



# National Best Practices for Implementing and Sustaining a Cold Case Investigation Unit



**U.S. Department of Justice  
Office of Justice Programs  
810 Seventh St. N.W.  
Washington, DC 20531**

**David B. Muhlhausen, Ph.D.**

Director, National Institute of Justice

This and other publications and products of the National Institute of Justice can be found at:

**National Institute of Justice**

Strengthen Science • Advance Justice

[NIJ.ojp.gov](http://NIJ.ojp.gov)

**Office of Justice Programs**

Building Solutions • Supporting Communities • Advancing Justice

[OJP.gov](http://OJP.gov)

The National Institute of Justice is the research, development, and evaluation agency of the U.S. Department of Justice. NIJ's mission is to advance scientific research, development, and evaluation to enhance the administration of justice and public safety.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance; the Bureau of Justice Statistics; the Office for Victims of Crime; the Office of Juvenile Justice and Delinquency Prevention; and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking.

Opinions or conclusions expressed in this paper are those of the authors and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

Cover Photo Sources: ©Nikada/iStockphoto, ©Photographee.eu/Shutterstock, Inc., ©spxChrome/iStockphoto, ©Prath/Shutterstock, Inc., ©FatCamera/Shutterstock, Inc., and ©focal point/Shutterstock, Inc.

Interior Photo Sources: ©alengo/iStockphoto, ©Fer Gregory/Shutterstock, Inc., ©Rena Schild/Shutterstock, Inc., ©Prath/Shutterstock, Inc., ©K.Chuansakul/Shutterstock, Inc., ©Myroslav Orshak/Shutterstock, Inc., ©Zolnierek/Shutterstock, Inc., ©allstars/Shutterstock, Inc., ©smolaw/Shutterstock, Inc., ©Olga Krasavina/Shutterstock, Inc., and ©focal point/Shutterstock, Inc.

# Contents



<b>NIJ Cold Case Investigation Working Group</b> .....	<b>iii</b>
<b>Summary of Recommendations for Best Practice</b> .....	<b>vii</b>
<b>Chapter 1: Background On Cold Case Units</b> .....	<b>1</b>
Cold case crisis.....	1
The current picture.....	4
<b>Chapter 2: The Need For Cold Case Units</b> .....	<b>7</b>
Why are cold case units needed? .....	7
Why now? .....	13
<b>Chapter 3: Determining the Needs and Scope of a Cold Case Investigation Unit</b> .....	<b>21</b>
Case inventory.....	21
Determining the scope of operations.....	22
<b>Chapter 4: Designing a Cold Case Unit</b> .....	<b>25</b>
Identifying support for a cold case unit .....	25
Preparation .....	26
Planning.....	28
Assessment of success in cold case investigation.....	29
Operational considerations .....	30
Unit models.....	32
Multidisciplinary teams .....	36
<b>Chapter 5: Implementing a Cold Case Unit</b> .....	<b>37</b>
Unit requirements .....	37
Agency organization .....	37
Cold case unit expenses .....	38
Protocols and directives .....	40
Victim-centered and trauma-informed approaches .....	41
Staffing .....	46

<b>Chapter 6: Operating a Cold Case Unit</b> .....	<b>53</b>
Case selection.....	53
Modernizing the case.....	55
Information management .....	57
Roles.....	61
Training and continuing education.....	64
Media .....	65
<b>Chapter 7: Identifying Support For a Cold Case Unit</b> .....	<b>69</b>
Local and state agencies as sources of support.....	69
Community resources as sources of support.....	69
Academia as a source of support .....	70
Federal resources as sources of support .....	72
Nontraditional sources of support.....	74
<b>Chapter 8: Conclusion</b> .....	<b>77</b>
<b>List of Abbreviations</b> .....	<b>79</b>
<b>Glossary</b> .....	<b>81</b>
<b>References</b> .....	<b>93</b>
<b>Resources</b> .....	<b>109</b>
General Resources .....	109
Federal Agencies.....	114
Victim Advocacy Groups .....	115
Databases .....	116
Publications .....	116
<b>Appendices</b> .....	<b>119</b>
APPENDIX A: Standard Operating Procedures.....	119
APPENDIX B: Investigation Checklist Template.....	128
APPENDIX C: Sample Contents of an Investigative Case File.....	129
APPENDIX D: Memorandums of Understanding (MOUs).....	130
APPENDIX E: Nondisclosure Agreement (NDA).....	132
APPENDIX F: Sample Application for Case Review .....	133

# NIJ Cold Case Investigation Working Group



Since 2005, the National Institute of Justice (NIJ) has assisted state and local law enforcement agencies across the nation in investigating cold cases through NIJ's Solving Cold Cases with DNA program. In 2015, NIJ assembled a group of subject matter experts from the cold case investigation community to review the state of cold case investigations and cold case units in the United States. One identified concern was the lack of agencies addressing the growing needs of unresolved cases. As a result, the Cold Case Investigation Working Group and NIJ collaborated to create this guide in an effort to assist law enforcement agencies in creating a mechanism for addressing the cold cases in their jurisdictions.

The recommendations in this document are not mandated by any governing body; they are provided as recommended best practices based on research, well-established processes, and the extensive professional experience of the working group members.

## NIJ Cold Case Investigation Working Group Members

### **James Adcock, Ph.D.**

U.S. Army Criminal Investigation Command, retired; Mid-South Cold Case Initiative

### **Bob Alford**

Johnson County (Texas) Sheriff's Office, retired; Texas Sheriff's Association Cold Case Squad

### **Hannah Barcus**

Booz Allen Hamilton, consulting for National Institute of Justice

### **Patrick Barron**

Los Angeles (California) Police Department, Foothill Homicide Division, retired

### **Martha Bashford, J.D.**

New York County (New York) District Attorney's Office, Sex Crimes Unit

### **Tiffany Brown, D-ABMDI**

Clark County (Nevada) Office of the Coroner/Medical Examiner

### **Amy Dobbs**

National Missing and Unidentified Persons System

### **Bill Doogan, M.C.J.**

Boston (Massachusetts) Police Department, Unsolved Homicide Squad

### **Eric Duvall, M.S.F.S.**

Denver (Colorado) Police Department Crime Laboratory

### **Suni Edson, M.S.**

Armed Forces DNA Identification Laboratory

### **Lou Eliopoulos**

Navy Criminal Investigative Service, Cold Case Homicide Unit

**Rockne Harmon, J.D.**

Alameda County (California) District  
Attorney's Office, retired; DNA Rock  
Cold Case Consulting

**Charles Heurich, M.F.S.**

National Institute of Justice

**James Holmes**

Wisconsin Department of Justice,  
Division of Criminal Investigation

**Ted R. Hunt, J.D.**

Jackson County (Missouri)  
Prosecutor's Office,  
DNA Cold Case Project, retired;  
U.S. Department of Justice

**Timothy Keel, M.S.**

Federal Bureau of Investigation,  
Behavioral Analysis Unit

**Erin Kimmerle, Ph.D.**

University of South Florida,  
Florida Institute for Forensic  
Anthropology & Applied Science

**Dan Levey, M.Ed.**

Parents of Murdered Children; Mothers  
Against Drunk Driving; Arizona Crime  
Victim Rights Law Group

**Jim Markey, M.Ed.**

Phoenix (Arizona) Police Department,  
Sex Crimes Unit, retired;  
Investigative Lead, LLC

**Todd Matthews**

National Missing and  
Unidentified Persons System

**Tom McAndrew, M.C.J.**

Pennsylvania State Police,  
Criminal Investigation Unit, retired;  
Lehigh County (Pennsylvania)  
District Attorney's Office,  
Homicide Task Force

**Gene Miller**

Tacoma (Washington)  
Police Department, Cold Case Unit,  
retired; Pierce County (Washington)  
Prosecutor's Office, Investigator  
Services Unit

**Michael Motsinger**

Iowa Department of Public Safety

**Marzena Mulawka, M.F.S.**

John Jay College of  
Criminal Justice

**Michael Murphy, D.B.A.**

Clark County (Nevada)  
Office of the Coroner/Medical  
Examiner, retired; MPower USA

**Craig O'Connor, Ph.D.**

New York City (New York) Office of  
Chief Medical Examiner, Department  
of Forensic Biology

**Heather Schafstall, M.S.**

Oklahoma State  
Bureau of Investigation,  
Forensic Chemistry Unit

**Gregory Schmunk, M.D.**

Polk County (Iowa)  
Medical Examiner

**Dawn Elizabeth Schwarting, M.B.A.**

Booz Allen Hamilton, consulting for  
National Institute of Justice

**Margaret Skokan**

Denver (Colorado) Police Department  
Crime Laboratory

**Carrie Sutherland**

National Missing and Unidentified  
Persons System

**Lindsey Wade**

Tacoma (Washington) Police  
Department, Cold Case Unit

**Heather Waltke, M.F.S., M.P.H.**

National Institute of Justice

**Dawn Weber, J.D.**

Denver (Colorado)  
District Attorney's Office

**Angela Williamson, Ph.D.**

Bureau of Justice Assistance

**Sally Wolter**

Michigan State Police, retired

## **NIJ Cold Case Investigation Project Team**

Hannah Barcus  
Charles Heurich  
Dawn Elizabeth Schwarting

## **Writing and Publication Development**

Hannah Barcus  
Charles Heurich  
Nancy Ritter  
Dawn Elizabeth Schwarting  
Rachel Walton

## **Editorial Review Board**

James Adcock  
Hannah Barcus  
Eric Duvall  
Charles Heurich  
James Holmes  
Marzena Mulawka  
Dawn Elizabeth Schwarting  
Rachel Walton

## **Sponsorship**

NIJ is the research, development, and evaluation agency of the U.S. Department of Justice and is dedicated to researching crime control and criminal justice issues. NIJ provides objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice. NIJ's Office of Investigative and Forensic Sciences is the federal government's lead agency for forensic science research and development as well as for the administration of programs that provide direct support to crime laboratories and law enforcement agencies to increase their capacity to process high-volume cases, to provide needed training in new technologies, and to provide support to reduce evidence analysis queues.



# Summary of Recommendations for Best Practice



**T**he Cold Case Working Group drafted 23 recommendations. The intention of the recommendations is to provide best practices that will assist agencies in addressing unresolved criminal cases. NIJ does not claim these recommendations to be all-encompassing directives for all agencies; there are variations among jurisdictions and agencies, and a one-size-fits-all solution is unrealistic.

The recommendations contained in this document are the result of a consensus process and do not necessarily represent the views or opinions of every individual working group member or their respective agencies and affiliates.

## Determining the Needs and Scope of a Cold Case Investigation Unit

1. Define the specific parameters of a cold case with consideration for applicable laws and agency policies and practices.
2. Conduct an initial needs assessment to determine the resources needed to create and sustain a successful cold case unit.
  - 2a. Conduct an inventory of the number of unresolved cases.
  - 2b. Identify and record all unresolved cases in a computerized information management system during the initial inventory.
  - 2c. Conduct periodic needs assessments to ensure that investigative activities conform to current investigative practices and that the operational needs remain in alignment with the agency's operations and mission.

## Designing a Cold Case Unit

3. Appoint a project lead to oversee the implementation of the cold case unit. Choose an individual who understands the agency, the process of unresolved case investigations, and the jurisdiction's administration.
4. Collect performance metrics relevant to cold case activities in addition to clearance rates. Use appropriate data analytics to examine the performance and needs of the unit.

5. Agencies should not assign cold case investigators to incoming cases, temporary assignments, or non-cold case projects.
6. Limit investigators to actively investigating no more than five cold cases at any one time.
7. Assemble stakeholders and representatives of affected agencies to provide input and assistance in planning the cold case unit, including how it will be structured, implemented, and operated.
  - 7a. Identify agencies of similar size and structure that have established cold case units as informational resources.
  - 7b. Formalize and document partnerships among stakeholders with a Memorandum of Understanding.
  - 7c. Bring together multidisciplinary subject matter experts to provide diverse knowledge, resources, and perspectives in all facets of cold case review and investigation.

## Implementing a Cold Case Unit

8. Implement a cold case unit as a separate, defined unit within an agency. Position the unit in an existing bureau, division, or branch responsible for investigative activities.
9. Identify a lead agency for the unit, if multiple agencies and/or multiple jurisdictions are engaged.
10. Create written protocols and directives to detail cold case organization, operations, and investigations.
  - 10a. Specify the job duties for cold case investigators, supervisors, and other personnel in the unit's policies and procedures.
  - 10b. In a multiagency/multijurisdictional cold case unit, implement protocols detailing the distinct roles of each participating agency.
  - 10c. Include protocols for continuity of operations and staff transitions.
11. Incorporate a trauma-informed approach into cold case unit operations.
12. Employ a victim-centered approach in the daily operations of cold case investigations.
  - 12a. Create protocols addressing situations in which a victim does not support continued investigation of their case.
  - 12b. Include a detailed plan for communication with victims and victims' families in the cold case unit protocols.
  - 12c. Incorporate a victim specialist and/or advocate into unit protocols and operations.
13. Select experienced investigators for the cold case unit, preferably with a minimum of five years of investigative experience.

14. Assign at least two full-time investigators to cold case investigations.
15. Cold case investigators should use and consider nontraditional resources, such as volunteers and academia, in cold case investigations.
16. Assign investigators to investigative duties only. Delegate all other operational activities of the unit to support staff. Assign administrative work to noninvestigative personnel or others to increase the efficiency of the unit.

## Operating a Cold Case Unit

17. Organize cases by starting with the investigations that have the most apparent means of resolution. Consider database hits, ease of resolution, and community interest when selecting cases.
18. Perform an initial comprehensive agency audit to locate, document, and package all evidence according to current standards. Perform evidence audits at least once a year and update agency files to reflect the results of the audits. Document the location, condition, and laboratory analyses of evidence in a computerized information management/tracking system.
  - 18a. Review all evidence to determine its evidentiary value and evaluate whether new forensic methods could be used for further examination.
  - 18b. Review and update evidence retention policies as needed to prevent the destruction of evidence in unresolved cases.
19. Review all case files to ensure that they are current with contemporary standards and that all investigative opportunities have been exhausted. Conduct subsequent reviews periodically to ensure that cases remain current with the available technology and investigative processes and to identify any new investigative opportunities.
20. Actively engage a prosecutor with cold case operations.
21. Maintain a public-facing list of all unresolved cases (e.g., a cold case website).
22. Develop a media information dissemination strategy. Detail this strategy in the agency protocols. Designate an agency public information officer to act as media liaison.

*“Doing nothing is not an option. Victims and their families demand more and deserve nothing less — and a commitment to solving these cases demonstrates accountability to our communities.”*

— Gerald LaPorte, Director, Office of Investigative and Forensic Sciences, National Institute of Justice

## Identifying Support for a Cold Case Unit

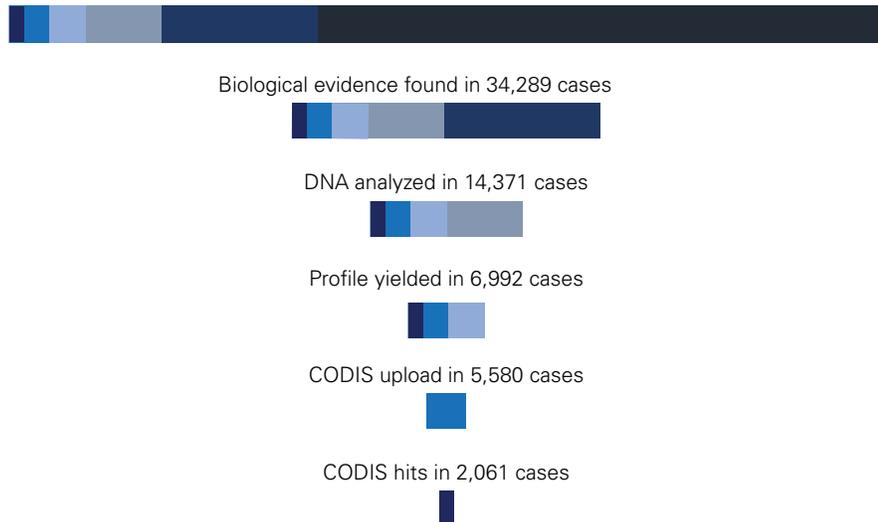
23. Utilize academic resources when possible and appropriate. These resources may include technologies, students, and faculty with subject matter expertise.

## The Mission

Between 2005 and 2014, the NIJ Solving Cold Cases with DNA program provided funding assistance to state and local law enforcement agencies across the nation to resolve cold cases through 213 awards totaling approximately \$78 million (see figure 1).

As a result of the highly successful program, NIJ gained critical insight into the important issue of addressing cold case investigations. To further this effort, NIJ created an expert working group in 2015 to look more closely at the state of cold case investigations and cold case units in the United States. This group of subject matter experts came from local, state, and federal law enforcement disciplines as well as medicolegal death investigation, academia, prosecution, victim advocacy, and forensics. They brought together their collective expertise to study and identify those practices which would best enable law enforcement to construct and maintain cold case units for the investigation and resolution of unsolved crimes. This working group considered issues ranging from planning, administrative, organizational, and policy considerations to specific strategies for identifying and addressing unresolved cases in agencies both large and small. With a diversity of experience and viewpoints, this working group successfully reached substantial agreement on a variety of complex issues involved in these cases. The group's conclusions are outlined in this document.

**FIGURE 1: RESULTS FROM NIJ'S SOLVING COLD CASES WITH DNA PROGRAM<sup>1</sup>**



<sup>1</sup> Data are reported to NIJ during the open project period of the funded award. Many successes occur after the NIJ reporting period has ended, so the final number of cases resolved is likely higher. CODIS is the FBI's Combined DNA Index System, a national DNA database.

## DOCUMENT TERMINOLOGY

### Cold Cases vs. Unresolved Cases

The term “cold cases” originated in the media. Due to the prevalence and acceptance of the term in most agencies, this document will use “cold cases” throughout. The working group realizes that this term can be perceived as insensitive, and it is not the intention of the working group to diminish the seriousness of any crimes nor the resolve of law enforcement to provide justice for all crimes. “Unresolved cases” is a more generic term that can include cases in which the offense recently occurred or the initial investigative process is still ongoing. As used throughout this document, cold cases and unresolved cases are synonymous terms; they include several categories of crimes and death investigations, including homicide, sexual assault, missing persons, and unidentified human remains (UHR).

### Victims/Survivors

For purposes of this document, victims and survivors include the person against whom the crime was directly perpetrated as well as that person’s family and friends, since they are also affected by these violent crimes. This document uses “victims” as an all-encompassing term for consistency and readability.

### Units

The word “unit” (i.e., cold case unit) is used throughout this document. However, agencies may not have a separate unit but may have specific positions designated to investigate cold cases.

### Agency

Throughout this document, the term “agency” is used in a collective sense, regardless of whether the cold case unit is operated by a single entity or through the collaboration of multiple entities (e.g., multijurisdictional, multiagency, or task force cold case units).

### Offenses

The working group does not specify which offenses should be considered for cold case investigations. Agencies need to set the scope of their cold case investigation operations based on their own organization and needs. Many agencies focus on homicides and/or sexual assaults. Each type of offense may require unique and varied approaches for investigation. This document will generalize approaches across offenses. The working group encourages agencies to consider addressing all unresolved violent crimes and to include unidentified persons and missing persons cases in their cold case investigations.

This publication, designed for law enforcement administrators and command staff, provides information about the importance of addressing cold cases and offers best-practice recommendations for creating and maintaining sustainable cold case units.

NIJ recognizes the diversity of law enforcement organizations in size and resources. Not all recommendations may be applicable to all agencies. The best practices presented here are recommendations compiled from many subject matter experts and from the available research. How these recommendations are implemented should be adapted to best suit each individual agency.

This document is not designed to give a specific or absolute order of implementation steps; rather, these guidelines are intended for consideration when initiating and operating a unit. Not all practices need to be incorporated for success. Nor does this document specify which offenses should be considered for cold case investigations. Although the popular conception of cold case units is that of cold case homicide

investigations, the suggestions in this document may also assist agencies in addressing other unresolved crimes.<sup>2</sup> Agencies need to determine what the scope of their cold case operations will be, based on the needs and gaps identified within the organization. Each individual cold case may require a unique investigation strategy. The most relevant practice for all agencies is to have a plan in place for resolving the unresolved cases.

---

<sup>2</sup> The Dallas (Texas) Police Department's Sexual Assault Cold Case Program is one example of a successful cold case program addressing nonhomicide offenses (Office for Victims of Crime, "Sexual Assault Cold Case Program—Texas"). NIJ urges agencies to include applicable missing persons and unidentified remains cases in homicide investigation caseloads. Although John and Jane Doe cases may fall under the jurisdiction of medical examiners or coroners, many of these cases are homicides that are in limbo until the victim is identified. Once the unidentified remains are placed in a cemetery, in most jurisdictions the cases move into the purview of the sheriff's office. Therefore, loss of remains in cemeteries is a concern for the entire medicolegal community.

# Background On Cold Case Units



**N**IJ's research has revealed the existence of a cold case crisis in the United States and the need for agencies to address these unresolved cases.<sup>3</sup>

Every unresolved case represents a person, along with their family, friends, and community. Creating and maintaining a cold case unit demonstrates an agency's commitment to victims and the community by solving crimes, holding offenders accountable, and ensuring public safety. Doing so reinforces a community's confidence in its police and the criminal justice system.

*"You also owe it to the victims and to their families — 'we promised.'"*

— William Doogan, Detective Sergeant,  
Boston (Massachusetts) Police Department

## Cold case crisis

Many crimes are not solved immediately, and numerous violent crimes prove particularly difficult to resolve. Unresolved crimes become cold cases. One of the most troubling aspects of cold cases is that we do not know precisely how many exist. There has been no national survey to determine the number of unresolved criminal cases.

Identifying the scope of the problem is the first step in addressing the cold case crisis. This can be complicated by a variety of factors. For instance, variation in the definition of a cold case is one reason why the exact number of unresolved cases nationwide is unknown. In Arizona alone, the homicide cold case definition has varied to such an extent that a state-commissioned task force required law enforcement agencies to "use the same definition of a cold case homicide" in order to attempt to conduct a statewide survey.<sup>4</sup> Arizona defined the term in a 2014 statute stating that "'cold case' means a homicide or a felony sexual offense that remains unsolved for one year or more after being reported to a law enforcement agency and that has no viable and unexplored investigatory leads."<sup>5</sup> In contrast, the Los Angeles (California) Police Department defines a cold case homicide "as any unsolved homicide in the City that was committed more than five years ago, and has no significant leads, and is no longer being actively investigated by area detectives based on a lack of solvability factor and/or workload."<sup>6</sup>

<sup>3</sup> Conservative estimates tallied over 240,000 unresolved homicides in 1980-2016 with approximately 6,000 cases added to this accumulation of unresolved cases annually (Stein et al., 2017).

<sup>4</sup> Arizona Cold Case Task Force, 2007.

<sup>5</sup> Justia U.S. Law, 2014.

<sup>6</sup> Los Angeles (California) Police Department, *Robbery-Homicide Division*.

## What Is a Cold Case?

No universal definition of a cold case currently exists.

Some jurisdictions consider a case to be cold when investigative leads have seemingly been exhausted.<sup>1</sup> Others consider the length of time that has elapsed since the crime occurred — for example, one, three, or five years. The Metropolitan Police Department of the District of Columbia transfers the responsibility of investigating an unresolved case from the initial investigation unit to the Major Case/Cold Case Squad after no further investigative steps are identified and after a period of time that could be up to four years.<sup>2</sup> Some agencies never really regard a case as cold; rather, an investigator is simply assigned to the case, working on it when time allows until it is solved or until he or she retires or is transferred to another position.

The term “cold case” should be used with caution. The National Sheriffs’ Association states, “Law enforcement officials should be sensitive in their use of the potentially painful word ‘cold’ and may want to consider explaining to survivors why specific language is used.”<sup>3</sup>

The NIJ Cold Case Working Group developed the following working definition for a cold case:

### **COLD CASE**

A case, such as a violent crime, missing person, or unidentified person, that has remained unsolved for at least three years and has the potential to be solved through newly acquired information or advanced technologies to analyze evidence.

1. Many agencies define a cold case as a case in which all identified leads have been exhausted. For example, the website of Houston, Texas, proclaims, “A case becomes ‘Cold’ when all probative investigative leads available to the primary investigators are exhausted and the case remains open and unsolved after a period of three years” (Houston [Texas] Police Department). The Hagerstown (Maryland) Police Department’s protocols note that “unsolved homicide cases will be referred to as ‘Cold Cases’”. Once all investigative leads are exhausted, and there is not enough evidence to place charges against a suspect(s) this case will be suspended and considered a ‘Cold Case’” (Hagerstown [Maryland] Police Department). The City of Greenville, South Carolina, defines a cold case as “an investigation of a serious crime where all leads have been exhausted and the case remains unsolved” (City of Greenville [South Carolina] Police Department).

