment programs as a waste of time, it can be extremely difficult to motivate individuals to seek out professional help. Likewise, some individuals may rely on society to motivate their recovery. Through national and international unification, progression in the control of the nation's prescription opioid abuse epidemic may be attained.

## Discussion and Analysis

Throughout the history of the United States, illicit drug use has been a dominant problem. In response, enforcement efforts to restrict the amount of illicit narcotics entering the nation from foreign countries were increased. Several U.S. Presidents made it their mission to combat illicit drug activity from foreign drug trafficking organizations. But, little results can be seen today as to the overall effectiveness from governmental action. President Richard Nixon was the first president who chose to combat the war on drugs head on, implement punitive interdiction policies, and unify collaborative border enforcement protocols (Keck & Correa-Cabrera, 2015). The predominant goal was to target the illegal growth of cannabis and clandestine transportation protocols used by organized Mexican drug trafficking organizations. By placing national officers on the home ground, the idea was that organized, international drug traffickers from Mexico could be met with the administration of drug enforcement standards. However, this was not fully effective as these traffickers sought to establish alternate routes of travel and advanced concealment tactics.

Comparatively, President Regan deemed the Southeastern border of Florida as the area in which interdiction resources were needed the most. In turn, the South Florida Task Force was developed with focus given toward collaborative leadership among the United States' Coast Guard, Customs Service, and military forces alike. By implementing a leadership model, various law enforcement entities could work together to identify newly formed smuggling routes and eradicate these resources being used by Caribbean traffickers (Keck & Correa-Cabrera, 2015). Rather than relying on a single entity to combat this transnational problem, President Reagan chose to implement a collaborative tactical approach to identify and isolate any and all smuggling routes possible. This advancement in strategic national drug enforcement protocol

created beneficial results for the United States as more individuals were being taken off of the streets and placed into prison for a federal drug offense. But, this created an alternate problem for the United States which we still see present today. The rate of prison overcrowding can be seen throughout the United States as roughly seventy-five percent of federal prison system is comprised of drug-related offenses (Sacco, 2014). This is an adverse result which was linked to the introduction of enhanced crime control legislation in the 1980s. Reflecting on punitive drug control models, it is difficult to understand whether tougher crime control policies truly create social control or if the consequences are more damaging to the nation's social welfare.

Despite being heavily neglected for some time, frivolous medical prescribing practices have withstood abuse by many individuals for a lengthy period of time. A serious global problem has resulted due to misleading information originally delivered from pharmaceutical companies (Dineen & DuBois, 2016). Prescription opioid medications were originally marketed as having little to no addiction aspects whatsoever. However, as time passed, many members of society began to seek out more prescription opioid pain relievers for non-medicinal use. Rather than serving the initial purpose of curbing severe pain, prescription pain relievers became the next source of widespread addiction. In 2017, there were approximately 1.7 million Americans dependent on some type of prescription pain reliever (NIDA, 2019). This statistic is quite alarming as attention is focused on the unique role opioids hold in our nation. Even though opioids are often fundamental to treat a severe pain and preferred by medical professionals for short term treatment, it should not be the initial drug of choice (Dineen & DuBois, 2016). The indirect consequences often out measure the beneficial results. Once a substance abuse disorder develops, it can be extremely problematic for the user to reign control over their addictive urges.

Oftentimes, a drug addict initially experiments with a precursor drug, such as heroin, cocaine, or methamphetamine, for the initial high or to impede a persistent pain. Research has shown that eighty percent of individuals who abuse prescription opioids originally used heroin (NIDA, 2019). So, it could be that many users developed a dependency to illicit heroin and are seeking out pain relievers with a higher potency, or users are seeking out a legal route to obtain their licit pain-relieving medications. By acquiring medication legally, individuals addicted to opioid-derived narcotics perceive that they are clear of any impending legal sanctions. But, just because a prescription was written by a medical professional, that does not mean that it is hindered from criminal ties. While a medical professional seeks to treat legitimate injuries or illnesses, they may be supplying an addicted patient with their advanced drug of choice, prescription opioids.

The misuse and abuse of prescription opioid pain relievers affects more areas of society than just the user alone. Deemed a serious global health problem, prescription opioid pain relievers affect areas of health, social, and economic wellbeing within all American societies (Volkow, 2014). Family members and friends of a drug-dependent addict endure a lot of emotions as they witness their loved one deteriorate both physically and mentally. Addiction has been viewed as a mental disease since the user struggles with many adverse consequences. Thus, the cerebral circuits functioning within the brain cannot process cognitive or behavioral responses properly as a result opioid chemical compounds generating irregularities within the brain (Kosten & George, 2002). A drug-dependent addict will never be able to function as they once did. Their lives will no longer be normal as they are constantly seeking out their next drug supplier, whether that be a medical professional or street level dealer. Addiction is difficult to assess when patients are in denial to the fact that they have developed a dependency to



prescription pain relievers. Acknowledging the corresponding risks could yield a more vigilant nation. But, little social acceptance has yet been achieved.