2. Metropolitan Police Department of the District of Columbia, *Investigating Unsolved Murders in DC*.

3. National Sheriffs’ Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

Even without a defined number of cold cases, the cold case crisis continues to grow at an alarmingly rapid pace as case resolution and clearance rates continue to fall.<sup>7</sup> Data contributed by most of the nation’s law enforcement agencies to the FBI Uniform Crime Reports (UCR) show an estimated 1,183,933 violent crimes nationwide in 2016, with a clearance rate of 45.6 percent.<sup>8</sup> The estimated number of homicides in the United States that year was 15,566, with a clearance rate of 59.4 percent.<sup>9</sup> Since 1975, when the clearance rate for homicides was 78.3 percent, clearance rates have continued to decline.<sup>10</sup> In fact, Pew Research notes that the average total violent crime clearance rate has remained below 50 percent since 1995 and that homicide offenses have the highest clearance rate.<sup>11</sup> Less than half of the violent crimes committed in the United States

<sup>7</sup> An article in the *Investigative Sciences Journal* provides detailed information on how one researcher used the FBI’s Uniform Crime Reports (UCR) and Supplemental Homicide Reports (SHR) to determine that 230,355 homicides were unsolved between 1980 and 2014 (Martin, 2017). James Adcock also used UCR and SHR to arrive at the figure of 230,355 unresolved cases for 1980-2014 (Adcock, 2017). Another publication notes that an estimated 6,000 more unresolved homicides are accumulated annually (Stein et al., 2017).

<sup>8</sup> The FBI UCR annually publishes clearance rates using the simple formula of the number of crimes solved divided by the number of crimes that occurred during the same time period. UCR contributions are voluntary (FBI, *Percent of Offenses Cleared*).

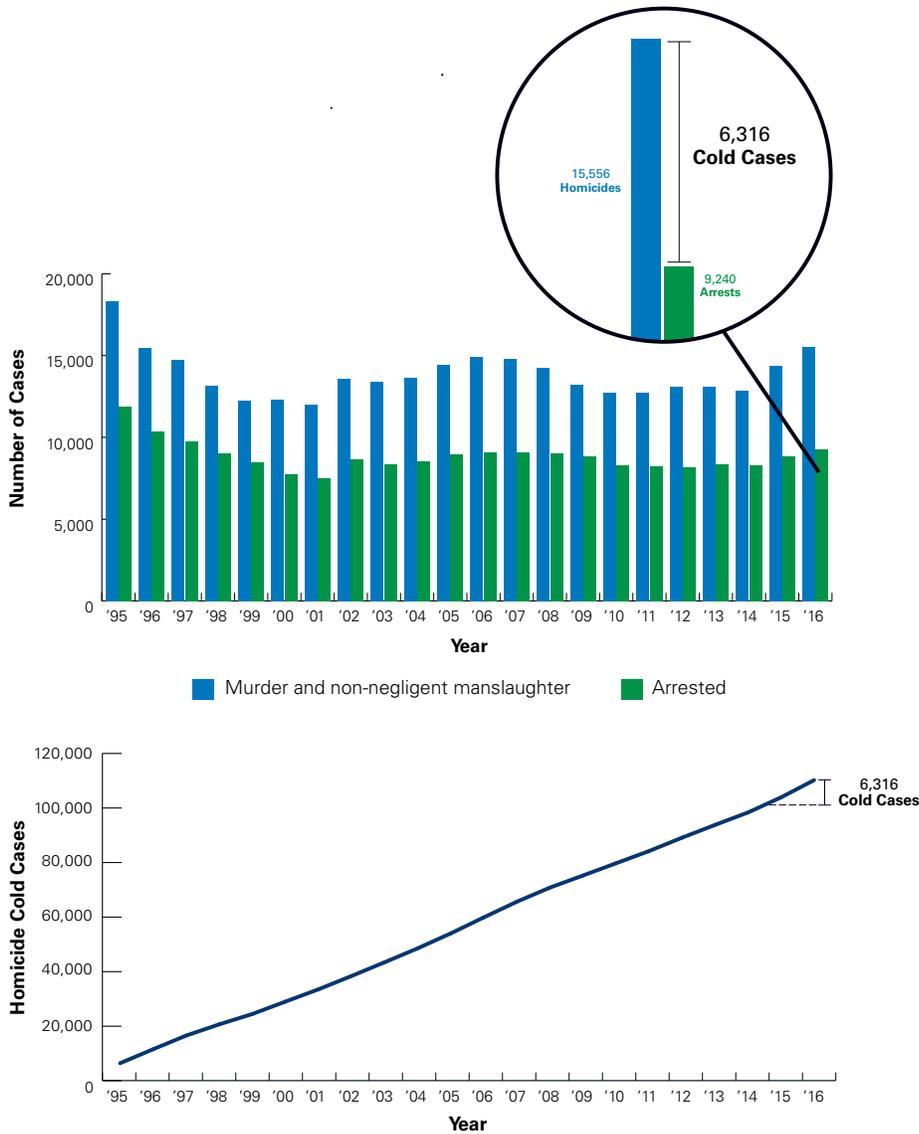
<sup>9</sup> Ibid.

<sup>10</sup> Fox & Zawitz, 2003.

<sup>11</sup> Pew Research Center, 2017.

are cleared, according to this research. Only 53.3 percent of aggravated assault offenses, 36.5 percent of sexual assault offenses, and 29.6 percent of robbery offenses were cleared in 2016 — meaning that approximately 64 percent of sexual assault perpetrators were not held accountable for their crimes.<sup>12</sup> Falling clearance rates mean an inevitable rise in the number of unresolved cases (see figure 2). Based on UCR data, experts estimate that there are more than 242,000 unsolved homicides in the United States.<sup>13</sup>

**FIGURE 2: ACCUMULATING COLD CASES**



Each year, the number of cold cases rises because there are more new cases than resolved cases. Homicides consistently have the highest clearance rates, but even these clearance rates are well below 70 percent. Since 1995, over 100,000 cold case homicides have accumulated in the United States.

<sup>12</sup> FBI, *Percent of Offenses Cleared*.

<sup>13</sup> Stein et al., 2017.

Thus, approximately four out of 10 homicides are not solved; four out of 10 murderers do not receive justice and remain free to continue to commit crimes; and four out of 10 homicide victims do not receive any sort of resolution, adding to the ever-growing number of cold cases.

In addition, it must be noted that missing persons and unidentified human remains (UHR) cases are often the result of violent crime, although many of these cases are classified as having an undetermined cause. As such, they are not included in violent crime statistics; thus, the number of unresolved crimes is likely much higher than currently estimated. Out of the 27,927 active and published missing persons and unidentified persons cases listed in the National Missing and Unidentified Persons System (NamUs) in February 2019, approximately 5,163 of the unidentified persons cases, or 48 percent, have an undetermined manner of death; 1,945 out of 15,444 open missing persons cases have been marked as “foul play” by families or law enforcement, and in another 12,370 cases, or 80 percent, the possibility of foul play has yet to be determined (see figures 3 and 4).<sup>14</sup> Realistically, 242,000 unresolved homicides is an extremely conservative estimate because a large number of death investigation and missing persons cases remain unknown.

This guide is intended to assist agencies seeking to address the cold case problem by implementing and sustaining a cold case investigation unit.

*“Police don’t even know how many homicides there are in the U.S. There is only a 60 percent clearance rate; there are thousands of unsolved cases, killers on the streets. Going back to 1980, there are hundreds of thousands of unsolved cases nationally and the numbers are increasing. How can you not address that? It’s a major issue that someone isn’t working these cases.”*

— Tom McAndrew, Homicide Cold Case Investigator, Pennsylvania State Police (retired)

## The current picture

For some agencies, the accumulation of unresolved cases became apparent along with the need to address these cases. For example, in 1992 the Metropolitan Police Department of the District of Columbia created a cold case squad to focus on the overwhelming number of unresolved cases in D.C. Early success was evident — approximately 160 homicides were closed within the first five years of operation.<sup>15</sup> In some agencies, such as the Miami-Dade Police Department in the early 1980s, cold case units were formed to address a specific case as well as an increased caseload, but agencies also realized the need for a specialized mechanism to address unresolved cases.<sup>16</sup> Advancements in technology, forensics, and related databases such as those for DNA, biometric data, impression evidence,<sup>17</sup> and firearm evidence have prompted many agencies to re-examine unresolved cases and prompted the creation of some cold case units.<sup>18</sup>

<sup>14</sup> *NamUs*, <https://www.namus.gov>.

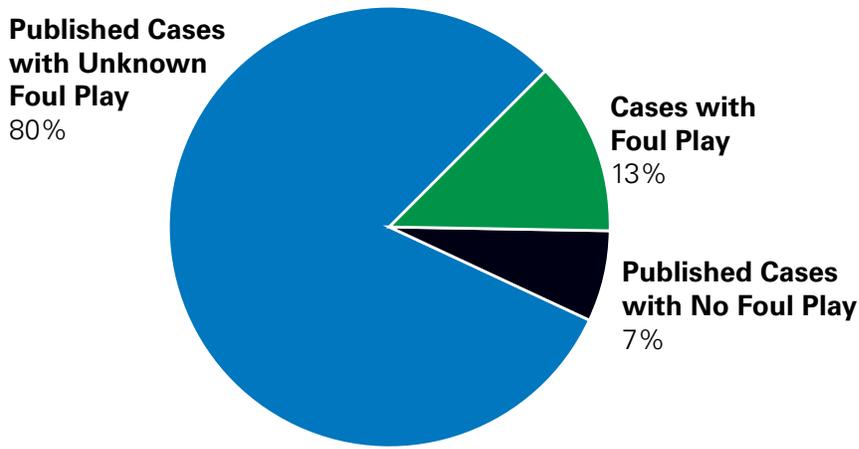
<sup>15</sup> Regini, 1997.

<sup>16</sup> Miami-Dade (Florida) Police Department (or Metro-Dade, as the agency was known at the time) is credited as forming the first cold case unit (Reyes, 2009). In fact, local newspapers covering the unit’s operations coined the term “cold case squad.” In addition to addressing a specific homicide, the unit was created to address the rising number of homicides related to the cocaine industry and the influx of Cuban refugees (Reyes, 2009).

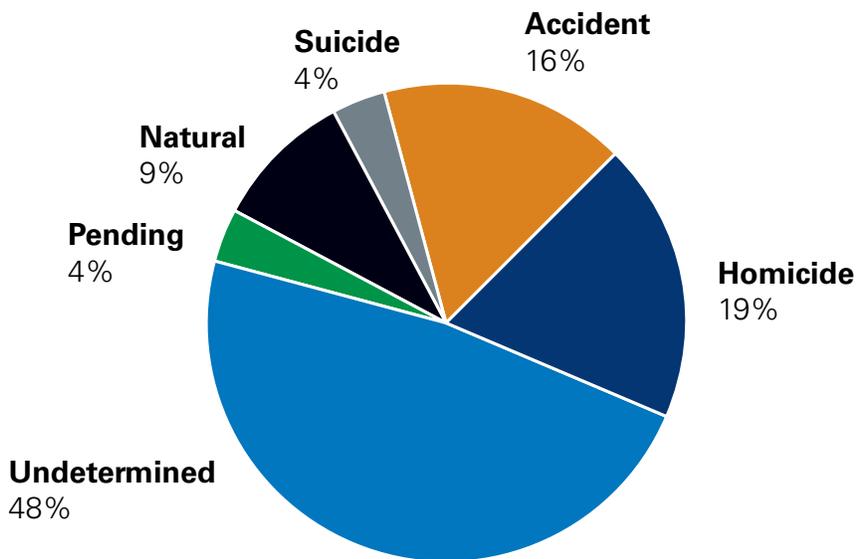
<sup>17</sup> Examples of impression evidence are tire impressions, footwear impressions, and fabric impressions.

<sup>18</sup> A newspaper editorial on the resolution of the 37-year-old homicide of a 14-year-old touts, “The case provides Exhibit A for the argument that every police department should have access to cold case investigators.” The article cites that the advancement of technology promises successful case resolutions and is the reason why agencies need to review unresolved cases (Mercury News & East Bay Times Editorial Boards, December 13, 2017).

**FIGURE 3: FOUL PLAY IN ACTIVE MISSING PERSONS CASES IN NAMUS**



**FIGURE 4: MANNER OF DEATH IN ACTIVE UNIDENTIFIED PERSONS CASES IN NAMUS**



Note: Active cases include published cases only. Draft, new, accepted, unverifiable, and deleted cases are not included in active case statistics.

Source: *NamUs*, <https://www.namus.gov>.

What do we know about the number of dedicated units tasked with investigating unresolved cases in the nation’s approximately 18,000 law enforcement agencies?<sup>19</sup> The best available data from the limited number of studies on cold case units indicate that very few law enforcement agencies maintain a cold case unit or dedicate resources to unresolved case investigations.<sup>20</sup> Major factors contributing to this situation include a lack of financial resources for supporting cold case units or cold case investigators, and a lack of formal protocols for initiating cold case investigations.<sup>21</sup>

**TABLE 1: COLD CASE UNITS IN THE UNITED STATES**

<b>Cold Case Units in the United States</b>	
Dedicated cold case units, all surveyed departments	7%
Dedicated units, departments with 100 or more officers	18%
Dedicated units, departments with 50 or fewer officers	1%
Investigators who work on cold cases (no dedicated unit), all surveyed departments	10%
Formal protocols for initiating cold case investigations, all surveyed departments	20%

Source: Davis, Jensen, & Kitchens, 2011.

<sup>19</sup> The most recent Bureau of Justice Statistics (BJS) report from a 2008 census of the nation’s law enforcement agencies notes that 17,985 state and local agencies were identified in the United States (Reaves, 2008).

<sup>20</sup> A 2009 report from the Texas Law Enforcement Management and Administrative Statistics Program notes that a survey completed by 58 law enforcement agencies indicated that only 19 percent of the agencies contained an active cold case unit at the time, whereas 76 percent had never possessed such a unit and 5 percent had a unit previously. Not surprisingly, the Texas survey also revealed that lack of funding was the reason previously existing units had been extinguished. The state-commissioned Arizona Cold Case Task Force (2007) revealed that only 17 percent of the responding law enforcement agencies contained a cold case unit. Similarly, an independent study published in 2017 reported that, out of 544 agencies surveyed, 18.5 percent possessed a cold case unit. Those same agencies counted 40,512 unresolved homicides in their jurisdictions (Stein et al., 2017).

<sup>21</sup> Davis, Jensen, & Kitchens, 2011.

# The Need For Cold Case Units



## Why are cold case units needed?

**A**s a matter of public safety and to ensure justice for victims, a priority of all law enforcement agencies — federal, state, and local — is to solve all cases, regardless of the amount of time that has passed. As noted by the American Bar Association, “the highest duties of government, and therefore the police, are to ‘safeguard freedom, to preserve life and property,’ to protect the constitutional rights of citizens and maintain respect for the rule of law by proper enforcement thereof, and, thereby, to preserve the democratic process.”<sup>22</sup> Solving crime is an inherent police function.

*“Working cold cases is a responsibility, not a luxury.”*

— Lou Eliopoulos, Cold Case Homicide Unit,  
Naval Criminal Investigative Service

There are five primary justifications for creating and maintaining a cold case unit:

- Criminal justice
- Public safety
- Public trust
- Clearance rates
- Cost savings

### ***Criminal justice***

In every crime, there is at least one victim. “Victims have fundamental rights and identifiable needs” and “victims should be the primary customers of the justice system.”<sup>23</sup> Victims are a critical component of the criminal justice system, and their issues and concerns are an integral part of policing in the 21st century.<sup>24</sup>

Faith in the criminal justice system, and in law enforcement in particular, hinges on the public’s perception that laws will be enforced. Maintaining this faith is the responsibility of the police. Victims want reassurance that

<sup>22</sup> American Bar Association, 1973/1980.

<sup>23</sup> International Association of Chiefs of Police Victims Summit, 2000.

<sup>24</sup> Ibid.

they are not forgotten and that offenders will be held accountable for their criminal actions. As time passes and criminal cases are not resolved, victims and the community do not forget or give up hope.

### ***Public safety***

The mission of every law enforcement agency, regardless of its size, is to keep the public safe. This mission includes recognizing the value of human life, maintaining the public's trust, respecting the principles of the country's constitution and laws, and serving with integrity, accountability, and professional excellence.

In their efforts to enhance public safety, agencies have worked to forge ties with their communities. Many agencies have found allies through programs such as community-oriented policing, furthering their efforts to resolve cases. Conversely, failure to address the issue of unresolved cases may contribute to fear and distrust of police in the community, potentially increasing the community's reluctance and resistance to working with law enforcement.<sup>25</sup>

The cold case crisis is in part the result of the accumulation of unresolved cases committed by repeat offenders. Research reveals that recidivism is disturbingly high in the United States: Within five years of their release from prison, 71 percent of violent criminal offenders are rearrested.<sup>26</sup> The Police Executive Research Forum (PERF) notes that even though time passes and investigators have not been able to resolve crimes, their caseloads increase. Mounting caseloads, in turn, create additional drain on agency resources, reducing the likelihood that incoming cases will be resolved and thus adding to the accumulation of cold cases. PERF describes this process as a vicious cycle, as offenders continue to be a threat to society.<sup>27</sup> Public safety cannot be ensured if a violent criminal is able to reoffend.

### ***Public trust***

According to a report from the International Association of Chiefs of Police (IACP), the public's image of the police has been declining since the 1960s. Citizens demand an extremely high level of performance and expect their communities to be crime free and criminal cases to be resolved.<sup>29</sup> In addition, research suggests that outcome-oriented aspects of police performance are linked to citizens' overall image of the police. Outcome-oriented elements include solved crimes as well as the community's sense of safety in the absence of fear of crime. Crime prevention — a major function of law enforcement and the

*“Everything we do at the Department of Justice is dedicated to reducing crime in America.”*

— U.S. Attorney General Jeff Sessions<sup>28</sup>

<sup>25</sup> Cronin et al., 2007.

<sup>26</sup> Durose, Cooper, & Snyder, 2014.

<sup>27</sup> Cronin et al., 2007.

<sup>28</sup> Sessions, May 7, 2018.

<sup>29</sup> Gallagher, Maguire, Mastrofski, & Reisig, 2001.

## Serial Offenders

According to the Begun Center for Violence Prevention Research and Education at the Mandel School, serial rapists are more common than previously perceived.

The Cuyahoga County Sexual Assault Kit Task Force and the Begun Center for Violence Prevention Research and Education report:<sup>1</sup>

- Of 243 sexual assaults studied, 51 percent were tied to serial offenders, who generally had more extensive and violent criminal histories than one-time sexual offenders.
- It is very likely that a sexual offender has either previously sexually assaulted or will offend again in the future.

- Investigating each sexual assault as possibly perpetrated by a serial offender has the potential to reduce the number of sexual assaults, if investigations focus more on the offender than on single incidents.
- Rapists have long criminal histories that often begin before their first documented sexual assault and continue after it.
- The majority of both serial and one-time sexual offenders have felony-level criminal histories: 74 percent of all serial rapists studied had at least one prior felony arrest, and 95 percent had at least one subsequent felony arrest.

1. Begun Center, 2018.

community — is also an outcome-oriented element. The public holds law enforcement accountable for achieving these outcomes, and police need to manage public expectations in order to operate effectively. Police performance falls short of public expectations when criminal investigations, especially those involving violent crimes, are not resolved.<sup>30</sup>

The IACP further noted, however, that the public offers “positive assessments of the police ability to achieve crime-focused outcomes.”<sup>31</sup> Consequently, not producing results jeopardizes any community’s goodwill and the positive public perceptions that exist. Resolving cold cases is an important contributor to preventing crime, increasing public safety, and increasing the favorable image of law enforcement — that is, fulfilling law enforcement’s mission and maintaining public trust.<sup>32</sup>

In addition to fulfilling its agency mission, law enforcement has become increasingly aware of potential repercussions from public perceptions of police performance. In today’s media-filled society, the accumulation of untested evidence as well as the existence of new forensics technology have become common knowledge. Citizens and the media are asking why all evidence has not been examined and why law enforcement has not used all potential tools available to resolve each and every case. Civil liability has become a real concern for law enforcement leadership. Even if agencies are able to successfully dismiss such lawsuits, jurisdictions will be faced with responding to these claims. Being proactive will help

<sup>30</sup> Ibid.

<sup>31</sup> International Association of Chiefs of Police Victims Summit, 2010.

<sup>32</sup> Gallagher, Maguire, Mastrofski, & Reisig, 2001.

agencies generate goodwill and reinstate trust, and addressing cold cases proactively may even stave off potential future legal claims.

Agencies must also realize that various policing operations do not need to be mutually exclusive. Cold case units can work in concert with particular policing initiatives, including Project Safe Neighborhoods (PSN),<sup>33</sup> Community Oriented Policing Services (COPS), problem-oriented policing (POP), hot spot policing, or even new and emerging initiatives such as New Orleans' Group Violence Reduction Strategy.<sup>34</sup> A cold case unit can be implemented and operated in a mutually beneficial relationship with these programs. For example, cold case units are, in essence, the embodiment of POP initiatives: to be proactive rather than reactive in resolving issues.

### ***Clearance rates***

Police agencies use performance measurements to evaluate the level of success of their operations. The four commonly recognized measures of police performance today are (1) crime rates, (2) arrests, (3) clearance rates, and (4) response times.<sup>35</sup> Often, an agency's success is evaluated based on clearance rates alone, as this data is considered an important measure of how effectively police agencies are doing their work. The annual FBI UCR is the generally accepted national resource for agency crime statistics.<sup>36</sup> When the annual report is released, the media, academia, law enforcement, and jurisdictional officials examine the data to understand current crime and law enforcement conditions and trends. Clearance rates are some of the most studied and reported data from the UCR, and declining clearance rates are further indicators of the national cold case crisis facing law enforcement leadership today.

Still, clearance rates alone do not fully reflect an agency's efforts, and this is especially true regarding the resolution of unsolved cases. Cold case investigation methods and procedures are vastly different from an initial investigation. While investigation of unresolved cases helps agencies, there is no performance instrument that reflects the true successes brought about by addressing unresolved cases. Nonetheless, as offenders are removed from the public through the resolution of unsolved cases, crime rates will likely decrease while arrests and clearances will increase. Response times will arguably improve as fewer resources are required for initial investigations.

---

<sup>33</sup> Facilitated by BJA, PSN is a DOJ crime reduction initiative designed to network local crime reduction programs (BJA, *Project Safe Neighborhoods*).

<sup>34</sup> CrimeSolutions.gov, 2016.

<sup>35</sup> Davis, Jensen, & Kitchens, 2011.

<sup>36</sup> The IACP's Committee on Uniform Crime Records started gathering crime data across the country in 1927, and in 1930 Congress mandated that the FBI obtain and control these records. Even as early as 1930, researchers and law enforcement executives realized the importance of resolving crime and initiated the use of "the number of cases cleared" as a measure of police effectiveness (CALEA, 2003). However, because of local laws and individual agency definitions of some offenses at variance with the FBI UCR definitions, FBI UCR numbers may not represent a complete picture of crimes and clearances.

## Forensic Databases Provide Cost Savings

The records in forensic databases, such as those for DNA, are increasing exponentially each year. As of December 2018, the national DNA database portion of the FBI's Combined DNA Index System (CODIS) contained over 13.6 million offender profiles and over 900,000 forensic profiles.<sup>1</sup> As these databases grow, more connections between offenders and other crimes will be realized. Populating these databases, therefore, aids agencies in case resolution. This translates to operational cost savings for agencies by providing valuable leads, thus saving the time and expense of exploring multiple options.

A 2017 article, "The Effects of DNA Databases on Crime" by Jennifer Doleac, outlines the effectiveness of DNA databases, specifically CODIS, for crime

reduction and crime deterrence. Doleac not only described the economic impact of using DNA databases to combat rising crime rates but also found that using DNA databases was more cost-effective than other law enforcement measures such as hiring more law enforcement personnel or increasing prison sentences. By using DNA technology, the agency has an efficient, effective way to combat crime and reap beneficial returns on its investment.<sup>2</sup>

Thus, implementing a cold case unit and ensuring that all evidence is examined, identified, and uploaded to CODIS translates to long-term cost savings for the agency.

1. FBI, *CODIS-NDIS Statistics*.

2. Doleac, 2017.

Measuring the successes of a cold case unit is difficult because they are often intangible and not easily quantified. Although the community may not comprehend the complexities of a case, knowledge of ongoing activity in an investigation may still afford public reassurance and may therefore be some level of success. Other, less apparent benefits may also result from the formation of a cold case unit. These may include enhanced perceptions of "justice, integrity, fear reduction, citizen satisfaction, protection and help for those who cannot protect or help themselves."<sup>37</sup> Law enforcement leadership, the media, and the public alike must come to understand and have realistic expectations of how cold case investigations differ from initial investigations, and how each cold case resolution is a noteworthy success.

Although clearance rates are not a true indicator of the success of a cold case unit, cold case investigations can aid an agency's clearance rate. A resolved cold case is considered cleared in the year that the resolution occurs; therefore, crimes that occurred in a prior year but were resolved in the current year will be included in the current year's clearance rate.<sup>38</sup> It is possible to have a clearance rate greater than 100 percent, and some agencies have in fact used boosting clearance rates as justification for maintaining a cold case unit.

<sup>37</sup> CALEA, 2003.

<sup>38</sup> Keel, 2012.

## ***Cost savings***

For many years, researchers have struggled to calculate the economic impact of crime and the savings that can be achieved by preventing it. The annual cost of crime to the nation has been estimated in the hundreds of billions of dollars. A National Institutes of Health study, for example, estimated that as a result of the 23 million criminal offenses in 2007, victims lost close to \$15 billion and government agencies spent approximately \$179 billion.<sup>39</sup> The Minnesota House of Representatives Research Department noted that there are tangible and intangible costs of crime, all of which are difficult to calculate. Some cost considerations include property loss, medical costs, government costs, and additional security measures.<sup>40</sup>

Some costs of crime are hard to quantify, and most do not have a numerical value. For example, victims and families may incur costs due to physical injuries and/or mental distress after a crime occurs, and due to participation in the criminal justice process itself. Sometimes, these costs are more difficult to quantify because they may arise, in part, after the primary data are collected about a criminal victimization event. Some research studies go beyond the obvious physical and monetary costs and attempt to quantify the cost of the increased fear that residents in high-crime neighborhoods have of leaving their homes, particularly at night. This increased fear may itself contribute to a decrease in neighborhood safety, to the extent that deserted streets and public areas invite additional criminal activity.

Several research studies seek to quantify other indirect or intangible costs of crime. One example is the negative effect that criminal victimization can have on children in the household. Most studies conclude that child victims are at increased risk of having school problems, psychological problems, and delinquency problems as a result of their victimization. Another example is the intangible cost to victims of their continuing pain and suffering due to the criminal event and their actual or perceived loss of quality of life. Even though pain and suffering costs are extremely difficult to measure, some research studies provide an aggregate dollar estimate of them, primarily based on data derived from jury awards in lawsuits.<sup>41</sup>

Resolving unresolved cases brings overall cost savings to an agency and to the community. Case resolutions free agency resources, lighten investigator caseloads, reduce administrative activities, and relieve potential laboratory evidence queues. Additionally, and most importantly, resolving cases can prevent future victimizations and the associated costs.

---

<sup>39</sup> McCollister, French, & Fang, 2010.

<sup>40</sup> Shapiro, 1999.

<sup>41</sup> Ibid.

## OJP's Efforts to Address the Accumulation of SAKs to Investigate Cold Cases

OJP's sister agencies NIJ and BJA have been collaborating to resolve the accumulation of SAKs across the country. Since 2000, NIJ has provided funding to address the accumulation of untested DNA evidence. The first initiative provided funding for the Convicted Offender Backlog Reduction Program; later, the No Suspect Casework DNA Backlog Reduction program was added. Currently, NIJ provides funds to state and local agencies for DNA capacity enhancement and untested evidence inventory reduction. As of December 2017, over 1,000,000 cases were analyzed for DNA and over 400,000 forensic crime scene DNA profiles were uploaded to CODIS, producing more than 200,000 CODIS hits.<sup>1,2</sup>

In recent years, processing and analyzing untested SAKs for DNA has become a priority for many agencies. NIJ, in partnership with the Office on Violence Against Women, published a report in 2011 in response to the SAK evidence accumulation.<sup>3</sup> This report spurred action-research projects in Detroit and Houston as well as additional NIJ-supported programs. For example, in 2016, NIJ provided \$3.3 million for the Sexual Assault Forensic Evidence – Inventory, Tracking, and Reporting Program

(SAFE-ITR).<sup>4</sup> NIJ also partnered with the FBI to provide DNA testing for unsubmitted SAKs at no cost to the submitting agency. As of October 2018, over 3,519 cases had been processed through this NIJ-FBI partnership, providing over 1,800 CODIS entries with over 760 investigative leads.<sup>5</sup> Other NIJ projects include technology research for forensic analyses, a best-practices guide for collecting SAK evidence, and knowledge transfer and technology workshop events through NIJ's Forensic Technology Center of Excellence (FTCoE).

The Bureau of Justice Assistance (BJA) also provides support for the SAK evidence accumulation through the Sexual Assault Kit Initiative (SAKI). SAKI provides funds for agencies to inventory, test, investigate, and prosecute SAK cases. From SAKI's launch in 2015 to December 2018, \$154 million was awarded to 41 jurisdictions. As of September 2018, 62,062 SAKs had been inventoried, 45,626 SAKs were sent for testing, 13,627 profiles were uploaded to CODIS, and 6,522 CODIS hits were obtained.<sup>6</sup> In FY 2018, SAKI provided funding opportunities for agencies investigating and prosecuting cold case sexual assaults.<sup>7</sup>

1. LaPorte et al., 2017.

2. NIJ receives monthly progress reports bi-annually that are reviewed and programmatic data analyses are performed after the reporting and approval process. Therefore, there is approximately a one-year lag in the reported work performed and the real-time work.

3. Office on Violence Against Women, *About the Office*.

4. NIJ, *Sexual Assault Forensic Evidence – Inventory, Tracking, and Reporting Grant Program*.

5. FBI, private correspondence with NIJ.

6. BJA, *Sexual Assault Kit Initiative (SAKI)*.

7. BJA, *National Sexual Assault Kit Initiative (SAKI) FY 2018 Competitive Grant Announcement, 2018*.

## Why now?

As elected officials and law enforcement leadership around the country ask what the actual cost of solving a cold case is, victims and the community can counter by asking, "What is the cost of not solving a cold case?"

A study into the processing of untested sexual assault kits (SAKs) by Lawrence Wein, of the Stanford Graduate School of Business, concluded that there was a moral imperative coupled with a powerful economic argument for testing every SAK: "Every dollar the police spend on analysis returns \$81 from averted sex crimes."<sup>42</sup> As a byproduct of

<sup>42</sup> Wang & Wein, 2018.

resolving crime, making communities safe, and realizing cost savings by deterring crime, an agency can also enhance its image and increase its positive relationships with its stakeholders.

Now is the time to address the cold case crisis. Cases once considered unsolvable can be resolved today. Reasons to reopen and investigate cold cases can include:

- Advancements in forensic technology
- Changes in relationships over time
- New leads through fresh reviews
- Increased public support and interest
- Improved information management

*“Criminal prosecution is not always possible. Justice can come in many forms. Truth is also justice.”*

— Erin H. Kimmerle, Executive Director, Florida Institute for Forensic Anthropology & Applied Science

### **Advancements in forensic technology**

Today, more than ever, forensic technologies are advancing at a rapid pace.<sup>43</sup> These significant advancements can now provide investigators with valuable tools that did not exist when older cases were originally investigated.<sup>44</sup> As a result, crime scene evidence that was once thought to be unsuitable for testing, or that originally yielded inconclusive or negative results, may now yield probative evidence or investigative leads.<sup>45</sup> Furthermore, forensic databases have improved substantially in recent years as a result of increased uploading of forensic data, improved search algorithms, and interoperability across systems.

Some examples of forensic technology advancements include:

- **NamUs**  
The National Missing and Unidentified Persons System (NamUs) provides a suite of services and databases for missing persons and UHR.<sup>46</sup>
- **DNA**  
DNA has become detectable in smaller amounts, and advances in DNA technology have substantially increased the likelihood that

<sup>43</sup> NIJ provides support for technology and forensic advancements through programs such as Forensic Science Research and Development (<https://www.nij.gov/topics/forensics/Pages/welcome.aspx>) and the Forensic Technology Center of Excellence (<https://forensiccoe.org>).

<sup>44</sup> Examples of database systems include case management programs, Geographic Information Systems (GIS), the FBI's Violent Criminal Apprehension Program (ViCAP), NIJ's National Missing and Unidentified Persons System (NamUs), the FBI's Combined Index DNA System (CODIS), the FBI's Next Generation Identification (NGI) system, the Bureau of Alcohol, Tobacco, Firearms and Explosives' National Integrated Ballistic Information Network (NIBIN), and many databases specific to the evidence described in the *NIJ Journal* article, "Forensic Databases: Paint, Shoe Prints, and Beyond" (Bowen & Schneider, 2007).

<sup>45</sup> An article published by IACP, "Knowledge Is Power – Using Technology to Gain Forensic Intelligence," describes using forensic databases for investigative intelligence. Linking cases, for example, multiplies the investigative information available for each of the linked cases (Roper & Morgan, "Knowledge Is Power").

<sup>46</sup> NamUs "assisted" in over 2,000 missing persons cases and over 1,500 unidentified persons cases.

aged, degraded, limited, or otherwise compromised biological evidence can be successfully analyzed to produce a DNA profile. The number and type of DNA profiles<sup>47</sup> contained in the FBI's national Combined DNA Index System (CODIS) — and in state and local databases — has increased dramatically.<sup>48</sup> The FBI's 2015 expansion of DNA markers included in CODIS provides greater discrimination potential for human identification and stronger statistics.<sup>49</sup> Moreover, new applications for technology such as familial DNA searching,<sup>50</sup> phenotypic DNA,<sup>51</sup> and genealogical DNA searches<sup>52</sup> can prove vital for producing investigative leads or even solving a case.

## ■ Friction ridge impressions

Techniques for collecting and recovering friction ridge impression evidence have improved. These include techniques for: locating and recovering impressions; recovering post-mortem fingerprints; digitizing impression evidence; record and evidence matching;<sup>53</sup> and system interoperability between jurisdictions.<sup>54</sup> The FBI's Advanced Fingerprint Identification Technology (AFIT), an enhanced fingerprint-matching algorithm, has been upgraded from the older Automated Fingerprint Identification System (AFIS).<sup>55</sup>

---

<sup>47</sup> Mitochondrial DNA (mtDNA), the DNA inherited from one's maternal genetics, and Y-STR DNA, genetic material inherited from the paternal side, are now accepted into the National DNA Index System (NDIS) for missing persons cases. Short tandem repeat (STR) DNA technology only requires a minimal amount of sample to produce a DNA profile (FBI, *Frequently Asked Questions on CODIS and NDIS*).

<sup>48</sup> As of December 2018, the NDIS contained almost 13.6 million offender profiles, more than 3 million arrestee profiles, and more than 900,000 forensic profiles (FBI, *CODIS-NDIS Statistics*).

<sup>49</sup> FBI, *Notice of Release*.

<sup>50</sup> Familial DNA is the process of searching for potential DNA database matches with relatives of the contributor of the unknown DNA. Familial DNA searching requires that a close relative's DNA data be in a database. Several states have found great success using this process, such as California in the Grim Sleeper case (Gerber, October 25, 2016). Without familial DNA, the numerous homicides in California committed by Lonnie Franklin, Jr., would still be unresolved and more victims might have died. Currently, 10 states allow database searching for familial DNA — and the list is growing — yet, there are still many states that forbid familial DNA searches (Augenstein, December 8, 2016, and Forensic Technology Center of Excellence, *Familial DNA Searching*).

<sup>51</sup> Phenotypic DNA analysis can suggest how the person who contributed the DNA sample may look. Several cold case arrests are attributed to this new forensic process. One such case was the arrest in 2017 of Blake A. Russell for the 2009 homicide of Sierra Bouzigard (KPLC, July 25, 2017).

<sup>52</sup> Genealogical DNA searches use commercial DNA databases where people provide their DNA information to a commercial genealogical company in order to establish genealogic connections with other people who have also submitted their DNA. The DNA profiles can provide valuable leads for investigators who have a DNA profile that has not produced a connection in other DNA databases. A genealogist and a DNA analyst are often required in order to navigate any possible relationships that may be identified. Notable cases such as the Golden State Killer have identified a suspect by using genealogical DNA searches.

<sup>53</sup> Fingerprints from 109 UHR cases were rerun and 47 percent were identified, including several cold cases dating back as far as 1979 (NamUs Fingerprint/AFIS Unit, 2014 Annual Staff Meeting; Mulawka & Craig, 2011).

<sup>54</sup> Through the years, many law enforcement agencies have installed automated fingerprint identification systems (AFIS) from a variety of vendors who each use their own software. As a result, many agencies are unable to compare their own data with other databases, whether in neighboring jurisdictions or at the state and national levels. The National Institute of Standards and Technology (NIST) initiated an AFIS Interoperability Working Group in 2008 that is attempting to resolve these interoperability issues (National Institute of Standards and Technology, *Forensic Science*). Searching the records in one system does not mean that all systems are searched, and cold case investigators must verify which databases were searched previously.

<sup>55</sup> A 25-year-old sexual assault cold case was solved when Florida's Pinellas County Sheriff's Office upgraded the agency's computerized fingerprint-matching program. The suspect's fingerprints had been in the system for years, but a match was not made until the new algorithm was applied (Augenstein, March 7, 2017).

## FBI and NamUs Fingerprint Collaboration Project

One of the functions of NamUs is to provide a repository of UHR records, such as fingerprint records, to be used as a resource for identifications. As of February 2017, NamUs contained over 14,000 UHR cases. In March 2017, NIJ and the FBI initiated a collaboration to compare the NamUs fingerprint files with the FBI's fingerprint files. In less than one year,

over 200 fingerprint associations were connected to UHRs. Fingerprint images continue to be submitted on a weekly basis as new UHR cases are received by NamUs.<sup>1</sup> At least 25 of the hits identified homicide victims, providing pertinent information for these cold cases.<sup>2</sup>

1. LaPorte, Johnson, & Schaeffer, 2018.

2. Augenstein, September 5, 2017.

### ■ Firearms evidence

The National Integrated Ballistic Information Network (NIBIN),<sup>56</sup> operated by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF),<sup>57</sup> is an ever-growing, automated imaging database system for cartridge casing evidence. Additionally, advanced reconstruction tools can note bullet trajectories and the activities associated with the crime, potentially providing investigative leads.

### ■ Medicolegal death investigations

Virtual autopsies may replace or supplement gross autopsies.<sup>58</sup> Numerous scientific advances may provide additional information about samples upon re-examination: Bone, tissue, and other biological samples once thought to have no forensic value can be retested with more sensitive DNA techniques to yield full DNA profiles.<sup>59</sup> Increased knowledge of mitochondrial DNA (mtDNA) also promises to make a significant impact on missing persons and UHR cases.<sup>60</sup>

### ■ Forensic anthropology

Technology can assist with locating, excavating, and documenting scenes. Trauma analysis, chemical isotope testing for geo-referencing the origin and migration of an individual, and forensic imaging and biometric analysis of skeletal and dental remains for identification are

<sup>56</sup> ATF's National Integrated Ballistic Information Network (NIBIN) has captured approximately 2.8 million ballistic images between 1999 and 2016 and over 74,000 matches have been identified (Bureau of Alcohol, Tobacco, Firearms and Explosives, 2016).

<sup>57</sup> NIBIN has traditionally used two-dimensional comparisons. Newer comparison studies use three-dimensional images to measure marks on fired cartridge casings (Augenstein, January 23, 2013).

<sup>58</sup> In 2016, NIJ and several international agencies participated in the International Forensic Radiology Research Summit (IFRRS) to discuss the current status of forensic radiology as well as gaps and research needs to advance technology (Jones et al., 2016).

<sup>59</sup> *Newsday*, September 9, 2017.

<sup>60</sup> Forensic Technology Center of Excellence, April 2018.

just a few of the analyses provided by forensic anthropologists. Bones can now be printed using 3D printers for in-depth examinations. Also, anthropologists have continued to collect more data on age, sex, and race determinations to refine their analyses.

#### ■ Crime scene analysis

Tools such as three-dimensional analysis, digital mapping, and computer animation can provide insight into the activities that occurred surrounding the commission of a crime. Reviewing notes, photographs, and information in the case files and from anyone who visited the crime scene at the time of the crime can assist in recreating scenes to provide valuable leads, regardless of the time that has passed since the date of the offense.

#### ■ Other forensic sciences

Forensic science disciplines continue to advance, and an exhaustive list would be difficult to compile. A few examples identified through NIJ research projects include: improved trace fiber comparison examinations;<sup>61</sup> chemical analysis of isotopes in human hair to identify where a person has lived and traveled as well as personal characteristics such as sex and race;<sup>62</sup> and very small particles<sup>63</sup> to link evidence and suspects to crime scenes.<sup>64</sup> Recent advancements in arson investigations have provided additional information.<sup>65</sup>

Many of the technologies that are beneficial to cold cases are those involving databases. However, the key to any database's usefulness is the addition of new information. As new cases are entered, they are compared with current data stored in the repository and are also retained for future comparisons. The inclusion of new data and comparison to existing data contribute to solving both current and unresolved cases. As these databases continue to grow, more cases will be solved.

### ***Changes in relationships***

Time may be the perfect ally in a cold case investigation. People and situations change. Those who were formerly unwilling to cooperate with an investigation may now cooperate. Marriages, friendships, and other trust relationships may deteriorate with the passage of years. Friends can become adversaries, business relationships may sour, and people may mature or relocate. A divorce may present the opportunity to glean new

---

<sup>61</sup> NIJ, *Fiber Impurities*.

<sup>62</sup> NIJ, *Using Isotopes in Human Hair*.

<sup>63</sup> Very small particles that are commonly referred to as dust have the potential to provide information on the origins of an object.

<sup>64</sup> NIJ, *Linking Suspects to Crime Scenes*.

<sup>65</sup> Forensic Technology Center of Excellence, February 2018.

## NIJ's Support for Science and Technology Advancements

Science and technology continue to progress at an amazing rate. NIJ's Office of Investigative and Forensic Sciences (OIFS) supports the advancement and implementation of technology for use in criminal justice. Cold case investigations can reap the benefits of applying these technologies to older evidence. The mission of OIFS includes support for

research, development, and evaluation to advance current scientific investigative tools and to identify and develop new ones.<sup>1</sup> In addition, NIJ funds the Forensic Technology Center of Excellence (FTCoE) to support the criminal justice and forensic science community by bridging research and development activities and practice.<sup>2</sup>

1. Between 2008 and 2017, NIJ awarded 822 forensic research and development awards for a total of \$326,767,375 (<https://www.nij.gov/funding/awards/pages/awards-list.aspx?tags=and%3aForensics%2cResearch%20and%20Development>).

2. See the FTCoE website, <https://forensiccoe.org>. In 2016, the research and development projects supported by FTCoE included developing an infrared camera to identify blood stains, identifying ignitable liquids in fire debris, and creating a database of skeletal markers for human identification (RTI International, *2016 Annual Report*).

information about someone whom the victim's family or friends no longer feel obliged to protect. Other similar changes may lead to witnesses who are now willing to cooperate with an investigation.

Law enforcement investigators must periodically review cold cases and the people involved in the investigations in order to take advantage of changing relationships over time. As the National Sheriffs' Association noted in its guide for working with the survivors of homicide victims, "in some cold cases, it is specifically because of this passage of time that key information surfaces."<sup>66</sup>

### *New leads through fresh reviews*

Often, the key to resolving unresolved cases is case reviews with fresh eyes and viewpoints. New reviews undertaken in a context different from the original environment or from a different perspective can often identify new leads. These reviews may identify a lead that was not explored, such as an unreturned "while you were out" message. New reviewers often have the opportunity to analyze cold case files without many of the initial investigation's constraints, such as pressure from the community, media, and the agency for a quick resolution or stress from compounding caseloads. Also, the initial investigation may have focused on a particular line of inquiry and not identified other potential lines of inquiry.

It is imperative that cold cases be investigated in the present, with the understanding that past investigative actions are not to be judged. New reviewers should not assume that investigators did a poor job in the initial investigation. Investigators must move forward with the information and evidence available.

<sup>66</sup> National Sheriffs' Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

### ***Increased public support and interest***

Many media outlets are reviving cold cases, increasing interest and desire in the public to assist in case resolution. Online web sleuths spend hours researching cases and trying to make connections. Television shows on cold cases, tapping the public's desire to solve these mysteries, are immensely popular and also increase the interest in cold case investigations.

### ***Information management***

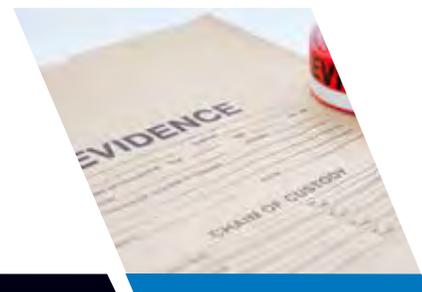
Digitization of records provides law enforcement the opportunity to organize records and realize connections. Computer analyses can identify connections between cases, people, and places. Investigators and crime analysts can apply their expertise toward analyzing the relevance of the connections.<sup>67</sup>

---

<sup>67</sup> The Tacoma (Washington) Police Department tapped into the power of an emergency management software program to organize and manage data in the agency's cold cases (Lewis, October 30, 2015).



# Determining the Needs and Scope of a Cold Case Investigation Unit



## RECOMMENDATION 1:

1. *Define the specific parameters of a cold case with consideration for applicable laws and agency policies and practices.*

The first step in setting up a cold case unit is to determine which cases the unit will investigate — in other words, what the agency’s definition of a cold case will be. This determination should be made based on the needs and circumstances of the jurisdiction: Deciding which cases to take on will depend on the size and composition of an agency’s accumulation of unresolved cases, along with the resources that an agency has available. Before an agency can identify the appropriate scope for cold case investigations, it must understand what kinds of unresolved cases exist and how many there are.

## Case inventory

A preliminary inventory of unresolved cases must be performed to guide the planning, organization, and operation of a cold case unit. The inventory can initially be a cursory overview; however, details of each case, such as the offense and the current status of the investigation, need to be captured to best define the scope of a unit’s operations.

Identifying unresolved cases may be a significant challenge. Many unresolved case files are stored as hardcopy documents, and these records are often not consolidated or stored in an easily searchable format. Large numbers of cold case files have never been entered into a computerized records management system. Updates and upgrades to an agency’s computer system often do not include uploading legacy case files; thus, an agency must verify that all of the unresolved cases in the jurisdiction are included in the case inventory.

Lost or misplaced records are not uncommon. Staff turnover, changes in leadership, and agency or department reorganization may further contribute to the loss of institutional knowledge and investigative information. In some instances, investigation details may not have been recorded. To capture information on a case, agencies may be forced to piece together records from traditional filing systems as well as external sources. Other law enforcement agencies, prosecutors' offices, hospitals, forensic laboratories, medical examiners/coroners, and former agency personnel should all be contacted. It is beneficial to enter key case information into a computerized information management system during the inventory. Using a computerized system allows the agency to best organize unresolved cases and to create a more efficient and effective unit (see chapter 6 for more information on case management systems). However, not all investigative details should be captured during the initial review; in fact, collecting too much data initially will prolong the inventory and be counterproductive to the unit's efficiency. Full details should instead be captured during the case review process once the cold case unit is operational.

## RECOMMENDATION 2:

2. *Conduct an initial needs assessment to determine the resources needed to create and sustain a successful cold case unit.*
  - 2a. *Conduct an inventory of the number of unresolved cases.*
  - 2b. *Identify and record all unresolved cases in a computerized information management system during the initial inventory.*
  - 2c. *Conduct periodic needs assessments to ensure that investigative activities conform to current investigative practices and that the operational needs remain in alignment with the agency's operations and mission.*

## Determining the scope of operations

Agencies will need to direct the focus of the unit's investigations by defining the scope of its operations. Once the case inventory is completed and the agency has determined what qualifies as a cold case, the agency will then need to decide which offenses to target. Sexual assault cases tend to have more DNA evidence and may have greater chances of success with fewer resources. Homicides, however, are a greater focus for some agencies due to the nature of the crime. The cold case unit will need to prioritize its investigative efforts based on the criteria identified by the agency. Agencies should also note that some crimes may overlap. A sexual assault may occur in the commission of a homicide, for example.

## Long-Term Missing Persons as Cold Case Homicides

Police agencies — generally already working with constrained resources and excessive workloads — are presented a challenging scenario once they are notified of a missing person. Juveniles often go missing intentionally, and adults have the option of travelling as they please. Unless a criminal offense is suspected at the time of the disappearance, persons missing due to harm may not be identified as victims immediately, in the near future, or possibly ever. Valuable leads are lost as time passes in missing persons cases that are actually homicides. Many missing persons cases become cold cases, often without law enforcement realizing that a homicide case exists. Missing persons cases should be

investigated as violent offenses until information is received to contradict a suspicion of criminal activity. Cold case units must inventory and analyze the missing persons cases in their jurisdiction to determine whether those cases should be added to the cold case inventory queue. Long-term missing persons cases are often not addressed in policing. Investigating these cold cases may also assist in the resolution of other investigations. One study notes that serial homicides are more prevalent than previously thought, with an estimated “hundreds of undetected, undiscovered, and uncounted serial murder victims each year in the United States.”<sup>1</sup>

1. LePard et al., 2015.

Including *all* violent crimes in the unit’s homicide investigation activities may provide critical information for resolving other violent crimes including homicides. Missing persons cases, too, are often overlooked when setting the scope of a cold case unit. Many missing persons are victims of violent crime, yet agencies often do not investigate these cases as homicides.