Some prescription medications have the risk of being misused and abused at a high rate. During the 1970s, opioids were deemed to have a legitimate medical purpose in sustaining the health and welfare of American citizens (Sacco, 2014). For example, both medically and synthetically compounded opioids are capable of eliciting abusive properties in the user if not monitored closely. This is particularly evident in the realm of prescription opioids such as hydrocodone, oxycodone, morphine, codeine, and fentanyl. As the neurochemicals of the brain are altered, the mesolimbic reward system must compensate and adjust to the chemical compounds introduced into the body (Kosten & George, 2002). This is where signs of dependency and abuse formulate. If care is not taken to monitor drug misuse, then adverse results could lead to altered limbic system functioning, deteriorated mental or physical health, or even death. Despite legislative endeavors to reform this national epidemic, public policy has failed to deliver proactive results in the realm of prescription drug misuse.

In a modern effort to combat the prescription opioid crisis facing the United States, President Donald Trump created a six-billion-dollar presidential initiative aimed at confronting the driving forces behind this expanding problem. Specifically, President Trump's Stop Opioid Abuse initiative has been referred to as the single largest legislative package that has sought to address a single drug crisis in the history of the United States ("President Donald J. Trump's Initiative to Stop Opioid Abuse and Reduce Drug Supply and Demand," 2018). This legislative initiative was designed to reduce over-prescribing and prevent the misuse of opioids through the development of a safer plan for use when prescribing prescription drugs. Specifically, enhanced alternatives to addictive pain relievers, evidenced-based treatment opportunities, and increased

use of prescription drug monitoring programs would serve as the foundation for advanced diversion plans. Through such initiatives, quantitative data held that high-dose prescription opioids decreased by sixteen percent, and the number of heroin users, between the ages of 12 and older, decreased more than fifty percent (“President Donald J. Trump's Initiative to Stop Opioid Abuse and Reduce Drug Supply and Demand,” 2018). Proactive results are beginning to appear under President Trump’s opioid abuse initiative. However, concern remains as to the effectiveness that this legislative initiative will deliver long-term. It is not clear as to whether increased resources and funds within the areas of supply and demand, prevention, and recovery will be enough to generate lasting results.

Daily, there are various organized crime groups trafficking illicit narcotics throughout North America. Domestic drug enforcement practices have been around for some time and have introduced protocols to control the manufacturing, distribution, and possession of particular substances for medical use (Sacco, 2014). It is up to domestic drug enforcement agencies to ensure that illicit narcotics remain out of the hands of the American citizens, young and old alike. Controlled, prescription-strength narcotics should only be obtained under the care and supervision of a licensed medical professional for a legitimate purpose. When alternate, less-addictive medications are available for treatment, medical professionals must consider each choice, weighting the pros and cons. Once prescribed, it should be up to the prescribing medical professional to ensure that signs of drug abuse do not become prevalent (Substance Abuse and Mental Health Services Administration, 2012). This can be monitored through contemporary controlled substance policies mandating routine drug monitoring protocols. Thus, monitoring baseline, biochemical levels can ensure that patients are adhering to the prescribed dosage of a

controlled narcotic and not abusing subsequent narcotics. Only time will reveal data supporting or rejecting the development of revitalized public policies.

### **Summary**

Throughout this article, attention was focused on the shift occurring amidst the illicit narcotics market. Originally, transnational drug trafficking organizations dominated the narcotics industry and trafficked addictive narcotics throughout the world. While this still occurs to a major extent, a more modern approach to drug use has entered the realm of addiction. Since the late 1990s, medical professionals have increased the rate for which they prescribe opioid pain relievers since pharmaceutical companies declared that there were no addictive risks. But, through statistical sources, it is evident that this was not a factual statement. Throughout the history of the United States, accelerating problems have ensued with the level of illicit and licit narcotics being abused across the nation. Americans are becoming addicted to and dependent on an array of narcotics due to the chemical compounds influencing the neurotransmitters within the brain. From the time that a drug is misused, that initial effect on the body is not going to be the same. Over time, that user will have to consume a greater dosage to achieve similar pain-relieving effects. No matter the source, individuals are going to do whatever it takes to sustain their addiction.

While billions of dollars are spent on healthcare, drug treatment and rehabilitation programs, intervention tactics, and transnational counternarcotics policies each year, prescription opioid deaths should be given identical consideration. As prescription opioid abuse continues to rise, this exemplifies the ineffectiveness of preceding public policies. Future studies should focus on the educational aspect of prescription opioids if curbing opioid misuse, addiction, and death is

a realistic objective for future generations. Particular attention should be given to the overall effectiveness of alternatives to opioid pain relievers and whether medical professionals are following federal guidelines. Targeting the supply of illicit narcotics is not enough. Efforts must be made on the home ground if genuine change is imminent. Legislative policies, emphasizing counternarcotic tactics, must ensure that equal attention is being focused on hindering domestic and international drug trafficking, prescription drug abuse, aggressive interdiction operations, and rehabilitative programs. Despite continued failures in devising progressive legislation, there is hope that the national prescription opioid epidemic can be hindered. Thus, collaborative efforts, throughout the criminal justice system, must remain proactive and continue to strengthen until the number of lives lost to a drug-facilitated overdose are diminished and stability is attained in the war on drugs.

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