## SUMMARY RECOMMENDATIONS

### DETERMINING THE NEEDS AND SCOPE OF A COLD CASE INVESTIGATION UNIT

1. *Define the specific parameters of a cold case with consideration for applicable laws and agency policies and practices.*
2. *Conduct an initial needs assessment to determine the resources needed to create and sustain a successful cold case unit.*
  - 2a. *Conduct an inventory of the number of unresolved cases.*
  - 2b. *Identify and record all unresolved cases in a computerized information management system during the initial inventory.*
  - 2c. *Conduct periodic needs assessments to ensure that investigative activities conform to current investigative practices and that the operational needs remain in alignment with the agency’s operations and mission.*



# Designing a Cold Case Unit



**A**fter an agency inventories its cases and determines which kinds of cases will fall within the scope of the cold case unit, the next step is to design the unit itself. The unit will be shaped by the resources available, so an agency must secure support for the unit from both inside and outside the agency. Then, the agency can begin the preparation and planning stages, in which stakeholders will decide what the unit will look like and how it will operate. A cold case project lead should be identified as early as possible, to bring stakeholders together and direct this planning process.

## Identifying support for a cold case unit

Once an agency determines the scope of the cold case unit, it must garner the support of key decision-makers from within the agency and from the community to provide the best opportunity for success. This support is necessary to move forward. Community stakeholders as well as the agency have a strong desire to resolve violent crimes, so it is imperative that all stakeholders work together toward accomplishing that goal.

From within an agency, support can come from administrative, supervisory, and investigation personnel who champion the activity of the cold case unit. From without, support may come from elected officials, other public and private figures, and even the media. These people can support the unit by providing personal and political backing as well as ensuring the allocation of necessary financial resources. Additional support may also be garnered through local, state, or national organizations and victims' groups as well as from regional law enforcement agencies. Chapter 7 further identifies potential sources of support for a cold case unit.

## Preparation

### RECOMMENDATION 3:

3. *Appoint a project lead to oversee the implementation of the cold case unit. Choose an individual who understands the agency, the process of unresolved case investigations, and the jurisdiction's administration.*

### *The project lead*

One of the first steps in implementing a cold case investigation unit is to identify a project lead within the agency who is capable of spearheading the effort and providing support for the unit.<sup>68</sup> This lead will be responsible for seeking and obtaining buy-in from agency officials and area policymakers. Above all, the lead must possess good leadership and people skills and must believe in the mission of the cold case unit. The lead is responsible for the success of the project and ensures that stakeholders and project team members support the mission and the cause of the project.

### **Critical skills and abilities for the lead include:**

- Researching and identifying best practices from other agencies and jurisdictions in similar situations.<sup>69</sup>
- Identifying a team to implement the cold case unit.
- Managing the drafting of guidelines for unit implementation, including progress timelines, key milestones, and progress reports to administrators and other stakeholders.
- Overseeing the establishment of unit protocols and operational procedures.

---

<sup>68</sup> In project management, a lead is termed a *champion* (Pinto & Slevin, 1989). One of the most successful methods of ensuring that the cold case unit is successful and implemented in the most effective and efficient manner is to apply project management principles. Project management is a process in which a project (e.g., the implementation of a cold case unit) is executed in a planned and organized way to ensure the most successful results.

<sup>69</sup> NIJ's CrimeSolutions.gov is a resource that assists agencies in identifying practices and programs that work. An agency can contact CrimeSolutions.gov and request guidance for implementing a new project or program. BJA's National Training and Technical Assistance Center (NTTAC) is a law enforcement resource that provides training and technical assistance (Bureau of Justice Assistance, *Training and Technical Assistance*).

- Determining the roles for the unit's operational team:
  - defining and documenting the roles.
  - working with the agency to fill those roles.
- Overseeing the establishment of partnerships.
- Identifying resource needs and appropriation mechanisms.
- Ensuring that obstacles for implementing, operating, and retaining a cold case unit are eliminated or mitigated.
- Providing updates to the project implementation and operational teams, agency administrators, and other stakeholders, such as partnering agencies.
- Identifying and managing potential risks.

### ***Implementation team***

The lead will need to construct a cold case unit implementation team. This team will work with and under the direction of the lead. A stakeholder or representative from every unit or agency that may work with or be affected by the cold case unit's efforts should be included in the implementation team. Each individual team member's roles may vary as well as their amount of involvement. High-level officials may attend periodic meetings, while a records management staff member may be detailed to the project full time, for example.

#### **The implementation team:**

- Includes representatives for stakeholders and relevant subject matter experts, such as district attorneys' offices, medical examiners' and coroners' offices, forensic services, agency policymakers, and other relevant investigative units.
- Assists the lead in fulfilling the lead's roles.
- Assists in the development and implementation of plans for setting up and operating the cold case unit.
- Establishes unit protocols and operational procedures.
- Defines the requirements for the operational team and may assist in selecting the operational team members.
- Identifies potential obstacles and assists in risk mitigation.
- Assists in formalizing partnerships.

Members of the implementation team do not need to be the people who will ultimately serve as the operational staff of the unit, though there may be overlap between these groups. Most agencies prefer to create an implementation team that is composed of people who are internal to the

agency, but external advisors should not be discounted and can provide beneficial support and resources for the cold case unit. External advisors may be involved as much or as little as the agency deems appropriate. External allies may assist in public relations with the community, such as by securing extramural support and resources for the unit.

## Planning

A plan provides a mechanism to organize and implement a cold case unit with forethought and attention, identifying and resolving issues before they can become obstacles and assisting in risk identification and mitigation. The lead's role is to work with the implementation team to construct implementation and operation plans for the cold case unit. These plans should be considered fluid and should be updated as needed during both the implementation and operational phases of the cold case unit.

### *Information in the cold case unit plan should include:*

- A mission and vision statement for the cold case unit.<sup>70</sup>
- The scope of the unit's work.
- The strategic objectives of the unit and how those objectives align with the agency's mission and values, including how cold case activities can support agency initiatives such as community-oriented policing, reduced use of force, predictive policing, and implementing technology.
- The goals of the unit. Clearly articulated goals will help a cold case unit achieve its mission, and they are important in measuring success. Goals can be straightforward, such as:
  - Identify and review unresolved homicides, sexual assaults, and/or missing persons and unidentified remains cases. These may or may not include specific time periods for focus (e.g., 1980-2010, or all designated offenses after 1980).
  - Bring cases up to current investigative standards, including forensics testing.
  - Identify suspects.
- Guidance on continuity of operations during staff transitions or any other changes in the unit or the agency.

---

<sup>70</sup> A simple mission statement serves as the guiding principle for a cold case unit — and although it can be detailed, it can also be very simple. For example, the mission statement of the Yellowstone County Cold Case Unit is "To speak for those who cannot speak for themselves by seeking answers and justice for victims and their families" (Yellowstone County [Montana] Sheriff's Office, *Cold Case Unit*).

## Assessment of success in cold case investigation

### RECOMMENDATION 4:

4. *Collect performance metrics relevant to cold case activities in addition to clearance rates. Use appropriate data analytics to examine the performance and needs of the unit.*

During the planning and design stage, parameters to assess the success of the unit should be identified. Cold case unit members and agency administrators must have reasonable expectations of what constitutes success in terms of cold case activities. Supervisors, elected officials, and the general public should understand that solving one or two unresolved cases a year is significant. Law enforcement leaders and the policymakers who support them should be mindful of the challenges of these cases.

Guidelines and protocols need to be established to define what constitutes success. A cold case unit cannot operate without the ability to assess its own performance. Plans for a cold case unit must consider questions such as: What information is relevant in gauging cold case investigation operations? What is “success” in a cold case? Should it be measured in arrests and convictions? Amount of evidence reexamined? Number of case files entered into an information management system or cases posted to a public information portal? Traditional metrics do not accurately convey the success of a cold case unit, but some means of performance measurement must be defined and incorporated into the unit’s operations.

Victims may define success differently from law enforcement. Often, what constitutes the successful resolution of a cold case will vary from victim to victim — some will find resolution from the identification of a suspect, while others will define success as nothing less than a conviction. Law enforcement must manage victims’ expectations and attempt to assist victims in understanding the realities of cold cases and the different variables that law enforcement agencies use to determine successes.

To describe the unit’s success, the agency will need to collect and examine quantitative data (i.e., metrics) relevant to cold case activities. Information such as the number of cases reviewed, hours worked, people interviewed, and cases analyzed through forensic technologies can be just as relevant as the number of arrests or prosecutions. As mentioned previously, case resolution without prosecution is pertinent in cold case investigations. Successes for the unit need to be defined and shared so that agency administrators and other stakeholders realize that cold case unit activities are productive and beneficial for the agency and the jurisdiction.

A report from the International Association of Chiefs of Police, the Institute for Intergovernmental Research, and the Bureau of Justice Assistance (BJA) suggests that jurisdictions should also consider some of the following metrics — and should work with the public to help them understand how these are important in evaluating police performance:<sup>71</sup>

- Outcome success: identification, prosecution, and conviction of factually guilty offenders.
- Procedural success: the quality of the investigative process and systems, including the number of times an investigation contributed knowledge about another case and the number of times an investigation led to the identification of other crimes.
- Community success: increasing community reassurance and public confidence, for example, implementing a method to measure the satisfaction of the survivors in homicide cases with investigative and follow-up efforts.
- Preventive success: the prediction and prevention of future homicides.

## Operational considerations

### RECOMMENDATION 5:

5. *Agencies should not assign cold case investigators to incoming cases, temporary assignments, or non-cold case projects.*

In law enforcement agencies that do not have a cold case unit, investigators are often tasked with investigating cold cases as their current caseload allows or, in some instances, through overtime. This ad hoc process is inefficient and not generally productive for cold case resolution. A BJA study reports that cold case investigators in jurisdictions with exceptionally high clearance rates were seldom asked to put aside an unresolved case to work on a new case.<sup>72</sup> Investigators must be allowed the opportunity to pursue all investigative leads.

Working overtime hours to continue investigating a specific case can be beneficial. However, working an entire shift on incoming or recent cases and then switching to investigations of older, unresolved cases through overtime does not work. Many agencies have discovered inconsistent

<sup>71</sup> Bureau of Justice Assistance & International Association of Chiefs of Police, 2013.

<sup>72</sup> BJA partnered with IACP and the Institute for Intergovernmental Research (IIR) to study best practices in homicide investigations. An in-depth analysis of seven jurisdictions with homicide clearance rates greater than 80 percent was conducted (Carter, 2013).

commitment towards working additional time, and often investigators that work overtime on cold case projects can become fatigued. Adding unresolved cases on top of an investigator's regular caseload can impede the investigations of the recent cases as well as the older cases when both are commingled into an investigator's assignment.

NIJ's Solving Cold Cases with DNA program discovered similar issues. In many instances, NIJ awardees requested additional time for cold case projects, noting that their investigators were unavailable to work overtime or that newer cases and other priority assignments interfered with the investigators' ability to investigate cold cases. Agencies have also reported to NIJ that their cold case investigators are often reassigned to other activities. Agencies tend to view cold case investigators as a surplus resource that can be transferred as needed to respond to incoming cases or other departmental activities. Pulling away investigators stalls any momentum gained on cold case investigations, hampering the progress of the investigation. Resolving cold cases must be understood by an agency and a jurisdiction as a vital activity. Otherwise, the benefits of potentially solving current crimes, preventing future crime, making the community safer, and assisting victims will not be realized — and the expenditures of time and resources may be wasted.

## RECOMMENDATION 6:

6. *Limit investigators to actively investigating no more than five cold cases at any one time.*

Caseloads are a significant factor in the successful resolution of cases. Investigators are assigned homicides as they occur. If a case is not resolved before the next case is assigned, caseloads build, investigators are less able to resolve the cases, and the number of accumulated unresolved cases grows. This vicious cycle frustrates the efforts of investigators.<sup>73</sup> Responsibility for numerous investigations often hinders pursuit of investigative leads. Research has demonstrated that smaller caseloads correlate to higher clearance rates. In fact, investigators who served as the primary investigator on no more than five cases a year had a clearance rate 5.4 percent higher than investigators with more than five cases a year.<sup>74</sup> Capping caseloads and utilizing a cold case unit alleviates added pressures on homicide investigators, who are able to pursue incoming, time-sensitive, fresh leads on new cases.

<sup>73</sup> Cronin et al., 2007.

<sup>74</sup> Keel, 2008.

## Unit models

### RECOMMENDATION 7:

7. *Assemble stakeholders and representatives of affected agencies to provide input and assistance in planning the cold case unit, including how it will be structured, implemented, and operated.*
  - 7a. *Identify agencies of similar size and structure that have established cold case units as informational resources.*
  - 7b. *Formalize and document partnerships among stakeholders with a Memorandum of Understanding.*
  - 7c. *Bring together multidisciplinary subject matter experts to provide diverse knowledge, resources, and perspectives in all facets of cold case review and investigation.*

When preparing to address cold case issues in a jurisdiction, an agency needs to determine how the cold case unit will operate. Just as no two criminal cases are exactly alike, each possessing its own unique nuances, no one cold case unit model can fit all agencies. Considerations in organizing and operating a cold case unit include the number of unresolved cases, jurisdictional circumstances and resources, and the availability of external resources.

Operational cold case units should be used as models. An existing unit's structure, organization, document templates, and other established practices can be starting points for implementing a new cold case unit. An agency should also consider lessons learned from its previous and current operational units and partnerships. Above all, cold case units should not be stagnant; as the context for the unit changes, the unit must evolve as well. Successful models for cold case units include independent units as well as partnerships.

### *Independent model*

A stand-alone cold case unit is a dedicated unit within an agency, composed solely of agency personnel and tasked with investigating agency cases. The unit is administered by the agency and included in the agency's organizational structure. Such a unit may be composed of as few as two investigators or as many as deemed appropriate by the agency. While these units are housed within an agency, they must work with other entities. Independent units should include multidisciplinary and multijurisdictional activities with prosecutors, forensic subject matter experts, medical examiners/coroners, and other resources.

## Kent County Partnership Model

In 2004, the Michigan State Police, Grand Rapids Police Department, and Kent County Sheriff's Department in Kent County, Michigan, entered into a partnership to solve cold case homicides. The Kent Metropolitan Cold Case Team operates under a Mutual Police Assistance Agreement. The team is led by a detective-sergeant of the Michigan State Police and operates out of the Sheriff's Office. It has investigators from the Sheriff's Office and the Grand Rapids Police Department, and a civilian contract worker who is a retired investigator.

Any of the partner agencies can submit a cold case for consideration. If the case is accepted for investigation, the agency may — depending on criteria laid out in the agreement — have to provide an investigator to the team for the duration of the investigation, or it may have to provide an officer to serve as a liaison between the team and the originating department.

### *Partnership models*

Collaboration and shared resources are beneficial, and agencies should consider partnership models as a viable option for addressing the cold cases in their jurisdictions. Not all agencies require or possess the resources necessary to form an independent, dedicated cold case unit. Some jurisdictions may not have enough unresolved cases to warrant cold case units within their agencies. Many agencies, especially smaller or rural ones, may simply not have the resources to handle the accumulated cold cases in their jurisdictions. About half of U.S. law enforcement agencies employ fewer than 10 full-time officers. Analysis of data from the Bureau of Justice Statistics has found that most agencies with fewer than 100 sworn officers do not use specialized units such as a cold case unit.<sup>75</sup> All agencies, regardless of size or resources, have a responsibility to solve all violent crime cases. Partnerships can fill the gaps in resources, allowing jurisdictions to address cold cases without placing untenable obligations on law enforcement alone. Partnerships should be chosen and maintained based on a cold case unit's current context; units may add or dissolve partnerships after reassessing their needs.

### **Multiagency/multijurisdictional model**

Regardless of their size or caseload, agencies benefit from gaining access to subject matter experts through multiagency collaborations.<sup>76</sup> Joint participation with other agencies or other jurisdictions can provide opportunities for resource sharing to resolve cases in the jurisdictions of the agencies involved.

---

<sup>75</sup> Reaves, 2008.

<sup>76</sup> A successful partnership approach is exemplified by the Denver (Colorado) Police Department. Their triad of forensic resources, the police department, and the district attorney has created policies and procedures designed to ensure maximum cooperation and efficiency as each seeks to understand the perspectives of the other and integrate these perspectives into their own mission (LaBerge, "Cold Case Best Practices").

## Cold Case Roundtables

Cold cases are unresolved for a reason. These cases are difficult to resolve, and many agencies have discovered that additional input from persons not involved in the investigation is beneficial. Some agencies, such as the Charlotte-Mecklenburg (North Carolina) Police Department, have an agency cold case review team composed of vetted civilian professionals.<sup>1</sup> Other agencies participate in state cold case review teams such as the one sponsored by the Sheriffs' Association of Texas. The Texas review team includes sheriffs, deputies, public safety representatives, crime laboratory representatives, Texas Rangers, and a medical doctor. The team meets quarterly to assist any law enforcement agency that presents them with an unsolved case.<sup>2</sup> Likewise, Colorado assembled a cold case review team through

the Colorado Bureau of Investigation composed of volunteers representing various disciplines from investigators to coroners to prosecutors. The team meets to discuss cold cases and bring fresh eyes and a multidisciplinary approach to uncover leads in the cases.<sup>3</sup>

In addition, several professional organizations are now offering opportunities for agencies to review unresolved cases during their meetings and professional conferences. For example, the 2019 National Homicide Investigators Association (NHIA) conference notes, "Open, 'cold' or unidentified cases can be presented to the class allowing other experienced forensic/homicide investigators to use their skills to assist in solving a crime."<sup>4</sup>

1. Schuster, 2008.

2. Sheriffs' Association of Texas, *Cold Case Review Team (CCRT)*.

3. Regensburger, 2014.

4. National Homicide Investigators Association, *31st Annual NHIA Conference 2019*.

*"You don't always have to be the smartest person in the room. You just have to know who is. The same holds true for cold case investigations. There are so many areas of expertise that have value to cold case investigations and no one person can possibly be an expert in them all. Take the time to figure out who is in your area and then develop them as a quality contact for the future. Be sure to make yourself available to them as well should they need your assistance."*

— Gene Miller, Pierce County  
Prosecutor's Office, Criminal Investigator,  
High Priority Offender Unit

### Task force model

A task force is another version of the partnership model. Task forces unify personnel from various agencies. Interagency drug task forces may be used as models for an interagency cold case unit. Within a task force, each member agency shares resources and contributes to funding, staffing, equipment, and specialized training. Offenders often cross multiple jurisdictions, and a regional partnership may benefit all agencies through increased communication and enhanced information sharing, leading to more cases being solved.

Organizing more than one entity into a cohesive unit may present challenges, but there are many potential rewards. Caution must be exercised when working with other agencies, however, as they may have different objectives and visions for how to fulfill the mission. A Memorandum of Understanding (MOU) is encouraged when partnering with other agencies. An MOU can cement the structure of the relationship, formalize the duties and responsibilities of participating agencies, and designate oversight personnel. Appendix D contains a sample MOU. A lead agency should take responsibility for ensuring cohesiveness, keeping the task force focused on the mission, and fostering efficient and effective communication when working with multiple agencies and jurisdictions.

**TABLE 2: RECOMMENDED RESOURCES FOR INCLUSION IN A MULTIDISCIPLINARY TEAM TO REVIEW UNSOLVED CASES**

Expertise	Contribution
Cold Case Investigator	Provides case information, including details of the commission of the crime, evidence identified and retained, and investigation activities.
Forensic Scientist	Reviews evidence and provides insight into technology available to analyze or reanalyze evidence.
Prosecutor	Provides legal expertise on subjects including chain of custody and statute of limitations, and can provide guidance on organizing investigation activities and identifying potential legal issues.
Victim Specialist/ Advocate	Provides advice on how to work with a victim through all phases of a cold case investigation and prosecution. Assists with interviewing and coordinating communications between the investigators and the victim.
Medical Examiner	Reviews the pathological aspects of the crime such as the manner of death, how wounds were inflicted, and the possible sequence of wounds.
Crime Scene Reconstructionist	Reviews photographs and other documentation to identify the potential sequence of events, which may be compared to investigation notes and statements on file; provides expertise in reconstructing the scene, which may present potential investigative leads.
Behavioral Analyst	Evaluates crime and crime scene characteristics and their relationship to the victim and offender; offers insight into possible motive and behavioral considerations of the victim and offender.
Crime Analyst	Reviews data on offense types and locations to identify trends and patterns of criminal behavior; may assist in linking offenses by the same perpetrator.
Intelligence Analyst	Synthesizes information derived from external resources and integrates this with local police information; may assist in linking offenses by the same perpetrator or group.
Academic <sup>77</sup>	Provides case reviews, database creation and management, grant writing assistance, reconstructions (crime scenes, victim faces, clothing or other historical objects or places), computer animation, research, and subject matter expertise.

<sup>77</sup> Graduate students at the University of South Florida (USF) provide assistance in researching records such as public deeds and historical photos in order to reconstruct information about the commission of the crime at the time of the offense. Other services provided by USF include reconstruction of clothing and other artifacts such as a degraded t-shirt recovered off of a decedent which may be digitized to demonstrate how a design may have looked.

## Multidisciplinary teams

Cold case investigation is a team — rather than an individual — effort.

Multidisciplinary teams are invaluable in cold case investigations. These teams may consist of law enforcement personnel (both sworn and nonsworn), forensic science experts, prosecutors, medicolegal death investigators, and others who come together to offer their expertise in the resolution of cold cases. These subject matter experts can assist cold case investigators in case prioritization, case management, and investigative strategy.

Subject matter experts can provide investigative support and offer training in addition to performing case reviews. These team members can be actively engaged in the daily operations of the unit or involved on an as-needed basis. Regardless of each member's level of involvement, multidisciplinary teams are a vital tool in the investigation of unresolved cases. Each case review will suggest those disciplines that may be of assistance in the particular investigation.

### SUMMARY RECOMMENDATIONS

#### DESIGNING A COLD CASE UNIT

3. *Appoint a project lead to oversee the implementation of the cold case unit. Choose an individual who understands the agency, the process of unresolved case investigations, and the jurisdiction's administration.*
4. *Collect performance metrics relevant to cold case activities in addition to clearance rates. Use appropriate data analytics to examine the performance and needs of the unit.*
5. *Agencies should not assign cold case investigators to incoming cases, temporary assignments, or non-cold case projects.*
6. *Limit investigators to actively investigating no more than five cold cases at any one time.*
7. *Assemble stakeholders and representatives of affected agencies to provide input and assistance in planning the cold case unit, including how it will be structured, implemented, and operated.*
  - 7a. *Identify agencies of similar size and structure that have established cold case units as informational resources.*
  - 7b. *Formalize and document partnerships among stakeholders with a Memorandum of Understanding.*
  - 7c. *Bring together multidisciplinary subject matter experts to provide diverse knowledge, resources, and perspectives in all facets of cold case review and investigation.*

# Implementing a Cold Case Unit



## Unit requirements

Once the need for a cold case unit has been identified, support for the unit has been consolidated, and the unit has been designed, agency leadership must ensure that the unit has the means to do the job. The cold case unit will need to be defined within the agency's organizational structure and will need to be given physical workspace and resources. An agency has to identify the level of staffing and additional expenses that will be necessary, such as organizational and administrative personnel, vehicles and equipment, travel, and investigative resources.

## Agency organization

### RECOMMENDATION 8:

8. *Implement a cold case unit as a separate, defined unit within an agency. Position the unit in an existing bureau, division, or branch responsible for investigative activities.*

A cold case unit should be organized as a separate, distinct entity under the authority of a larger, established unit. For those agencies that have a relevant existing unit (e.g., a violent crimes, homicide, sexual assault, or missing persons unit), the cold case unit should be organized into the same framework. This helps maximize investigative expertise and tactics, including case consultations with other investigators. Existing protocols can be a foundation for the cold case unit's operations, with modifications for nuances specific to cold cases.

### RECOMMENDATION 9:

9. *Identify a lead agency for the unit, if multiple agencies and/or multiple jurisdictions are engaged.*

In order to facilitate operations, multijurisdictional/multiagency operations should establish designated roles and appoint a lead agency. This will aid in moderating and directing the unit's activities toward unified goals.

### ***Physical facilities and organization***

Although the organization of a cold case unit works best under the umbrella of a larger, established unit such as a violent crimes unit, the cold case unit needs to be separate in its daily operations. The cold case unit will benefit from both independence and collaboration and information sharing with other stakeholders. Ideally, the cold case unit would be based in a physical location separate from the main law enforcement headquarters. The purpose of this is to allow cold case investigators to focus solely on unresolved cases without being drawn into special assignments, active homicide investigations, or other activities not associated with investigation of unresolved cases. If the cold case investigators are not defined as a separate unit, all too often they and their resources are pulled into current investigations, defeating the mission of the unresolved case activities.

## **Cold case unit expenses**

Operating expenses for a cold case investigation unit may generally be categorized as:

- Operational expenses, such as salaries and facility costs.
- Investigative expenses, such as travel and overtime for investigators.
- Evidence analysis and expert testimony.

### ***Operational Expenses***

Agencies must realize that there will be operational expenses in cold case investigations beyond the salaries of assigned investigators. Administrative and operational activities — such as documenting unit activities, recording findings, updating statuses, and notifying relevant stakeholders and supervisors — are often overlooked, but they need to be included in resource budgeting and allocation. Records management may play an important role in the resource needs of a cold case unit. Older records need to be digitized. Documents and recordings must be copied.

## ***Investigative Expenses***

Cold case investigations are tedious processes, and the amount of time and resources required for daily investigative activities must be considered when planning and facilitating a cold case unit. Allocation of resources for activities such as reviewing the particulars of each case, identifying and locating the people involved, locating and analyzing evidence, and conducting other investigative activities should not be underestimated. Investigations may entail travel and overtime expenses. Witnesses and former investigators have to be located and reinterviewed, often after they have moved out of the area. In some instances, cold case investigators may be able to elicit assistance from investigators in other jurisdictions, but critical interviews should be done face-to-face whenever possible. Coordinating investigative efforts and potential criminal proceedings with a prosecutor requires resource commitments as well. Often, court proceedings are excluded from consideration in agency expenses and operational planning. Investigators have noted that they might be occupied with a trial for a week or more, during which time their active cold case investigations lose traction unless they are able to work overtime outside of court hours. Personnel, investigative activities, and any other incidental costs of investigations are therefore a major and necessary expense in cold case operations.

## ***Evidence Analysis***

Evidence analysis may often be the key to resolving a case; however, analysis requires resources as well. Physical evidence will have to be located and inspected to determine its condition and evidentiary value. It may need to be verified against agency records and repackaged, and the chain of custody may need to be documented. Most localities operate with a publicly funded laboratory; however, unresolved case analyses are often relegated to the back of the queue and considered a low priority, continually superseded by newer cases with more political pressures or active court processes. Outsourcing analysis to a private laboratory is a great alternative; however, agencies need to remember that using private laboratories is an additional expense, and even more funding may be required to pay for a private laboratory analyst's expert testimony and travel. Further analysis may also be required for confirmation of laboratory results; private laboratories cannot enter data into the FBI's Combined DNA Index System (CODIS) except under the auspices of a public laboratory willing to take ownership of the results for the entry. When choosing between private and public laboratories, cold case units need to consider the additional costs accrued by potential leads and case resolutions. Agencies should explore various analysis options with their local crime lab and/or prosecutor.

## Protocols and directives

### RECOMMENDATION 10:

10. *Create written protocols and directives to detail cold case organization, operations, and investigations.*
  - 10a. *Specify the job duties for cold case investigators, supervisors, and other personnel in the unit's policies and procedures.*
  - 10b. *In a multiagency/multijurisdictional cold case unit, implement protocols detailing the distinct roles of each participating agency.*
  - 10c. *Include protocols for continuity of operations and staff transitions.*

Every law enforcement agency, regardless of size, must have written protocols and directives regarding overall agency operation and thus should also have specific protocols and directives for investigating unresolved cases. These written protocols and directives, approved by agency leadership, are important to the success of a cold case unit. They support the overall mission of the agency and ensure good investigative practices. Protocols and directives provide direction, define job expectations, and also provide a mechanism for the unit's administration and oversight.<sup>78</sup> This ensures transparency, standardization, and accountability for the unit's investigators and staff members, the agency, and the public. Having written protocols mitigates the impact of staff turnover and is vital to the transfer of institutional knowledge. Written protocols are also useful in managing risk.

Cold case unit protocols should cover the scope of the unit's mission and function and must address issues such as:

- How the unit is organized and how it will operate.
- Chain of command and assignment of responsibilities.
- Personnel selection and supervisory oversight.
- Continuity of operations.
- Initial and ongoing training requirements.
- The nature and scope of cases to be investigated.
- Procedures for case review, prioritization, and assignment.
- Requirements and procedures for opening and closing cases, including administrative closures.
- Investigative procedures.

---

<sup>78</sup> As an example of these protocols, see the policies of the Phoenix (Arizona) Police Department's *Investigations Bureau, Sex Crimes Unit, Sexual Assault – Cold Case and Evidence Backlog Team*.

Unfortunately, only a minority of law enforcement agencies in the United States have written protocols for unresolved case investigations. In a 2011 survey, RAND researchers found that only 20 percent of the responding departments had a formal protocol for initiating cold case investigations.<sup>79</sup> A few years earlier, in 2007, the Arizona Cold Case Task Force took a survey of all 106 police departments, county sheriffs' offices, and tribal police departments in the state. Only 9 percent had written protocols for handling cold case homicides.<sup>80</sup>

All agencies are different, and there is no overarching standard for how cold case units should operate. The size of the jurisdiction, structure of the agency, locale, types and numbers of unresolved cases, and jurisdictional legal considerations all play a role in the operation of a cold case unit and should be considered when the unit protocols are drafted. The protocols should reflect the requirements and needs of the agency and the unit.

### ***Continuity of operations***

An often overlooked aspect of implementing and operating a unit is consideration for the sustainability of the unit's operations. A unit needs to have continuity of operations in both the short term and long term. Short-term considerations might include provisions for temporary support should one of the assigned investigators be unavailable, e.g., because of extended court proceedings. Long-term considerations include measures to address the selection processes for investigative personnel and their turnover, and ways to assign new investigators to the unit with minimal impact on its daily operations. When staff and investigators leave the unit, continuity protocols should outline a process for onboarding new personnel. Detailed protocols should explain information retention and record turnover. Ideally, new personnel should be in place prior to the departure of current personnel. Plans detailed in the agency protocols should minimize the loss of institutional and case investigative knowledge due to personnel changes.

## **Victim-centered and trauma-informed approaches**

### **RECOMMENDATION 11:**

*11. Incorporate a trauma-informed approach into cold case unit operations.*

A victim-centered and a trauma-informed approach must be established and employed in the daily operations of cold case investigations, and

---

<sup>79</sup> Davis, Jensen, & Kitchens, 2011.

<sup>80</sup> Arizona Cold Case Task Force, 2007.

investigators must receive trauma-informed training. This includes training the investigators to understand that victims can be retraumatized during investigations and that investigators themselves can suffer from secondary trauma.

## RECOMMENDATION 12:

12. *Employ a victim-centered approach in the daily operations of cold case investigations.*
  - 12a. *Create protocols addressing situations in which a victim does not support continued investigation of their case.*
  - 12b. *Include a detailed plan for communication with victims and victims' families in the cold case unit protocols.*
  - 12c. *Incorporate a victim specialist and/or advocate into unit protocols and operations.*

Being the victim of a violent crime is life altering. After the crime, victims often live in fear, all the more so if the perpetrator from their crime has eluded the criminal justice process. Employing a victim-centered approach will ensure that the victim's autonomy, safety, and well-being are maintained. Adhering to this approach can help mitigate any retraumatization and may increase victims' participation in investigations. See the sidebar "What Is a Victim-Centered Approach?" for more information.

Traditionally, law enforcement investigators have refrained from disseminating information about investigations, even to the victims of crime. Victims are not versed in law enforcement investigative practices and do not understand the reasons for withholding information. Victims and family members may feel that they are owed access to all of the case information, since they were the ones who were victimized and suffer from the repercussions. The longer the case goes unsolved, the greater the potential for the relationship between law enforcement and the victim to turn adversarial. The Arizona Cold Case Task Force's victim subcommittee voiced frustration with the lack of communication from law enforcement in a 2007 survey report.<sup>81</sup> Consideration of the victims and an open line of communication with them helps keep a cold case unit productive.

Agency protocols need to recognize and validate the significance of victim-oriented concerns. This includes recognizing what the passage of time means for the victim; the limitations of the case with respect to evidence and witnesses; the limitations of the department with respect to destruction of evidence or the historical culture of investigations; and the need for training investigators on victim interactions and roles. Agencies also need to validate the victim's fear of reliving traumatic emotions; fear

---

<sup>81</sup> Arizona Cold Case Task Force, 2007.

## What Is a Victim-Centered Approach?

*National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach*, a guide produced by NIJ, explains that victims need to be considered in law enforcement operations. A victim-centered approach, which recognizes the ramifications of the investigation on the victim, is defined in the NIJ guide as “the systematic focus on the needs and concerns of a victim to ensure the compassionate and sensitive delivery of services in a nonjudgmental manner.” Considerations include “prioritizing and protecting victims’ privacy.”<sup>1</sup> Victim advocates can assist law enforcement in integrating victim-centered approaches into cold case investigation operations. This approach can align law enforcement and victims’ interests to best facilitate an effective investigation.

The NIJ guide’s recommendation that “agencies should collaborate and involve victim advocates early in the process to create a more victim-centered approach to the criminal justice process”<sup>2</sup> is equally applicable to cold case investigations.

After extensive research through the Detroit Sexual Assault Kit Action Research Project,<sup>3</sup> which sought to understand the ramifications of SAK evidence accumulation, NIJ and the Office for Victims of Crime collaborated to publish a resource for law enforcement, *Notifying Sexual Assault Victims After Testing Evidence*.<sup>4</sup>

1. NIJ, *National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach*.

2. Ibid.

3. Campbell et al., 2015.

4. NIJ, *Notifying Sexual Assault Victims After Testing Evidence*.

of unknown outcomes; any frustration with prior treatment by the agency; and disappointment if the case is not solved or charges are not filed.<sup>82</sup>

Investigators and others should refrain from using the word “closure.” This is a misnomer widely found in the media. For victims and survivors, there is no closure. The hurt and pain persist, even decades later, but resolving or even merely addressing the case may allow a healing process to begin or progress.

Investigators need to understand the complicated nature of grief, the types of possible reactions to violence, and the potential for victims to be retraumatized when their unresolved cases are reopened. Although reinvestigating an unresolved case may be welcomed by some victims, others do not want to revisit the crime and do not support reinvestigation of their case. Victims may oppose reinvestigation for many reasons, including fear of facing the defendant in open court and having to relive the incident, or the wish to move forward after having put the incident behind them. However, even victims who support a renewed investigation often experience traumatic effects.<sup>83</sup> It is therefore incumbent on cold case investigators to understand the psychological effects that victims of violent crimes experience when their cases remain unsolved.

<sup>82</sup> Ibid.

<sup>83</sup> National Sheriffs’ Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

## What Does Trauma-Informed Mean?

People who have experienced, witnessed, or responded to traumatic events are indelibly affected by those events. Responses vary greatly among individuals and are often unpredictable. Having an awareness of the vast differences in responses allows investigators to understand the effects of trauma on the people involved in their investigations. Investigators must be aware of these differences and refrain from concluding that a person is “not acting like a victim.”

The investigators and other persons engaged in traumatic cases are also affected by the trauma. Trauma-informed approaches consider the effects of exposure to traumatic incidents and provide resources to support emotional and physical safety.<sup>1</sup>

Trauma-informed means:<sup>2</sup>

- Attending to victims’ emotional and physical safety.
- Strengthening victims’ capacity to recover from the traumatic effects of abuse and violence by providing information, resources, services, and support.
- Educating victims, service providers, and the general community about the impact of trauma on survivors’ health and well-being.

The Office for Victims of Crime produced the *Vicarious Trauma Toolkit* to assist people who are exposed to trauma through occupational duties.<sup>3</sup> Additional information can be found in *Tools for Transformation: Becoming Accessible, Culturally Responsive, and Trauma-Informed Organizations*, published by the National Center on Domestic Violence, Trauma & Mental Health.<sup>4</sup>

1. NIJ, *Sexual Assault Kits: Using Science to Find Solutions*.

2. Warshaw, Tinnon, & Cave, 2018.

3. Office for Victims of Crime, *Vicarious Trauma Toolkit*.

4. Warshaw, Tinnon, & Cave, 2018.

### ***Lack of victim support***

Lack of support from a victim for reinvestigation of a case should not preclude law enforcement from continuing the investigation. An agency should not assume that the offender in the victim’s case is a one-time perpetrator, and due diligence requires that the agency proceed with the investigation. Forensic advances and databases such as CODIS and NGI have provided investigators with significant resources for successful identification of perpetrators and resolution of criminal cases. Connecting all of a perpetrator’s offenses, even if they will not all be prosecuted, is relevant for case resolutions as well as for understanding the full magnitude of the perpetrator’s activities. In the case of unsupportive victims, the agency must determine the course of action, and consultation with a prosecutor is advised.

### ***Victim communication***

Victims are often unfamiliar with law enforcement practices and criminal investigations and need to be apprised of the current status of their case. To manage expectations, agencies need a communication plan that includes information on what details will be shared with victims, a schedule for when communications will occur, and the meaning of designating a case a “cold case.” The agency’s communication plan

## Victim Communication

Agencies must define their strategies for communication among investigators, victim advocates, and victims. For example:

- Colorado requires ongoing communication between law enforcement and victims in cold case investigations, mandating that “the law enforcement agency shall provide the victim in a cold case, information concerning any change in the status of the case. In addition, upon the written request of the victim, the law enforcement agency shall provide an update at least annually to the victim concerning the status of a cold case involving one or more crimes for which the criminal statute of limitations is longer than three years.”<sup>1</sup>
- After observing communication difficulties arise between law enforcement and victims and survivors, Arizona recommended that agencies develop a clear definition of the criteria for transitioning an active homicide investigation to inactive status.<sup>2</sup> An agency’s definition of a cold case and the transition criteria for designating cold cases need to be clearly stated in the communication protocol and shared with victims, so that both the agency and the community can manage expectations.
- The National Sheriffs’ Association notes that the “lack of criteria defining a cold case poses a problem for law enforcement in communicating with surviving family members of homicide victims and creates confusion and frustration among the survivors.”<sup>3</sup>

---

1. Denver (Colorado) Police Department Victim Assistance Unit, 2012.

2. Arizona Cold Case Task Force, 2007.

3. National Sheriffs’ Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

must be conveyed to victims.<sup>84</sup> Victims, when informed appropriately and transparently of what it means for their case to be designated a cold case, are more likely to appreciate that the transfer of their case to a special investigation unit provides additional resources and specialty investigative expertise, which can offer a greater opportunity for case resolution.

Lack of communication between victims and the agency generates difficulties for both. Victims do not know the current status of their case and may be “surprised to learn their case agent had resigned or retired, having received no subsequent communication from the law enforcement agency.”<sup>85</sup> A change in departmental responsibilities for a case — even one as positive as starting up a cold case unit — can impact survivors. “Shifting to a cold case unit can cause an interruption in lines of communication and trust that has [sic] been developed over time between the original homicide investigator and a victim’s family,” the Arizona Cold Case Task Force reported; the task force recommended that all state police departments adopt policies that “ensure the transfer, resignation or retirement of a detective will not adversely affect communication with the surviving family members.”<sup>86</sup>

---

<sup>84</sup> Denver (Colorado) Police Department Victim Assistance Unit, 2012.

<sup>85</sup> Arizona Cold Case Task Force, 2007.

<sup>86</sup> Ibid.

There are resources that can help assist agencies in communicating with victims during an investigation. As just one example, the Wisconsin Department of Justice published *Assisting Survivors During Cold Case Investigations: Recommendations for Providing Victim Assistance in Reactivated Cases*.<sup>87</sup> This publication includes guidance on the details that should be provided to victims — such as the fact that their case is being reinvestigated — prior to sharing any information with the media.

### **Victim Specialists**

Having a victim specialist who can assist the cold case team in implementing a victim-centered approach is extremely beneficial.<sup>88</sup> Much of the communication with victims can be performed by the specialist, allowing investigators to focus on investigation activities. A victim specialist can explain the investigation process and help the victims understand the procedures and the rationale behind them. Effective communication helps to minimize damage to relationships between the agency and the victim, the victim's loved ones, and the community.

If jurisdictions do not have a victim specialist, an agency spokesperson or liaison should be incorporated into the unit's activities to maintain communication with victims. Community-based victim service providers can also be a source for "essential victim services in cold case investigations; they offer emotional support for victims throughout the investigation/prosecution. These types of services can provide resources to assist victims and family members long-term."<sup>89</sup> If community organizations lack personnel trained in a victim-centered approach, agencies are encouraged to seek assistance and training from other agencies who have adopted these practices. Resources such as *Serving Survivors of Homicide Victims During Cold Case Investigations: A Guide for Developing a Law Enforcement Protocol* provide guidance for agencies on how to consider a cold case unit's ramifications for victims as well as to establish a cold case unit with victim partnerships.<sup>90</sup>

### **Staffing**

The most important resources in a cold case investigation unit are the personnel engaged in the unit. The staff of a cold case unit encompasses more than just the investigators assigned to cold cases. It includes support personnel whose collective efforts enable the investigators to work to their maximum potential.

---

<sup>87</sup> Wisconsin Victim Resource Center, 2011.

<sup>88</sup> Some agencies have realized success through the inclusion of a victim specialist in their operations. Houston, for example, employs a "justice advocate" to work with police and victims in the reinvestigation of unsolved sexual assaults (SAK Action-Research Task Force, Houston, Texas, 2013). Similarly, the Denver Police Department's Victim Assistance Unit has a full-time "cold case victim coordinator" who works with detectives to help ensure that victims and survivors' families receive referrals, support, and information, and the department has developed protocols for working with cold case victims (Denver [Colorado] Police Department Victim Assistance Unit, 2012).

<sup>89</sup> Wisconsin Victim Resource Center, 2011.

<sup>90</sup> National Sheriffs' Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

## Investigators

The investigators are instrumental. Many cold case units have been staffed primarily by personnel who are not able to perform patrol functions, such as injured police officers on light duty; by investigators working on cold cases during overtime, on top of their current caseloads; or even by an ad hoc, temporary squad. These staffing arrangements are not the most effective way of investigating cold cases. Having the right people in the right positions — including supervisory oversight — is key to achieving the goals of a cold case unit.

### RECOMMENDATION 13:

*13. Select experienced investigators for the cold case unit, preferably with a minimum of five years of investigative experience.*

There are numerous knowledge and skill sets that a cold case investigator should possess. A survey of 55 police departments with more than 25 homicides per year during 2000-2004 overwhelmingly showed that the greatest asset for a cold case detective is interviewing and interrogation skills.<sup>91</sup>

Ideal attributes for investigative personnel include:

- Knowledge of law.
- Background in agency organization and practices, including records systems.
- Advanced investigative skills and experience applicable to cold case investigations.
- Offense-relevant investigation experience.
- Strong communication and interpersonal skills.
- The ability to develop and foster relationships with multidisciplinary partners, including survivors and their families.
- A victim-centered approach.
- Patience and creativity.
- Motivation, enthusiasm, and tenacity.
- The ability to work with minimal supervision.
- Awareness of contemporary technology and forensic science.
- Research, database, and computer skills.
- The ability to work with nontraditional resources, such as volunteers and academia.

---

<sup>91</sup> Keel, 2012.

Because cold case investigations tend to be complex, investigators should ideally have at least five years of investigative experience. Specific cold case training will be required to transition an experienced investigator to unresolved case investigations. Having untrained or temporary personnel responsible for a cold case investigation is not as efficient or effective, although temporary personnel, such as limited-duty police officers, can — under the guidance of a properly trained, full-time cold case investigator — be very beneficial for supporting the unit's operations.

#### **RECOMMENDATION 14:**

*14. Assign at least two full-time investigators to cold case investigations.*

Units need to maintain staffing levels so that the investigators can do their jobs. An investigative unit should always maintain two investigators working together at all times. Having at least two investigators familiar with operations and current investigative efforts allows an agency to continue operations if one investigator leaves the unit. This also ensures transparency, officer safety, and an additional witness for interviews and other investigative activities. Court proceedings benefit as well, since one of the two investigators is likely to be available to testify at any given time. In addition, having more than one person facilitates teamwork, allows the skill sets of the investigators to complement each other, and fosters the additional points of view that are essential for solving these harder cases.

Cold case investigators must be proactive thinkers and must be able to fuse jurisdictional initiatives with the cold case unit's activities. For example, Project Safe Neighborhoods,<sup>92</sup> community-oriented policing, and problem-oriented policing strategies can be used to accomplish the objectives of both the jurisdiction and the cold case unit "because these approaches promise increased productivity and effectiveness by leveraging knowledge."<sup>93</sup> Agencies do not need to choose between their programs/initiatives and cold case investigations.

#### ***Cold case unit supervisors***

The supervisor is responsible for (1) obtaining the resources needed for the investigators to do their jobs and (2) acting as a go-between for the administrators, media, partner agencies, and outside entities such as forensic services and victim advocacy groups. The supervisor has a critical role for ensuring quality control and support for investigators, who need not engage in distracting political or bureaucratic processes.

---

<sup>92</sup> Project Safe Neighborhoods is a collaborative effort for public safety that incorporates law enforcement and community partnerships (Bureau of Justice Assistance, *Project Safe Neighborhoods*).

<sup>93</sup> King & Cooper, 2010.

Ideal skills for supervision of a cold case unit include:

- Strong organizational leadership and communication skills.
- Major case management experience that includes assigning cases for investigation, consulting during investigations, and reviewing completed investigations.
- Offense-relevant experience.
- A victim-centered approach.
- An awareness of current investigative processes, technology, and forensic techniques.
- The ability to work with the agency public information officer (PIO) and the media to act as a buffer between the media and the unit personnel.
- The ability to identify and acquire resources.
- Problem-solving skills.

### **Support staff**

As previously noted, support staff are often nonsworn personnel who assist the sworn investigators in accomplishing the mission of the unit. They may include administrative staff, crime and behavioral analysts, computer and technical specialists, and other skilled personnel who supplement the efforts of the investigators.

In cold case investigations, a crime analyst can potentially identify patterns of criminal activity that investigators may not see when focusing on one case in isolation. Data analysis from previous crimes can provide potential leads for law enforcement to resolve past crimes.<sup>94</sup> Not all agencies have immediate access to data analysis or can dedicate an analyst to unresolved cases. The FBI Violent Criminal Apprehension Program (ViCAP) and state-level resources may provide assistance in the analysis of crimes. Academic resources, including criminal justice students and forensic and computer programmers, may also be of use.

### **RECOMMENDATION 15:**

*15. Cold case investigators should use and consider nontraditional resources, such as volunteers and academia, in cold case investigations.*

Support personnel — including academics, retired law enforcement officers, and other volunteers — can increase the productiveness and efficiency of the cold case unit. Vetted volunteers, especially retired

---

<sup>94</sup> Drug Enforcement Administration, 1987.

## Examples of External Assistance

- The Los Angeles County Sheriff's Office employs "hire-backs" (retired detectives) for case reviews and similar duties.
- The Tulsa (Oklahoma) Police Department uses a variety of external professionals, including professors.
- The Venice (Florida) Police Department uses retired military analysts. These volunteers have previously held high clearances, have the available time, and can bring a creative, non-law enforcement mindset to an investigation.
- The Charlotte-Mecklenburg (North Carolina) Police Department uses retired law enforcement officers, engineers, pilots, other professionals, and criminal justice professors on their cold case review teams.<sup>1</sup> Investigators have remarked that professionals bring education and experience outside of law enforcement to approach investigations with a different mindset.<sup>2</sup>

1. Russell, August 3, 2017.

2. Price, 2017.

persons, often have time to address these tedious cases and enjoy the opportunity to remain active and be of service to the community. Using retired investigators, on a part-time or volunteer basis, can tap a wealth of experience without a significant investment of agency resources. Other valuable volunteers include retired military analysts who are adept at intelligence and can translate their skills to criminal investigations. Agencies need to be mindful, however, of any legal commitments such as police union contracts that may require consideration when using volunteers or retired personnel.

### RECOMMENDATION 16:

*16. Assign investigators to investigative duties only. Delegate all other operational activities of the unit to support staff. Assign administrative work to noninvestigative personnel or others to increase the efficiency of the unit.*

Although some administrative work may be performed by investigative personnel, it is preferable to maximize the unit's resources by having the investigators focus on investigative activities. Functions for noninvestigative staff could include:

- Organizing, reviewing, and summarizing files.
- Scanning documents and entering data into case management systems.
- Performing case reviews and reporting any potential leads or gaps, e.g., in cases that are not current with modern forensic analyses or investigative processes.

- Monitoring and updating cold case unit webpages and social media.
- Conducting record checks and performing database searches on witnesses and suspects.
- Monitoring and requisitioning supplies.

## SUMMARY RECOMMENDATIONS

### IMPLEMENTING A COLD CASE UNIT

8. *Implement a cold case unit as a separate, defined unit within an agency. Position the unit in an existing bureau, division, or branch responsible for investigative activities.*
9. *Identify a lead agency for the unit, if multiple agencies and/or multiple jurisdictions are engaged.*
10. *Create written protocols and directives to detail cold case organization, operations, and investigations.*
  - 10a. *Specify the job duties for cold case investigators, supervisors, and other personnel in the unit's policies and procedures.*
  - 10b. *In a multiagency/multijurisdictional cold case unit, implement protocols detailing the distinct roles of each participating agency.*
  - 10c. *Include protocols for continuity of operations and staff transitions.*
11. *Incorporate a trauma-informed approach into cold case unit operations.*
12. *Employ a victim-centered approach in the daily operations of cold case investigations.*
  - 12a. *Create protocols addressing situations in which a victim does not support continued investigation of their case.*
  - 12b. *Include a detailed plan for communication with victims and victims' families in the cold case unit protocols.*
  - 12c. *Incorporate a victim specialist and/or advocate into unit protocols and operations.*
13. *Select experienced investigators for the cold case unit, preferably with a minimum of five years of investigative experience.*
14. *Assign at least two full-time investigators to cold case investigations.*
15. *Cold case investigators should use and consider nontraditional resources, such as volunteers and academia, in cold case investigations.*
16. *Assign investigators to investigative duties only. Delegate all other operational activities of the unit to support staff. Assign administrative work to noninvestigative personnel or others to increase the efficiency of the unit.*



# Operating a Cold Case Unit



**A**lthough it is not the purpose of this guide to detail actual investigative practices for unresolved cases, it is imperative that agency leaders have a basic familiarity with the process and the issues likely to confront the unit and its investigators. Agencies are encouraged to adapt cold case investigation operation models from successfully established cold case units in other agencies. This section offers an overview of considerations for operating a successful cold case unit.

Law enforcement leadership and policymakers should be mindful of the following cold case concerns:

- Locating case files and relevant case information and documentation.
- Identifying, locating, and analyzing evidence.
- Complying with current investigative and agency standards.
- Organizing an investigative schedule.
- Collaborating with prosecutors, noting the statute of limitations and applicable laws at the time of the offense.
- Using forensic services and other technologies.
- Working with outside experts.
- Training.

## Case selection

Agencies need to determine how they will select cold cases to investigate. Factors to consider when initiating an investigation include:

- Prosecution considerations (e.g., statute of limitations, chain of custody, key witness availability, and factual analysis of the case).
- Database hits.
- New information.
- Evidence that could provide investigative leads if analyzed/reanalyzed.
- Named suspects.

- Persons of interest.
- Previously issued or recalled warrants.
- Interest and communication from the community or other stakeholders.

Involving a prosecutor early in case selection process will help identify cases that have the most potential for a quick resolution. See page 63 for more information on prosecutor roles.

## RECOMMENDATION 17:

*17. Organize cases by starting with the investigations that have the most apparent means of resolution. Consider database hits, ease of resolution, and community interest when selecting cases.*

### ***Statute of limitations***

Agencies should prioritize cases in which the statute of limitations is expiring. Alternatively, a John Doe warrant can negate the time constraint of the statute of limitations, providing the necessary time to locate the perpetrator and adequately prepare the case for prosecution.

### ***Database hits***

Forensic database hits reveal a new connection between a crime and a suspect, or connections between known offenders and other crimes. Harnessing the power of computers and information sharing, connections can be identified within case files, between cases, and even among jurisdictions nationwide. As the information in databases increases, more connections are realized.

Agencies need to have a protocol in place to respond to such database connections and hits. Database hits often occur long after an investigation is initiated. Without a proper protocol to address hit notifications, agencies face confusion about what is needed and who should respond. Leaving a notification unaddressed equates to ignoring a suspect who is likely the perpetrator. As these cases are generally cold cases by the time a database hit occurs, cold case units are uniquely suited to respond to hit notifications. Protocols for database hit notifications must be incorporated into the unit's operations and defined in the written policies and procedures of the unit. Tasking a cold case unit with these responsibilities provides for efficient follow-up investigations by investigators who are trained in the proper procedures. It is important to keep in mind that, because of the long-term search capabilities of modern forensic databases such as the FBI's Combined DNA Index System (CODIS) and Next Generation Identification (NGI) system, cold case units should anticipate receiving ongoing database hits that will need to be investigated.

## John Doe Warrants

A John Doe warrant is an arrest warrant that is issued for a suspect identified only by their DNA or genetic information. It is used when evidence provides a DNA profile that has not been linked to the name of a suspect. Issuing a warrant begins the prosecution of the crime. This is helpful when a statute of limitations deadline is approaching.

**Case Example:** In a 2011 case, *People v. Robinson*, the defendant was convicted of a 1994 rape based on DNA evidence collected at the crime scene. A John Doe arrest warrant was issued at the time of the offense for the person matching the DNA profile. The DNA profile on the John Doe warrant was matched to a DNA profile from a separate crime committed by Robinson after the six-year statute of limitations had already ended.<sup>1</sup>

---

1. Sucherman, 2011.

## Community Interest

Cold case units may want to consider cases with a strong community interest during the case selection process. Working with the community on these cases may assist in closing the cases, demonstrate fulfillment of public trust, and garner support for the unit. Agencies should communicate progress to stakeholders according to the unit's protocols. Momentum for resolving other cases will likely increase with the addition of support from community advocates.

## Modernizing the case

When conducting a cold case investigation, look forward — where does the investigation go from here?

The first step in addressing cold cases is to identify and explore the investigative opportunities for each case. Modernizing a case involves reviewing the case records and the evidence to perform any investigative activities or evidence analyses that may not have been available previously. Many investigators refer to this process as bringing the case to current modern-day standards.

## Investigation checklist

To assist agencies in organizing cold case investigations, an investigative lead matrix or checklist should be created during the initial case review and maintained throughout the investigation.<sup>95</sup> The checklist and an adjoining case summary should provide information about the investigation: What has been done? What is the current status of any investigating activity? Why did the case go cold? Were there any

---

<sup>95</sup> The Arizona Cold Case Task Force developed a cold case questionnaire that requires input from investigators, forensic services personnel, and prosecutors (Arizona Cold Case Task Force, 2007). The National Sheriffs' Association also published a checklist in its publication, *Serving Survivors of Homicide Victims During Cold Case Investigations: A Guide for Developing a Law Enforcement Protocol* (National Sheriffs' Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011).

## Beyond the CODIS Hit

Once DNA is obtained and the resulting profile is entered into CODIS, the investigator's work is still not finished. After a potential match surfaces, the organization responsible for CODIS will notify the submitting agency. There must be a mechanism in place for receiving and acting on these notifications. Working with the local crime lab can help establish the best mechanism or procedure to relay CODIS hits. The hit then needs to be confirmed by collecting and comparing a known sample from the suspect to the DNA profile that generated the hit. The investigating agency is responsible for obtaining a DNA sample from the suspect to submit for this comparison.

CODIS, like other forensic databases, works by using algorithms to compare data entries. Forensic evidence is only one piece of the puzzle. Caution

must be exercised to avoid misreading evidentiary information out of the context of the criminal act; a CODIS hit does not confirm guilt. Finding a matching DNA profile from two different locations shows that the contributor was in a position to have his or her DNA deposited in both of those locations. DNA can potentially be transferred from one location to another, or the contributor may have been at the location yet uninvolved in the crime. Investigators are responsible for obtaining corroborating evidence as to the activities that occurred during the commission of a crime in order to confirm the perpetrator.

Additional information on CODIS can be found on the FBI CODIS webpage at: <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/codis-and-ndis-fact-sheet>.

witnesses, and were any of the witnesses uncooperative? Was there physical evidence? Was there a database hit to an offender or separate case? Were friction ridge impressions retained in the databases to which they were submitted? If not, are they submitted periodically for updated searches in the databases? What other factors, including operational policies at the time, might have been relevant? Using the checklists for all unresolved cases, agencies can then organize investigative activities.

### *Forward thinking*

During the course of case review and investigation, the cold case unit should keep in mind that the primary solvability factors in cold case investigations are advances in forensic testing and analysis and changes in relationships. Although the review may identify missed investigative opportunities, investigators must not concern themselves with what might have been done differently. Looking backward is unproductive, as it is often hard to understand the full context of the initial investigation. Additionally, reviewers must understand and be aware of contextual bias without judgment.<sup>96</sup>

---

<sup>96</sup> Contextual bias occurs when someone is influenced, often subconsciously, by known information or the context of a situation. All investigators must be aware of influences on their investigation and remain as objective as possible.

## ***Updating case files***

All records — including information from all agencies and persons engaged in any activity related to the investigation, such as the medical examiner/coroner's office — need to be compiled and entered into an electronic case management system. It is imperative that case records are properly documented and updated in the case management system whenever any activity occurs or information related to the case is discovered or learned.

Case file reviewers need to:

- Ensure that all information from all agencies regarding any case activity from the initial incident through all post-incident activities is included in the file.
- Enter any missing details from records, data, and notes into an electronic information management system.
- Ensure that all records are current and comply with agency and industry standards.
- Update the case summary with dates of review and the current status.

Older investigation files may initially be difficult to understand or interpret. They may not be in a format that is compatible with current technology, and it is important to understand the technology available and processes in use at the time of the crime. For example, prior to the incorporation of DNA analyses in criminal cases in the late 1990s, serology reports using blood type groups were the standard means of documenting biological evidence. Evidence reports from older cases will often require interpretation by forensic services experts. Additionally, the topography of the crime scene may have changed, and investigators may have to reconstruct the crime scene using old records such as newspaper photographs or assessor and other records.

## **Information management**

A computerized case management system, as a one-stop source of data, is paramount for organizing and operating a cold case unit. Implementing a case management system should be a high priority in a cold case unit. In well-implemented systems, searches can reveal possible relationships and investigative leads, including names repeated across a number of unresolved cases. Unfortunately, limited resources often make the digitization of records a low priority. Some agencies have found it helpful to use interns and volunteers to assist in scanning documents or entering data.

## Computerized Case Management

The Tacoma (Washington) Police Department's Cold Case Unit realized that a computer program designed for assisting agencies during disasters could be applied to cold case investigations. Detectives use the system to input records pertaining to people involved in a cold case. They are able to record information such as the person's current residence, previous residences, whether their DNA profile is included in any databases, and notes on interviews and investigative activity as well as pertinent documents.<sup>1</sup>

In another example, The Los Angeles County Sheriff's Department developed a case management system, the CLUES Management Program, to organize and maintain data in investigations. Through the system, investigators can link, catalog, assign, track, and archive information. Photographs and map data can also be added to the electronic case files, and the system is helpful in conducting searches of large amounts of data.<sup>2</sup>

1. Lewis, October 30, 2015.

2. County of Los Angeles (California), 2003.

Criminal investigations have been compared to a jigsaw puzzle. Volumes of information can be generated in an original investigation, and any number of professionals (investigators, laboratory staff, and prosecutors) may have been involved. In addition to applying new technology to evidence, advancements in the digitization of records and correlation capabilities can also aid in identifying new investigative leads.

Evidence suggests that computerized case management systems contribute to higher clearance rates for homicides. These systems may be equally beneficial in clearing cold cases.<sup>97</sup>

Agencies should consider working with other local jurisdictions to implement case management systems that are compatible and interoperable. Interagency databases can be beneficial since criminals are not confined by jurisdictional boundaries.

In addition, agencies should consider records systems that can exchange information with other agencies such as the local laboratory or prosecution office. Shared records can be compartmentalized so that only those who are approved can obtain information, even on a case-by-case or item-by-item basis. When implementing or upgrading records management systems, having the foresight to include potential collaborations will assist all agencies. Information sharing may even elevate current clearance rates and prevent future cold cases. It is far easier to create systems that are collaborative from the beginning than to force interoperability between existing incompatible systems.

<sup>97</sup> A 2012 survey of 55 police departments found that of departments with 25-49 homicides per year, those that used a computerized case management system had a 5 percent higher clearance rate for homicides than those that did not; in departments with 100 or more homicides per year, those that used a computerized system had a 5.5 percent higher homicide clearance rate than those that did not. In its 2013 best practices publication on homicide investigations, BJA noted that the most successful departments had robust computerized systems. In that report, BJA recommended that homicide units have a "comprehensive digital case management system that contains all reports, photographs, videos, medical examiner reports, and images or documents that constitute the entire investigation" (BJA and IACP, 2013).

## Evidence review

### RECOMMENDATION 18:

18. *Perform an initial comprehensive agency audit to locate, document, and package all evidence according to current standards. Perform evidence audits at least once a year and update agency files to reflect the results of the audits. Document the location, condition, and laboratory analyses of evidence in a computerized information management/tracking system.*
  - 18a. *Review all evidence to determine its evidentiary value and evaluate whether new forensic methods could be used for further examination.*
  - 18b. *Review and update evidence retention policies as needed to prevent the destruction of evidence in unresolved cases.*

Physical evidence plays a vital role in resolving many cases. In addition to its role in judicial proceedings, evidence analysis can offer important investigative leads. Identifying, locating, and physically examining evidence is the next step after compiling all available information in the case files. Supervisors and investigators must understand that this process may be more involved than anticipated. Evidence may be found in unexpected places. The victims or their families as well as previous investigators may even have potential evidence in their possession. Chain of custody will need to be confirmed, and the evidence may need to be repackaged, photographed, or otherwise secured to comply with current standards.

Evidence should be reviewed in consultation with a forensic science expert who has knowledge of what testing and analysis might be available and applicable (including any new or novel technologies). The location and condition of the evidence, and results of any past and current laboratory analyses performed on the evidence, will need to be included in the case in an information management system.

The cold case unit should identify and coordinate with a liaison in the evidence control unit as well as forensic subject matter experts. Having people who understand the processes of evidence handling and examination is instrumental for understanding the potential value of the evidence.

Evidence reviews need to include assessments of photographs, audio recordings, videotapes, and any other relevant media and their current condition. Crime scene photographs may be faded or damaged and will

## Case Solved!

Systematic reviews of unsolved case files may reveal a significant number of cases that can be closed simply by recording that they have already been solved or by completing administrative processing of the files. After all of the missing persons files at one

medical examiner's office were updated, the local law enforcement agency was able to clear 200 missing persons cases by locating the individual as deceased or recovered, lowering their total number of open cases from 287 to 87.<sup>1</sup>

1. University of South Florida, "The Florida Missing and Unidentified Persons Cold Case Program."

need to be digitally recorded and preserved. Investigators may need to locate original negatives. Additionally, friction ridge impression lifts and other physical impression evidence may need to be photographed and digitized to preserve their integrity because of deterioration over time.<sup>98</sup>

Agencies should have written protocols governing the long-term storage of unresolved case documents and evidence to ensure that integrity of the evidence and chain of custody is maintained. Working with the appropriate forensic services, all media should be copied, preserved, and recorded in a computerized information management system. Electronic data such as recovered cell phone and image data (bit-by-bit imaging) and computer hard drives should be saved in a manner that retains all potential evidentiary value. As with any digital media, caution should be exercised to ensure that backup copies of the data are maintained and stored in a secured remote location. In many agencies, natural disasters and other events have severely impacted evidence.

All agencies should have evidence retention policies. Policies already in place need to be reviewed and updated to ensure evidence is being retained in accordance with current standards. For example, NIJ's Technical Working Group on Biological Evidence Preservation proclaims that evidence from homicide investigations should be retained indefinitely.<sup>99</sup>

### RECOMMENDATION 19:

*19. Review all case files to ensure that they are current with contemporary standards and that all investigative opportunities have been exhausted. Conduct subsequent reviews periodically to ensure that cases remain current with the available technology and investigative processes and to identify any new investigative opportunities.*

<sup>98</sup> Impression evidence created by the friction ridge detail is commonly referred to as a fingerprint. Because fingers, toes, and palms can all leave similar patterns, the technical term is "friction ridge impressions." Latent friction ridge impressions (those invisible to the unaided eye) can be visualized using print-processing techniques that enhance the print and make it visible. Friction ridge impressions can also be patent (visible) or plastic (three-dimensional).

<sup>99</sup> National Center for Victims of Crime, 2013.

All unresolved case evidence must be brought up to current scientific standards. Evidence will need to be retested using current technology. Something determined to have no evidentiary value 10 years ago may now yield probative evidence when submitted to examination by current technology. For example, biological evidence could be retested using methods such as Y-STR testing.

Additionally, investigators should determine whether the results of evidence analyses have already been submitted to the relevant databases. Investigators should not assume that all evidence was analyzed and that the results were entered, retained, and periodically searched in local, state, and federal databases. Confirming that evidentiary information is indeed contained in the applicable databases serves as a starting point. Partnerships with forensic services can assist in this process.

Another factor in bringing a case and its evidence up to current standards is that many federal, state, and local databases have improved comparison algorithms and expanded their file base dramatically in recent years, which may help resolve cold cases. In 2014, the FBI replaced the Integrated Automated Fingerprint Identification System (IAFIS) with the Advanced Fingerprint Identification Technology (AFIT), which uses digital imaging technology to store and analyze fingerprint, palm, and latent print data. AFIT is part of the advanced biometric NGI system; as more and more data is uploaded to the system, its effectiveness continues to grow. The National Integrated Ballistic Information Network (NIBIN), an automated imaging system for firearms-related evidence, also has an ever-growing database. Therefore, cold cases should be subjected to periodic review to ensure that they are making the best possible use of these databases to move the investigations forward.

## Roles

### *Supervisor roles*

A cold case unit supervisor is responsible for assigning and overseeing the completion of tasks for unit members, ensuring that the unit personnel have the necessary resources to complete their tasks, and acting as a liaison with other units, other agencies, and agency management. Investigators should not actively investigate more than five cases at any time, and supervisors must be aware of each unit member's workload to facilitate this. Once cases are assigned, supervisors should periodically assess the priority and progress of investigations. The frequency of the supervisor's reviews needs to be detailed in the unit's protocols, and the reviews need to be documented in the case files.

## Missing Database Data

Most people assume that DNA information from known criminals is contained in CODIS; however, there are a multitude of DNA profiles that are not included in DNA databases.<sup>1</sup> DNA databases exist at the national, state, and local levels. Each database has defined criteria for entering DNA information into that database. If a DNA profile was recovered from evidence in a case that has gone cold, investigators in the cold case unit need to learn if the profile was eligible and into which databases it was entered.

Investigators must also realize that there are potentials for error at any point in the process of uploading the DNA profile into a DNA database as well as during the hit notification process. Investigators should confirm that DNA profiles related to their cases are indeed entered into the database and verify that no hits have been realized to date. It is imperative that investigators communicate with appropriate laboratory personnel to ensure both parties are on the same page for seamless notifications.

Several investigators have discovered that lawfully owed DNA samples from convicted offenders were not contained in the DNA databases as expected and therefore were not included in any database search results. Furthermore, the collection requirements

for DNA samples, as well as the processes and responsibility for collecting the samples, vary across the country. Missing database samples have been discovered when:

- Persons were determined not mentally competent for trial and held in a health facility.<sup>2</sup>
- Suspects were arrested prior to passage of DNA collection laws, no sample was obtained, and no retroactive collection conditions are defined in the laws.<sup>3</sup>
- Suspects died in incarceration or were deported without having a DNA sample collected.
- Protocols specified DNA collection upon prisoner release rather than entry into the prison system.<sup>4</sup>
- Offenders were released upon sentencing rather than incarcerated.
- Offenders were under supervision and not subject to collection.
- Offenders were awaiting execution or serving life sentences.
- Offenders refused to provide a sample and no court order was obtained.
- Logistical conditions impeded DNA collection.

---

1. Kentucky discovered that 6,000 (8 percent) of its lawfully owed DNA samples were not collected. The issue was identified when the Department of Corrections Commissioner noticed that DNA samples were not obtained during her review of internal reports. Approximately 4,000 felons were released from prison prior to having their DNA collected. The cause for the missing DNA samples is unknown, and Kentucky is in the process of collecting the lawfully owed DNA (Musgrave, July 25, 2013). *Forensic Magazine* reported in July 2017 that lawfully owed DNA profiles were missing from CODIS in at least seven states (Augenstein, July 17, 2017).

2. A Washington state investigator discovered that the state was retaining 49 civilly committed, sexually violent predators whose DNA samples were never collected. Additionally, samples from sexual offenders in state mental hospitals were discovered to be missing in the DNA databases (Wade, January 16, 2015).

3. A series of news stories in 2017 estimated that approximately 8,000 DNA samples were owed from violent criminals in the Nevada penal system and at least six other states were identified. Since the series was published, there have been nine hits from the testing of these samples as of September 2018. One such case resolution was a 1984 cold case where a family was murdered. In addition, the Gypsy Hill Serial Killer was identified when DNA was collected from a parolee (Augenstein, July 17, 2017).

4. Michigan amended the state's DNA collection law requiring that DNA samples be collected from incarcerated persons upon entry into prison rather than upon release. Under the amended law, an additional 5,000 DNA samples were collected from prisoners (Michigan Department of Corrections, *DNA Profile Collection Completed*).

Supervisors must also monitor the well-being of the cold case unit staff. Investigating cold cases over a long period of time can contribute to secondary trauma and burnout. As the National Sheriffs' Association notes, investigators may not recognize or acknowledge the impact that their work has on them, including, for example, anxiety, depression, sleep disturbances, anger, and hypervigilance.<sup>100</sup>

---

<sup>100</sup> National Sheriffs' Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc., 2011.

## ***Forensic services and medicolegal roles***

Success in cold case operations is greatly bolstered through support and assistance from forensic service providers, including forensic pathologists and medicolegal death investigators. It is crucial to have an identified liaison to help develop a plan for evidence testing and to streamline the process. A forensic database hit may change the focus of the investigation, suggesting new avenues of investigation; therefore, it is important that investigators work with forensic experts and prosecutors to understand the weight of the available evidence and any results associated with it. Medicolegal experts can help investigators understand autopsy reports and the activities involved in medicolegal investigations, perhaps identifying critical information already in the file but unrealized for its investigative and probative value. In addition, investigators should be familiar with the capabilities of the forensic services at the time any evidence examinations and analyses were performed. The capabilities of current testing facilities must be understood as well; not all laboratories provide all possible analyses.

It is possible that current testing procedures may consume all of an evidentiary sample. Investigators, working in conjunction with forensic services and the prosecutor, may have to grapple with the decision of consuming the evidence now or waiting for future technological advancements.

## ***Prosecutor roles***

### **RECOMMENDATION 20:**

*20. Actively engage a prosecutor with cold case operations.*

The support of the prosecutor's office is integral to the operation and success of a cold case unit. A prosecutor should be involved in the case review process as early as possible. A prosecutor provides important assistance in determining case assignments and investigative activities and is a vital component of a cold case team for identifying critical legal issues. Prosecutors help triage cases and provide advice — such as assessing the probative value and admissibility of evidence — that can increase a case's ability to be prosecuted. In addition, once a person of interest has been identified, prosecutors can provide valuable insight regarding interviewing strategies to gain information about the case. If filing charges in a cold case is not possible from the prosecutor's perspective, it is helpful to know this sooner rather later — although the

*“There are many tools in the cold case tool box and no one person knows how to use them all to their full potential. Thankfully you don’t have to. You just need to have a collection of people that do. As a result, I’ve developed relationships with experts in a variety of fields so I can access their expertise when needed. In turn, I make sure to make myself available to them as well.”*

— Gene Miller, Pierce County  
Prosecutor’s Office, Criminal Investigator,  
High Priority Offender Unit

goal of the case may not be prosecution per se but rather resolution of the case. It is important to note that the role of a prosecutor is different from that of an investigator. An investigator’s role is to identify offenders and resolve crimes; a prosecutor’s role is to litigate the case, based upon proof “beyond a reasonable doubt.” Prosecutors, therefore, must have sufficient evidence to withstand constitutional scrutiny and meet their burden of proof in court.

Supervisors and investigators must remember, however, that prosecution must be undertaken according to the laws in effect at the time of the offense, not the current laws. Cold case crimes may require a different burden of proof or have a different statute of limitations or classification than they would, had they been committed more recently.

### **Expert roles**

In addition to establishing liaisons with agencies in their same jurisdiction, agencies should foster working relationships with subject matter experts such as crime analysts, specialized prosecutors, graphics experts, genealogists, historians, academics, research librarians, and public records managers. The unit should maintain a readily accessible list of subject matter experts with current contact information. This list should include “who to call” resources at the local, state, and federal levels.

### **Consultations**

Cold case investigations can be aided by guidance or assistance from investigators or cold case experts outside the agency. Cold case units should find out whether their state or region has any cold case associations. Participating in meetings with others and sharing information may help provide ideas for new investigative options. Some areas have regional roundtables. Federal resources such as the FBI’s Behavioral Analysis Unit in Quantico, Virginia, which offers case consultations from a behavioral perspective, are also available. The U.S. Department of Homeland Security runs fusion centers that can send bulletins to agencies in other states seeking information on similar cold cases.<sup>101</sup> There are also private, nonprofit organizations, such as the Vidocq Society, that offer expertise and assistance in cold case homicides and some disappearances.

## **Training and continuing education**

Cold case investigators must have adequate, relevant, and continued training to remain current in new resources and technologies and to take advantage of insight from other experts. There are major differences in solving cold cases versus currently active cases. Investigators

---

<sup>101</sup> U.S. Department of Homeland Security, *State and Major Urban Area Fusion Centers*.

who are well-trained in cold case-specific methodologies will bring greater efficiency and success for the unit — and cost-effectiveness for the agency.<sup>102</sup>

Suggested training topics for unresolved case investigations include:

- Contemporary technology and science for investigators.
- Available resources and services.
- Cold case investigative methodologies.
- Contacting and interviewing cold case suspects.
- Victim-centered and trauma-informed approaches.
- Case management.
- Use of social media in unresolved case investigation.

There are resources and working models available for cold case training. The Advanced Training Center at the California Department of Justice, for example, created a cold case investigation training program in which experts meet twice a year in different locations within the state, inviting agencies to present their cold cases during a week-long session. The experts — including seasoned homicide investigators, a DNA expert, a general criminalist, a forensic pathologist, and a forensic behavioral analyst — may also present brief lectures about recent developments in their disciplines. This same approach can be used in regional cold case roundtable meetings, where cases are presented to facilitate the exchange of investigative ideas.

## Media

### RECOMMENDATION 21:

*21. Maintain a public-facing list of all unresolved cases (e.g., a cold case website).*

### RECOMMENDATION 22:

*22. Develop a media information dissemination strategy. Detail this strategy in the agency protocols. Designate an agency public information officer to act as media liaison.*

---

<sup>102</sup> Adcock & Chancellor, 2016.

Law enforcement agencies should use traditional news media and social media to their advantage to create positive relationships and, potentially, to help identify resources.

Agency protocols need to detail the do's and don'ts for interacting with the media and engaging the agency's public information officer (PIO). If there is no agency-identified PIO, the cold case unit should identify a person who will fulfill the PIO role for the unit. The agency also needs to include a plan for responding to received information. This includes information supplied directly to the department from call-ins as well as information given to the media. All information needs to be included in the records management system along with any associated activities and results.

There are numerous ways that the media can assist in cold case investigations. Media campaigns often cost the agency little or nothing. Social media can be used both to elicit tips in a cold case investigation and to increase the transparency and accountability of a cold case unit. For example, some law enforcement agencies use blogs, YouTube channels,<sup>103</sup> Facebook pages, Twitter feeds, and community-based websites such as Patch.com or iWatch. Crime Stoppers or a dedicated tip line, including an anonymous tip submission tool, is extremely beneficial to have on the department's website. Billboards and posters have long been used to draw the public's attention to cold cases, asking "Do you know who killed me?" "Do you know who I am?" or "What happened to my mother?" Many jurisdictions hold press conferences to highlight certain cases. Agencies may also involve the media in targeted campaigns, eliciting media cooperation, for example, to seek information on the anniversary of a particular cold case.

The case resolution process is often a partnership with the public, and cold case success stories must be shared with the public. This increases an agency's transparency and informs the public about how unresolved case investigations work. Developing positive media relationships serves to strengthen community relations and partnerships as well as to obtain future buy-in from the agency and the jurisdiction, which may be crucial both to future investigations and for continued support of a cold case unit. If the victim was a member of a specific community, share the successful resolution with that community's media as well. When communicating with the media, make sure the message is clear. Use statistics regarding the number of unresolved cases and offer examples of cases.

---

<sup>103</sup> The Philadelphia (Pennsylvania) Police Department has had great success, for example, using YouTube videos to ask for tips after a homicide (Bureau of Justice Assistance & International Association of Chiefs of Police, 2013).

## SUMMARY RECOMMENDATIONS

### OPERATING A COLD CASE UNIT

17. *Organize cases by starting with the investigations that have the most apparent means of resolution. Consider database hits, ease of resolution, and community interest when selecting cases.*
18. *Perform an initial comprehensive agency audit to locate, document, and package all evidence according to current standards. Perform evidence audits at least once a year and update agency files to reflect the results of the audits. Document the location, condition, and laboratory analyses of evidence in a computerized information management/tracking system.*
  - 18a. *Review all evidence to determine its evidentiary value and evaluate whether new forensic methods could be used for further examination.*
  - 18b. *Review and update evidence retention policies as needed to prevent the destruction of evidence in unresolved cases.*
19. *Review all case files to ensure that they are current with contemporary standards and that all investigative opportunities have been exhausted. Conduct subsequent reviews periodically to ensure that cases remain current with the available technology and investigative processes and to identify any new investigative opportunities.*
20. *Actively engage a prosecutor with cold case operations.*
21. *Maintain a public-facing list of all unresolved cases (e.g., a cold case website).*
22. *Develop a media information dissemination strategy. Detail this strategy in the agency protocols. Designate an agency public information officer to act as media liaison.*



# Identifying Support For a Cold Case Unit



**A**gencies must identify and seek support from available resources. Support for a cold case unit can come from other local and state agencies, federal agencies, and private or community resources. Collaboration allows other agencies' operations and services to assist in law enforcement needs. Local, state, and federal agencies and academia all have operating budgets that may assist with agency activities. Tapping these available resources for cold case investigations can help local law enforcement agencies achieve their cold case goals and mitigate a lack of internal resources as a barrier for investigating cold cases.

## Local and state agencies as sources of support

Successful cold case investigations often involve engaging units and agencies outside the cold case unit. Examples of such partners include the district attorney or county prosecutor, the medical examiner/coroner's office, forensic services, and other local or state agencies. These entities are all part of the team when it comes to investigating and resolving cold cases, and including them from the outset fosters development and good will for the cold case unit. Such efforts may pay great dividends in the form of enhanced cooperation and *esprit de corps*.

In addition, other noninvestigative state and local agencies may be open to service partnerships. There are a plethora of government agencies that may be able to provide assistance, especially if more creative, nontraditional approaches are used. Assistance may be tangible, such as material goods and equipment, or intangible, such as assistance in grant writing.

## Community resources as sources of support

Survivors, family members, and friends in cases that have not been resolved may be among the staunchest supporters of creating and maintaining a cold case unit. News media, victims' rights groups, social services providers, and politicians may likewise be viable sources of support. In any given community, many people and organizations are critical to the success of an agency and its mission to solve cold cases. These include local and state politicians, nongovernmental organizations, community leaders, civic organizations, the media, and the community in general.

Nongovernmental organizations often have more flexibility than government agencies and can be strongly invested in obtaining results. Major corporations may be sources of financial assistance through grants or other means, and cold case units should not overlook community organizations.

Cold case units can benefit from targeted outreach to community leaders — both formal, such as an elected official, and informal, such as a popular clergy person or neighborhood resident. Initiation of a cold case unit reaffirms the agency's commitment to case resolution and enhanced public safety for all members of the community.

## Academia as a source of support

### RECOMMENDATION 23:

*23. Utilize academic resources when possible and appropriate. These resources may include technologies, students, and faculty with subject matter expertise.*

An often-overlooked source of support in cold case investigations is academia. Academic support can come in three forms: subject matter expertise, resources, and labor.

Colleges and universities can provide services that might lessen the burden on police agencies. Agencies can tap the expertise of faculty and the labor of students and gain access to new technologies, processes, and specialty equipment for investigative purposes. In addition, academics can identify and assist in procuring funding resources such as grants. Educational institutions may also be able to offer professional development and training.

Academic resources in cold case investigation include:

- Remote sensing for buried bodies
- Burial excavation and documentation
- Human identification or visualization
- Facial reconstruction and trauma analysis
- Isotope testing and analysis
- Forensic entomology remote sensing
- Forensic palynology
- Forensic genealogy
- Grant writing
- Data analysis
- Statistical analysis

## Examples of Academic Subject Matter Experts

Institutions of higher education often have expertise and resources that can be beneficial for cold case investigators. Most schools provide the services as a goodwill gesture to the community. Cold case units are encouraged to explore local schools as well as identify specialty schools that may provide assistance. Below are a few examples of academic cold case partnerships.

- The University of South Florida is a nationwide service provider for cold cases, homicide cases, and missing persons cases. It provides a range of technical services as well as educational programming in the areas of:<sup>1</sup>
  - New facial imaging and clothing approximation.
  - Case review.
  - Skeletal analysis for identification.
  - Chemical and elemental isotope analysis.
  - Trauma analysis.
  - Crime scene location and documentation.
- Mercyhurst University in Pennsylvania has provided assistance in forensic anthropology cases and for coroners.<sup>2</sup>
- The University of North Texas Health Science Center provides numerous cold case resources, including:
  - Managing the National Missing and Unidentified Persons System (NamUs).
  - Coordinating anthropology and DNA resources.
  - Providing nationwide missing and unidentified persons training courses.
  - Developing and implementing missing and unidentified persons protocols.
  - Providing case consultations and networks of resources to assist with investigations.
  - Obtaining facial reconstructions of unidentified decedents from certified forensic artists through Project EDAN.
  - Performing analytical searches to locate family members for DNA collection and next of kin for death notifications.

1. University of South Florida Institute of Forensic Anthropology and Applied Sciences, *Art of Forensics: Solving Florida's Cold Cases*.

2. Mercyhurst University, *Dennis Dirkmaat, Ph.D., D-ABFA*.

- Database creation and management
- Geographic information systems analysis

Additionally, colleges or universities may be able to offer personnel to assist with case reviews and preliminary assessments, thereby allowing investigators to concentrate on investigative functions. Some college programs have initiated partnerships wherein thoroughly vetted students assist investigations under the guidance of the law enforcement agency. Many agencies have benefited by having students upload data into information management systems or perform other administrative functions. Students may assist in the organization of files, prepare case file videos for dissemination on platforms such as social media, perform research in libraries and local records (e.g., property deed history), locate archived photographs and periodicals, prepare physical and computer models and diagrams, and provide different perspectives.<sup>104</sup>

<sup>104</sup> Some graduate student programs have worked with local law enforcement to create videos of the case for dissemination, using media such as YouTube.

## Examples of Student Programs

Several institutions of higher education have organized cold case investigation programs. Law enforcement should tap into the energy and services that faculty and students can bring to an investigation. The following is a short list of some of the cold case projects involving partnerships between academia and law enforcement.

- The Institute for Forensic Anthropology and Applied Sciences at the University of South Florida works with agencies to perform cold case reviews, integrating students into case assessments to ensure that case files are up to current investigative standards. The institute has also worked to organize special programming to engage the public and has assisted in more than 30 exhumations of John and Jane Does from city cemeteries for DNA analysis.
- Olivet College in Michigan participates in a joint effort with the Calhoun County Prosecutor and the Battle Creek Police Department in which a select group of students works alongside local cold case investigators.<sup>1</sup>
- A cold case team was created in Greensboro, North Carolina, with a biology professor from Guilford College, faculty from Rockingham Community College, and a detective from the Greensboro Police Department. Students from both colleges work with law enforcement, using assessment tools and forensic science to review cold cases. The professors, also members of the Vidocq Society, bring their own cold case experience along with the student and college resources.<sup>2</sup>
- Towson University students and a faculty member who is a former crime lab forensic investigator formed the Forensic Science Student Organization. The group assists in cold case investigations, such as a case in which they helped search for the body of a missing woman who was believed to have been murdered.<sup>3</sup>

1. Olivet College, April 27, 2017.

2. Guilford College, April 20, 2017.

3. *The Baltimore Sun*, September 4, 2016.

## Federal resources as sources of support

Federal agencies may offer significant financial assistance, forensic and investigative equipment, training, and resources as well as personnel and facilities. Agencies are advised to register for federal notification systems such as email distribution lists to keep abreast of any potential resources as they arise.

Federal resources for cold case investigations include:

- The FBI's Violent Criminal Apprehension Program (ViCAP), a national database for collecting and analyzing information on major violent criminal cases.<sup>105</sup>
- The Computer Analysis and Response Team (CART) of the local FBI office, which can assist with computer or digital evidence investigations.<sup>106</sup>

<sup>105</sup> FBI, *ViCAP Homicides and Sexual Assaults*.

<sup>106</sup> The FBI can assist with seizing and analyzing digital evidence using state-of-the-art equipment that few local or state agencies have the opportunity to access through local evidence services (FBI Laboratory, *Computer Analysis and Response Team*).

## Examples of Federal Resources

Agencies can seek assistance in the form of federal partnerships from several agencies within the Department of Justice. The Office of Justice Programs (OJP) serves as an assistance agency for law enforcement, and the Bureau of Justice (BJA) offers programs such as the Sexual Assault Kit Initiative (SAKI), which creates partnerships and provides resources for cold case sexual assaults. Partnerships between federal agencies may also assist local law enforcement. For example, in early 2017 BJA initiated a partnership with the FBI's Violent Criminal Apprehension Program (ViCAP) to help ensure that case information is shared across jurisdictions and states to increase the chances of solving cases in the absence of forensic evidence. As a result of this partnership, ViCAP staff are now available to assist SAKI sites in gaining entry into the system; provide training on optimal use of the database; and conduct crime analysis on specific offenders or cases upon request.

The Naval Criminal Investigative Service (NCIS) initiated a full-time cold case program in 1995 that was the first cold case unit commissioned by a federal agency. Seasoned special agents were trained in the methodologies and concepts of cold case investigations; NCIS now teaches cold case protocols to hundreds of other federal, state, and

local law enforcement agents every year. Since 1995, NCIS agents, along with their local partners, have resolved 62 cold case homicides. An example of their partnership approach is the San Diego Police Department Cold Case Team. Created in 1995, this team is composed of investigators from the San Diego Police Department, the U.S. Drug Enforcement Administration, NCIS, and U.S. Customs and Border Protection.<sup>1</sup>

Another source of federal support for cold case investigations is the FBI's Safe Streets Violent Crime Initiative, which is designed to foster task forces focused on gang- and drug-related violent crimes.<sup>2</sup> Many cold case investigations fall under this purview. Resolving such cold cases will naturally curb current and future violence, because violent crimes committed by gang members are not usually limited to only one criminal event. Cold cases involving crimes committed by gang members are often difficult to solve for many reasons, including the "street culture" and a lack of close proximity for evidence exchanges in instances of shooting. Tapping the FBI's knowledge and resources can be very beneficial in resolving cold cases. These resources are available for drug-related violent crimes as well. The FBI's Safe Streets Task Forces are designed to be long-term initiatives.<sup>3</sup>

1. San Diego (California) Police Department, *Cold Case Homicide Team*.

2. FBI, *Violent Gang Task Forces*.

3. *Ibid.*

- The U.S. Postal Inspection Service.<sup>107</sup>
- NIJ's National Missing and Unidentified Persons System (NamUs), a national database of missing and unidentified persons as well as a source for related services.
- Local branches of the military, such as the Naval Criminal Investigative Service (NCIS), the Army Criminal Investigative Division (CID), and the Air Force Office of Special Investigations (OSI).
- The National Crime Information Center (NCIC), a database operated by the FBI nationwide 24 hours a day year-round and consisting of seven property files and 14 persons files with an offline search capability.

<sup>107</sup> On January 18, 2018, the Department of Justice announced that 104 people had been arrested for drug trafficking through a federal task force that included the FBI, the U.S. Postal Inspection Service, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the Puerto Rico Police Department Bayamón Strike Force, the U.S. Marshals Service, and the San Juan Municipal Police in Puerto Rico. Murder and drive-by shootings are among the charges filed against the defendants (U.S. Attorney's Office, District of Puerto Rico, 2018).

- The U.S. Marshals Service, which provides investigative assistance through joint-agency fugitive task forces, arrests out-of-state suspects, and transports suspects to the investigating agency.
- The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), which maintains the National Integrated Ballistic Information Network (NIBIN), manages records pertaining to sales of firearms, and assists in fire- and explosives-related cases.
- The Drug Enforcement Administration (DEA), which assists local agencies with intelligence on the drug-related activities that commonly accompany violent crime.<sup>108</sup>
- The Department of Homeland Security’s Immigration and Customs Enforcement (ICE), which provides information-sharing resources for law enforcement through its Law Enforcement Information Sharing Service and its Pattern Analysis and Information Collection System (ICEPIC) database of information on persons, businesses, vehicles, and firearms.<sup>109</sup>
- The National Center for Missing and Exploited Children (NCMEC), which provides investigative and forensic services such as age progression and regression composite sketches, information dissemination assistance, and forensic testing.<sup>110</sup>
- The FBI’s Behavioral Analysis Unit (BAU), which provides consultation support for understanding criminals and their behavior to assist in identifying potential suspects.<sup>111</sup>

For more information, see the Resources section of this guide.

## Nontraditional sources of support

Most agencies cite a lack of resources as their main reason for not having a dedicated cold case unit. Many creative approaches can be employed to alleviate some of the agency’s burden. In addition to sharing resources with other agencies through a regional task force and using academia, agencies can seek assistance from the public. Some agencies have found success with programs through which the public donates to a cause directly.<sup>112</sup> Soliciting other types of donations can also be successful. The

<sup>108</sup> On November 22, 2017, the DEA announced a conviction for homicide and additional charges originally filed almost two decades earlier, in 1999. The conviction resulted from joint efforts by the U.S. Drug Enforcement Administration, the New York Police Department, and the New York State Police (Drug Enforcement Administration, *Additional Charges Announced*, and Drug Enforcement Administration, *Intelligence*).

<sup>109</sup> Fort Worth Police and ICE Homeland Security Investigation agents worked together to arrest a foreign national for a 2007 homicide in December 2017. Detectives from Fort Worth connected evidence to a deported individual who illegally re-entered the country and was incarcerated in a federal prison (U.S. Immigration and Customs Enforcement, *ICE Detainee Charged With 2007 Fort Worth Murder* and U.S. Immigration and Customs Enforcement, *Law Enforcement Information Sharing Initiative*).

<sup>110</sup> National Center for Missing & Exploited Children, *Case Resources*.

<sup>111</sup> FBI, “Behavioral Analysts.”

<sup>112</sup> For example, Crimestoppers (<https://crimestoppers.org>) is a nonprofit program that participates in fundraising efforts from the public where donations can be used for rewards for information in criminal investigations.

## Community Donations Fund DNA Lab

The Charlotte-Mecklenburg (North Carolina) Police Foundation's DNA Project<sup>1</sup> solicited community donations to help set up a DNA crime lab for unresolved cases. Donations paid for a DNA forensic laboratory analyst's salary and supplies, including DNA testing materials. In addition to community

fundraisers, the project received a boost from a Harris Teeter grocery store, which donated \$10,000 in the name of a former employee whose homicide was resolved by the Charlotte-Mecklenburg Cold Case Squad.<sup>2</sup>

1. Charlotte-Mecklenburg (North Carolina) Police Foundation, *Cold Case DNA Crime Lab*.

2. Charlotte-Mecklenburg (North Carolina) Police Department, *Homicide/ADW Unit*.

City of Boston has found success using police foundations that work with vetted corporate donors.

Some jurisdictions have developed innovative approaches for funding. Texas introduced a bill that would allow the state to crowdfund sexual assault kit testing by asking citizens to donate a dollar to the effort when they renew their driver's license.<sup>113</sup> Many local jurisdictions are finding additional revenue streams through code enforcement, such as red light and speed cameras and parking infractions, or administrative fees, such as an increased cost for death certificates. Similar types of revenue could be used for unresolved case funding.

The internet and social media have allowed people to create fundraising efforts without going through a nonprofit agency. GoFundMe, for example, is a website where people can ask for donations toward a cause. Several GoFundMe campaigns are directed at solving cold cases.<sup>114</sup> Facebook and other social media websites provide free community outreach and information sharing. Nextdoor, another free website and app, is a targeted social media platform that some law enforcement agencies have embraced for information sharing. The platform allows law enforcement to send messages to specific neighborhoods or regions by email or through the Nextdoor application.<sup>115</sup>

## SUMMARY RECOMMENDATIONS

### IDENTIFYING SUPPORT FOR A COLD CASE UNIT

*23. Utilize academic resources when possible and appropriate. These resources may include technologies, students, and faculty with subject matter expertise.*

<sup>113</sup> For example, Mansoor, April 5, 2017

<sup>114</sup> The sister of a teen killed in 1984 initiated a GoFundMe campaign in 2017 to assist in the investigation (*Helen Kilgore's COLD CASE FUND*, March 6, 2017).

<sup>115</sup> The Fayetteville Police Department in North Carolina issued a press release through the Nextdoor app to share information on a cold case suspect wanted for sexual assault in August 2017 (Fayetteville [North Carolina] Police Department, *Fayetteville Police Department*).



## Conclusion



Investigation of unresolved cases presents unique challenges. Not only are the cases themselves difficult, but the fiscal commitment to investigating them — particularly through a dedicated cold case unit — can be challenging to secure amid competing demands for resources. The media spotlight on high-profile new cases often puts pressure on agencies to focus on those cases, and as a result, unresolved case investigations can become a low priority.

Securing financial stability is frequently a source of difficulty for cold case units. There is anecdotal evidence that cold case units and squads around the country are being downsized or eliminated, as jurisdictions grapple with resource reallocation. In a 2011 study, RAND researchers reported that funding for unresolved cases is “tenuous.”<sup>116</sup> To ensure their own long-term sustainability, cold case units should be recognized as a separate line item in an agency’s budget.

Because cold case investigations are often incorrectly deemed a luxury, they are likely to be among the first affected when decisions are made to reallocate resources toward an increased police presence in the community. The benefits of a dedicated cold case unit are not as immediately visible to the police executives, elected officials, and other policymakers who make funding decisions. A mounted horse unit, new Segways, or transferring unresolved case personnel to patrol in order to reduce response times by a few seconds may be well-received by the public, but it is critical that decision-makers understand the benefits of providing resources for unresolved crimes.<sup>117</sup>

At the nation’s current clearance rate, approximately 40 percent of the roughly 15,000 homicides that occur every year are not being solved. In the face of the admittedly difficult challenges that unresolved cases present, cases can go cold quickly. The options are to do nothing about this — or to do something.

*“If we don’t solve them, the number of unsolved crimes will just go up and then there will be thousands of cases — more and more, committed by people who continue to offend if they are not dead or incarcerated.”*

— Charles Heurich, Senior Physical Scientist, Office of Investigative and Forensic Sciences, National Institute of Justice

<sup>116</sup> Davis, Jensen, & Kitchens, 2011.

<sup>117</sup> Some studies indicate that decreased police response times do not correlate to increased clearance rates. One study, based in the United Kingdom, notes that the chance of clearing a crime decreases by approximately 4.6 percent when response time increases by 10 percent (Blanes i Vidal & Kirchmaier, 2016). Two studies — one in York, Pennsylvania (Stevens, Webster, & Stipak, 1980) and one performed by the New York Police Department (Russo, 2016) — found that increased response times do not increase clearance rates.

Jurisdictions with a cold case unit, or those which are engaged in a regional effort for resolving cold cases, will likely find that their return on investment is initially high, as the more easily solved cases are quickly resolved. The more difficult cases require much more time and effort. This guide has offered recommendations, based on research and input from a working group of experts, to help law enforcement leadership understand the costs of solving cold cases — and the costs if they are left unsolved.

The time has come for forward-thinking, innovative law enforcement leaders to embrace the investigation of cold cases as an integral part of their agencies' core mission. At the very least, bringing a cold case up to today's technological and investigative standards gives the case a better chance of being resolved.

Finally, those who are dedicated to solving cold cases would do well to remember the words of Thomas A. Edison: "When you have exhausted all possibilities, remember this — you haven't."

# List of Abbreviations

---



- AFIS** – Automated Fingerprint Identification System
- AFIT** – Advanced Fingerprint Identification Technology
- BJA** – Bureau of Justice Assistance
- CODIS** – Combined DNA Index System
- IACP** – International Association of Chiefs of Police
- IAFIS** – Integrated Automated Fingerprint Identification System
- MOU** – memorandum of understanding
- NamUs** – National Missing and Unidentified Persons System
- NCIC** – National Crime Information Center
- NGI** – Next Generation Identification
- NIBIN** – National Integrated Ballistic Information Network
- NIJ** – National Institute of Justice
- NIST** – National Institute of Standards and Technology
- OSAC** – Organization of Scientific Area Committees for Forensic Science
- SAK** – sexual assault kit
- SAKI** – Sexual Assault Kit Initiative
- UCR** – Uniform Crime Reports
- UHR** – unidentified human remains
- ViCAP** – Violent Criminal Apprehension Program



# Glossary



**T**his glossary defines terms used in this best practices guide as pertaining to or addressing issues in the law enforcement and forensics arenas.<sup>118</sup>

The National Institute of Standards and Technology (NIST) created the Organization of Scientific Area Committees for Forensic Science (OSAC) to set nationwide standards in forensic sciences. OSAC publishes a database of standard defined terms at <http://lexicon.forensicosac.org/Term/Home/index>. Where possible, OSAC definitions are used in this glossary and are labeled as such.

**Advanced Fingerprint Identification Technology (AFIT).** Deployed by the FBI in 2011, this technology implemented new matching algorithms to increase accuracy in electronic automated fingerprint identification as part of the Next Generation Identification (NGI) services offered by the FBI.

**algorithm.** A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer. Case management and forensic databases use algorithms to identify connections such as with CODIS hits.

**Automated Fingerprint Identification System (AFIS).** OSAC: Biometric computer system that allows forensic examiners to encode, digitize, and search recovered fingerprint impressions against fingerprint record databases for identification purposes. AFIT replaced the FBI's AFIS segment of the IAFIS in 2011.

**backlogs.** Cases received by the laboratory that exceed the laboratory's capacity and are awaiting testing.<sup>119</sup>

**ballistics.** OSAC: The science and study of projectiles in motion. Usually divided into three parts: (1) *interior ballistics*, which studies the projectile's movement inside the gun; (2) *exterior ballistics*, which studies the projectile's movement between the muzzle and the target; and (3) *terminal ballistics*, which studies the projectile's movement and behavior in the target.

---

<sup>118</sup> NIJ's Forensic Technology Center of Excellence (FTCoE) and the Center for Forensic Nursing Excellence International (CFNE International) collaborated to create a glossary that was funded in part through a sub-award from RTI International as the lead partner for the FTCoE. For terms related to sexual assault investigations, this glossary uses the CFNE International Multidisciplinary Glossary on Sexual Violence definitions (<https://www.cfnei.com/glossary-index>).

<sup>119</sup> NIJ, *National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach*.

**behavioral analysis.** The examination of an action taken by an individual, to include the analysis of why the action was taken. In criminal investigations, the analysis of the offenders and their behaviors to commit a crime.<sup>120</sup>

**Behavioral Analysis Unit (BAU).** A unit of the FBI's National Center for the Analysis of Violent Crime (NCAVC) that uses behavioral sciences to assist in criminal investigations.<sup>121</sup>

**Bureau of Justice Assistance (BJA).** Provides leadership and assistance to local criminal justice programs that improve and reinforce the nation's criminal justice system. BJA's goals are to reduce and prevent crime, violence, and drug abuse and to improve the way in which the criminal justice system functions. In order to achieve these goals, BJA programs illustrate the coordination and cooperation of local, state, and federal governments. BJA works closely with programs that bolster law enforcement operations, expand drug courts, and provide benefits to safety officers.<sup>122</sup>

**Bureau of Justice Statistics (BJS).** The primary statistical agency of the Department of Justice. BJS collects, analyzes, publishes, and disseminates information on crime, criminal offenders, crime victims, and criminal justice operations. BJS also provides financial and technical support to state, local, and tribal governments to improve their statistical capabilities and the quality and utility of their criminal history records. BJS provides statistical information to the President, Congress, other officials, and the public with accurate, timely, and objective data about crime and the management of criminal justice.<sup>123</sup>

**burnout.** This term refers to the long-term psychological effects upon investigators or others due to extended periods of time exposed to the negative influences of working in the law enforcement field, for example, in child abuse or homicide investigations.

**case review.** Comprehensive review of all case-related documents and evidence for the purpose of solving the case.

**case summary.** Documentation summarizing the status of a cold case after review.

**caseload.** The number of cases that an investigator is actively investigating.

**chain of custody.** OSAC: The process used to maintain and document the chronological history of an item of evidence. The chain of custody documents the individual who collected the evidence and each person or agency that subsequently takes custody of it. This verifies evidence integrity, meaning that the evidence being analyzed is the same evidence

---

<sup>120</sup> FBI, "Behavioral Analysts."

<sup>121</sup> Ibid.

<sup>122</sup> Bureau of Justice Assistance website.

<sup>123</sup> Bureau of Justice Statistics website.

that was found at the scene and that there was no opportunity for the evidence to be tampered with or compromised. A chain of custody should be maintained for an item until it is released, disposed of, or destroyed.

**clearance rate.** The percentage of crimes known to law enforcement that were “cleared,” or solved, by arrest or special circumstances.

**cleared by arrest.** A case status meaning that a law enforcement agency has cleared a crime from active investigation when a suspect is arrested and charged with an offense.

**closed case.** A case where all suspects have been identified and (if possible) successfully prosecuted.

**cold cases.** Generally, unresolved cases where leads are not readily identifiable and/or a period of time has passed since the date of the offense without any case resolution. NIJ’s Cold Case Working Group offers a possible definition for agencies: A cold case is a case, such as a violent crime, missing person, or unidentified person, that has remained unsolved for at least three years and has the potential to be solved through newly acquired information or advanced technologies to analyze evidence.

**cold case units.** A designated organizational unit within a law enforcement agency, consisting of two or more investigators specifically tasked to investigate cold cases.

**cold hit.** An identified connection between two cases that were previously unknown to be related. A DNA cold hit, for example, is an association made between a crime scene DNA profile and a DNA profile found in a DNA database (e.g., CODIS) in the absence of any prior investigative leads. The association may be to another crime scene DNA profile or to a profile from a known individual.<sup>124</sup>

**Combined DNA Index System (CODIS).** OSAC: The Combined DNA Index System, administered by the FBI, can link human DNA evidence obtained from crime scenes, thereby identifying serial criminals. Comparing crime scene DNA to known reference sample profiles can indicate the identity of a putative perpetrator. There are three levels of CODIS: the Local DNA Index System (LDIS), used by individual laboratories; the State DNA Index System (SDIS), used at the state level to serve as a state’s DNA database containing DNA profiles from LDIS laboratories; and the National DNA Index System (NDIS), managed by the FBI as the nation’s DNA database containing all DNA profiles uploaded by participating states.

**Community-based victim services.** An independent, usually nonprofit organization that provides comprehensive services to victims before, during, and after a criminal case.<sup>125</sup>

**Computer Analysis and Response Team (CART).** Teams located at FBI field offices that provide support with computer evidence and forensic analysis

---

<sup>124</sup> Butler, 2010.

<sup>125</sup> Victim Support Services, November 7, 2013.

of computer-related evidence for local, state, and federal law enforcement investigations.<sup>126</sup>

**coroner.** Generally, an elected (sometimes appointed) official whose duty is to oversee medicolegal death investigations, usually for a single county, and certify cause and manner of death. Coroners need not be medical professionals and therefore might not be authorized to physically conduct autopsies or other invasive procedures. These are the responsibility of a forensic pathologist.

**criminalist.** OSAC: One employed in a field of criminalistics. See *criminalistics*.

**criminalistics:** OSAC: A branch of forensic science concerned with the examination and interpretation of physical evidence for the purpose of aiding forensic investigations including drug analysis, crime scene reconstruction, firearms and tool marks, fire debris analysis, molecular biology, photography, and trace evidence analysis.

**current standards.** Standards currently in existence for case investigation, such as documentation of evidence, witness and suspect interviews, etc. In the cold case context, the term refers to the process of reviewing a cold case and updating the file and documentation to comport with current agency and professional standards.

**database hit.** OSAC: A link between two or more crimes that results when computer databases connect information or evidence from separate crimes, or connect physical evidence with a potential suspect.

**database system.** OSAC: An authoritative repository of information used for storage, search, and analysis. Alternatively, a collection of known samples that provides a point of reference for comparison and identification.

**DNA.** Deoxyribonucleic acid. The genetic life codes which individualize all human beings and other organisms with a cellular structure.

- **familial DNA.** A deliberate search of a DNA database that is conducted when a routine search has failed to yield an exact match, based on the concept that first-order relatives (such as a parent, child, or sibling) will share more DNA than unrelated individuals. States vary, however, in the admissibility of such evidence.
- **mtDNA.** Mitochondrial DNA, which exists outside the nucleus of a cell and is maternally inherited. It is less susceptible to degradation than nuclear DNA and thus helpful in identification of limited or degraded biological material (i.e., human remains).
- **Y-STR DNA.** Short tandem repeat markers located only on the male Y-chromosome.

**DNA analysis.** OSAC: The use of DNA technologies for the evaluation of biological evidence that may be involved in legal matters.

---

<sup>126</sup> FBI, *Computer Analysis and Response Team*.

**exclusion.** OSAC: The determination by a forensic examiner that there is sufficient quality and quantity of detail in disagreement to conclude that two items being analyzed did not originate from the same source.

**fingerprint.** OSAC: An impression of the friction ridges of all or any part of the finger.

**forensic anthropology.** OSAC: The application of anthropological methods and theory, particularly those relating to the recovery and analysis of human remains, to resolve legal matters.

**forensic data.** OSAC: The use or application of scientific knowledge to a point of law, especially as it applies to the investigation of crime.

**forensic genealogy.** The combined use of family histories and partial DNA matches to identify the likely donor of a DNA sample.

**forensic pathologist.** OSAC: A physician who is certified in forensic pathology by the American Board of Pathology (ABP) or who, prior to 2006, has completed a training program in forensic pathology that is accredited by the Accreditation Council on Graduate Medical Education or its international equivalent or has been officially “qualified for examination” in forensic pathology by the ABP. May be employed as a medical examiner or as a consultant to a coroner or justice of the peace.

**Forensic Technology Center of Excellence (FTCoE).** Cooperative agreement between NIJ and RTI International through awards 2016-MU-BX-K110 and 2011-DN-BX-K564. The FTCoE supports the implementation of new forensic technology and best practices by end users and is dedicated to elevating the status of forensic science through advancing technology, sharing knowledge, and addressing challenges. The FTCoE bridges the gap between the scientific and justice communities.<sup>127</sup>

**friction ridge.** OSAC: A raised portion of the epidermis on the palmar or plantar skin, consisting of one or more connected ridge units. Friction ridge details are the area comprised of the combination of ridge flow, ridge characteristics, and ridge structure. The analysis of friction ridge details is used in the comparison of ante mortem and post mortem fingerprints, palm prints, and foot prints for personal identification purposes. Friction ridge impressions are more commonly called fingerprints; however, friction ridges are also found on the palms of the hands and on the feet. Friction ridge impressions recovered from a crime scene may be from any friction ridge source.

**impression.** OSAC: An image formed by pressure. In fingerprints, friction ridge detail deposited on a surface.

**Integrated Automated Fingerprint Identification System (IAFIS).** The FBI’s automated fingerprint system. NGI has replaced IAFIS.

**fusion center.** Fusion centers operate as focal points for the receipt, analysis, gathering, and sharing of threat-related information between federal, state, local, tribal, territorial, and private sector partners.<sup>128</sup>

---

<sup>127</sup> Forensic Technology Center of Excellence website.

<sup>128</sup> U.S. Department of Homeland Security, *State and Major Urban Area Fusion Centers*.

**hit.** See *database hit*.

**hot spot policing.** Policing strategy for crime reduction focusing on improving physical and social order in a high-crime location.<sup>129</sup>

**implementation team.** The persons designated to organize and implement a project such as creating a cold case unit. Project management refers to the implementation team as the project team. There is one lead person who is responsible for overseeing the implementation team and the associated activities.

**inconclusive.** OSAC: In forensic DNA analysis, the conclusion that there is not enough information to include or exclude a person, or that the sample is not suitable for statistics. Alternatively, not conclusive; not resolving doubts or questions; without final results or outcome. In forensic analysis, the results do not provide information to assist with the investigation.

**International Association of Chiefs of Police (IACP).** A professional organization of law enforcement leadership and associated members.

**interoperability.** The ability of two or more computer systems to share information. Forensic databases, for example, may or may not have the capability to share data. AFIS interoperability has been an issue for jurisdictions trying to share fingerprint files due to multiple database vendor systems.

**latent print.** OSAC: A print impression not readily visible, made by contact of the hands or feet with a surface resulting in the transfer of materials from the skin to that surface. A latent print requires enhancement either by a chemical process or through alternative lighting in order to be visible and used in forensic analysis. Once a print becomes visible, such as after the application of print powder, the print is no longer latent. Prints that are visible are patent prints.

**lead.**

- a. investigation – the investigator responsible for managing investigative and administrative oversight of all investigation activities in a case.
- b. project management – a person responsible for executing a task. Often the lead is referred to as a champion in project management. See *project champion*.

**lift.** OSAC: An adhesive or other medium used to transfer a friction ridge impression from a substrate. Lifts are often used in crime scenes when latent prints are made patent through processes such as powder print processing. Once identified, the patent print can be preserved using a lift. Electrostatic, gelatin, and adhesive lifts are all common methods of recovering prints from a scene or off of evidence.

**long-term missing persons.** A general term for those persons whose whereabouts have been unknown for an extended period of time. There

---

<sup>129</sup> CrimeSolutions.gov, *Program Profile: Hot Spots Policing (Lowell, Mass.)*.

is no standard definition of such persons, and the time length involved varies from agency to agency.

**long-term storage.** OSAC: The means of location and preservation for an item of evidence or reference sample for an extended period of time, the amount of time necessary to resolve a case.

**matrix.** Organization of information into a format, often tables or spreadsheets, in which it can be analyzed. Cold case investigations often use matrices to prioritize information.

**medical examiner.** OSAC: An appointed forensic pathologist whose duty is to oversee medicolegal death investigations, perform postmortem examinations, and certify cause and manner of death.

**medical examiner/coroner (ME/C).** An all-encompassing term for the person responsible for determining the cause and manner of death in a particular jurisdiction. Death investigations are not uniform across the nation. Some jurisdictions employ a coroner and some employ a medical examiner.

**medicolegal death investigator.** A person tasked with investigating suspicious, undetermined, or violent death of a person under the jurisdiction of a medical examiner or coroner. Investigation activities include scene investigations.<sup>130</sup>

**memorandum of understanding (MOU).** A formalized agreement or contract between at least two entities defining the roles and commitments for each entity.

**multidisciplinary approach.** A method of applying a variety of forensic and investigative disciplines, e.g., behavioral analysis, criminalistics, and forensic anthropology, in an effort to investigate criminal events.

**National DNA Index System (NDIS).** See **CODIS**.

**National Institute of Justice (NIJ).** Federal agency in the Office of Justice Programs focused on research, development, and evaluation of crime control and justice issues. NIJ provides objective, independent, evidence-based knowledge and tools to meet the challenge of criminal justice, particularly at local and state levels. NIJ funds research, development, and technology assistance. NIJ also assesses programs, policies, and technologies. NIJ publicizes the research it conducts and the evaluation findings through conferences, reports, and the media.<sup>131</sup>

**National Institute of Standards and Technology (NIST).** Founded to establish nationwide standards in measurement and technology. Through research and standards improvement, NIST is addressing forensic science practice throughout the United States.<sup>132</sup>

---

<sup>130</sup> American Board of Medicolegal Death Investigators, *FAQ*.

<sup>131</sup> National Institute of Justice website.

<sup>132</sup> National Institute of Standards and Technology, *Latent Print AFIS Interoperability Working Group*.

**National Integrated Ballistic Information Network (NIBIN).** A national database of digital images of fired bullets and cartridge cases from crime scenes, operated by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).

**National Missing and Unidentified Persons System (NamUs).** A national, central repository and resource center for the records of missing and unidentified persons. It consists of three primary databases: the Missing Persons Database, the Unidentified Persons Database, and the Unclaimed Persons Database. Unlike other databases, portions of this database are accessible to anyone using characteristics such as race, sex, and other body features. Accessible at <https://www.namus.gov>. See *long-term missing persons*.

**National Sheriff's Association (NSA).** A professional association dedicated to serving Sheriffs' Offices and their affiliates through police education, police training, and general law enforcement information resources.<sup>133</sup>

**negative results.** In forensic analyses, when items or results are compared and determined not to match.

**Next Generation Identification (NGI) Biometric Database.** Enhances FBI biometric identification services by providing an incremental replacement of current AFIS technical capabilities. Considered the largest biometric database in the world. Stores individual fingerprint records and other biometric data for criminal and civil matters. Advanced identification technology provides rapid, efficient, and accurate fingerprint processing.<sup>134</sup>

**nondisclosure agreement (NDA).** An agreement between two parties wherein the signer agrees not to disclose any information related to the activities defined in the agreement. Common NDAs restrict volunteers from discussing any information learned while assisting a law enforcement agency.

**odontologist.** OSAC: A dentist who deals with the proper handling and examination of dental evidence and the proper evaluation, interpretation, and presentation of such evidence in the interest of the law. The discipline of odontology deals with human identification, examination and assessment of evidence and orofacial injuries along with age assessment and cases of malpractice and fraud.

**offline search.** A special technique by NCIC that can be used in a variety of situations to obtain information not available through online channels.

**Office of Justice Programs (OJP).** Provides innovative leadership to federal, state, local, and tribal justice systems by disseminating state-of-the-art knowledge and practices across the United States and providing grants for the implementation of these crime-fighting strategies. Because

---

<sup>133</sup> National Sheriffs' Association website.

<sup>134</sup> FBI, *Next Generation Identification (NGI)*.

most of the responsibility for crime control and prevention falls to law enforcement officers in states, cities, and neighborhoods, the federal government can be effective in these areas only to the extent that it can enter into partnerships with these officers.<sup>135</sup>

**Organization of Scientific Area Committees for Forensic Science (OSAC).**

OSAC: Created through an initiative by the National Institute of Standards and Technology and the U.S. Department of Justice to strengthen forensic science in the United States. OSAC coordinates development of standards and guidelines to improve quality and consistency of work in the forensic science community.

**probative value.** OSAC: Possessing the potential to provide details that are valuable to an investigation.

**problem-oriented policing (POP).** An approach to policing in which police officers attempt to perform root-cause analysis of crime issues in their jurisdiction.

**profile.**

- a. anthropology — OSAC: The description of an individual's estimated age, sex, ancestry, and living stature derived from an anthropological (skeletal) analysis.
- b. behavior analysis — A term most often used by the media and public to describe what is more accurately termed behavioral analysis of a criminal. Analysis looks at the motivations for the crime, victimology, pre- and post-offense behavior, personality assessments, linkage analysis and a variety of other aspects that contribute to the reasoning for the actions of a person.
- c. DNA – OSAC: The genetic constitution of an individual at one or more defined locations (also known as loci) in the DNA.

**project champion.** A person who is responsible for the success of a project by ensuring that stakeholders and project team members support the mission and the cause of the project. See *lead*.

**relevant existing unit.** An operational division or defined section of a law enforcement agency's organization that is tasked with relevant duties. Cold case units should operate within an operational unit which is already performing similar, or relevant, activities, e.g., a violent crime squad, a sexual assault squad, or a homicide squad.

**retraumatized.** When a victim has experienced something that reopens a trauma and is distressing. Notifying victims after analyzing a previously untested SAK can be retraumatizing. Experiencing secondary victimization during an initial report (or from notifying personnel) can be retraumatizing.

---

<sup>135</sup> Office of Justice Programs, *About Us*.

**revictimization.** Repeat victimization, that is, experiencing the same crime for a second time. Alternatively, treatment of a victim in a harsh, victim-blaming way. See **secondary victimization**.

**secondary trauma.** The trauma that people who work with survivors experience through their constant exposure to the pain and suffering of others. Also called vicarious trauma or compassion fatigue.

**secondary victimization.** Negative, victim-blaming treatment received by victims from justice system personnel during the process of reporting or seeking help after a crime.

**Sexual Assault Forensic Evidence – Inventory, Tracking, and Reporting Program (SAFE-ITR).** NIJ funding program to implement an evidence management program to inventory, track, and report untested and unsubmitted SAKs.<sup>136</sup>

**sexual assault kit (SAK).** A package (e.g., envelope, box) containing items for collecting and preserving materials holding potential evidentiary value from the bodies of sexual assault victims, the accused, or suspects in sexual assault cases.<sup>137</sup>

**Sexual Assault Kit Initiative (SAKI).** BJA funding program aimed at reducing the number of unsubmitted SAKs in law enforcement custody. Funding may be used to inventory unsubmitted SAKs, test these kits, and assign designated personnel to pursue new investigative leads and prosecutions and to support victims throughout the investigation and prosecution process.

**statute of limitations.** A legal time frame within which criminal charges must be filed against an accused or the case may no longer be prosecuted.

**survivors.** Victims, their friends, and their family who feel the effects of a crime.

**trauma-informed approach.** Systematic focus on victim safety and the impact of trauma. Includes generating provisions for prioritizing and protecting victim's privacy.<sup>138</sup>

**unidentified decedents/unidentified human remains (UHR).** Deceased human beings whose identity is unknown.

**Uniform Crime Reports (UCR).** An annual FBI statistical compilation, "Crime in the United States: The Uniform Crime Report," which details information on crime in the United States. Law enforcement agencies across the country submit data reports to the FBI, which the FBI uses to report crime statistics.

---

<sup>136</sup> NIJ, *Sexual Assault Forensic Evidence*.

<sup>137</sup> Note that local and state agencies may utilize different terminology, such as a physical evidence recovery kit (PERK), sexual assault forensic evidence (SAFE) kit, sexual offense evidence collection (SOEC) kit, or biological evidence kit (National Center for Victims of Crime, *Sexual Assault Kit Testing*). NIJ has been a part of a nationwide effort to standardize sexual assault evidence practices; through these efforts, SAK was selected as the standardized term used in federal references (CFNE International, *Sexual Assault Kit [SAK]*).

<sup>138</sup> NIJ, *Sexual Assault Forensic Evidence*.

**unresolved cases.** Criminal investigations where no resolution has occurred. No time frame nor any availability of leads is inferred. See **cold cases**.

**Vicarious Trauma Toolkit (VTT).** Resources made available by the Office for Victims of Crime to assist persons exposed to traumatic incidents experienced by other persons. Research demonstrates that exposure to traumatic experiences not only affects victims and their survivors, but also those engaged in occupations that interact with these victims.

**victim-centered approach.** Systematic focus on the needs and concerns of a victim to ensure the compassionate and sensitive delivery of services in a nonjudgmental manner.<sup>139</sup>

**victim specialist.** A professional with specialized training and education who works with law enforcement and victims of crime.

**victim survivors.** Family members, friends, and allies of victims of crime who are also affected by the crime.

**Vidocq Society.** A private organization that provides multidisciplinary assistance to law enforcement in the resolution of cold case homicides. Membership consists of active-duty law enforcement and legal and forensic practitioners as well as retired professionals who contribute their time and experience, pro bono, to assist in the investigation of these crimes.

**Violent Criminal Apprehension Program (ViCAP).** FBI program that maintains a nationwide data information center to collect, collate, and analyzes violent crimes (e.g., homicide, attempted homicide, missing persons, child abductions, sexual assaults, and unidentified decedents). ViCAP analysts examine crime data and patterns to identify potential similarities among crimes, create investigative matrices, develop timelines, and identify homicide and sexual assault trends and patterns.<sup>140</sup>

**Y-STR.** OSAC: Short tandem repeat markers found on the Y-chromosome that enable male-specific DNA testing and can be useful in cases involving sexual assault. Also used in genetic genealogy to trace male lineages.

---

<sup>139</sup> NIJ, *National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach*.

<sup>140</sup> FBI, *Privacy Impact Assessment Violent Criminal Apprehension Program (ViCAP)*.



# References



ABC 13 Eyewitness News. "Rape Victim Sues City of Houston Over Rape Kit Backlog," September 26, 2017. <http://abc13.com/rape-victim-sues-city-of-houston-over-rape-kit-backlog/2454419>.

Adcock, J. "Getting Away With Murder: The National Crisis of Cold-Case Homicides." *The Crime Report*, March 20, 2017. <https://thecrimereport.org/2017/03/20/getting-away-with-murder-the-national-crisis-of-cold-case-homicides>.

Adcock, J.M., and A.S. Chancellor. *Death Investigations*, 2nd ed. CreateSpace Independent Publishing Platform, 2016.

Adcock, J.M., and S.L. Stein. "Cold Case Models for Evaluating Unresolved Homicides." *Investigative Sciences Journal* 5 no. 2 (2013): 19-28. <http://www.thecruc.com/resources/Cold%20Case%20Evaluation%20Models.pdf>.

American Bar Association. *Standards on Urban Police Functions*. 1973/1980. [https://www.americanbar.org/groups/criminal\\_justice/publications/criminal\\_justice\\_section\\_archive/crimjust\\_standards\\_urbanpolice/](https://www.americanbar.org/groups/criminal_justice/publications/criminal_justice_section_archive/crimjust_standards_urbanpolice/).

American Board of Medicolegal Death Investigators. *FAQ*. <http://www.abmdi.org/faq>.

Anderson, G. "Remains Found in Mendocino County in 1979 Belonged to Two Missing Forestville Teens." *The Press Democrat*, February 2, 2016. <http://www.pressdemocrat.com/news/5161463-181/remains-found-in-mendocino-county>.

Arizona Cold Case Task Force. *Cold Case Task Force: A Report to the Governor and the Arizona State Legislature*. Phoenix, AZ: Arizona Attorney General, 2007. <http://azmemory.azlibrary.gov/digital/collection/statepubs/id/16000/>.

Augenstein, S. "AFIS Fingerprint Upgrade Nabs Florida Man in 1992 Rape Cold Case." *Forensic Magazine*, March 7, 2017. <https://www.forensicmag.com/news/2017/03/afis-fingerprint-upgrade-nabs-florida-man-1992-rape-cold-case>.

Augenstein, S. "Familial Searching, Used in 10 States and Counting, Solves the Unsolvable." *Forensic Magazine*, December 8, 2016. <https://www.forensicmag.com/news/2016/12/familial-searching-used-10-states-and-counting-solves-unsolvable>.

Augenstein, S. "FBI and NamUs Partnership IDs Victims, Killers, Unknown Nationwide." *Forensic Magazine*, September 5, 2017. <https://www.forensicmag.com/news/2017/09/fbi-and-namus-partnership-ids-victims-killers-unknown-nationwide>.

Augenstein, S. "Hidden in Prison: 7 States Have Thousands of Inmates Not in DNA Databases." *Forensic Magazine*, July 17, 2017. <https://www.forensicmag.com/news/2017/07/hidden-prison-7-states-have-thousands-inmates-not-dna-databases>.

Augenstein, S. "New Firearms Analysis Quantifies Matches – But Still Not as Assured as DNA." *Forensic Magazine*, January 23, 2013. <https://www.forensicmag.com/news/2018/01/new-firearms-analysis-quantifies-matches-still-not-assured-dna>.

Bagley, L. "College Students Help Investigate Cold Case Murders in Michigan." *South Bend Tribune*, January 24, 2016. [https://www.southbendtribune.com/news/publicsafety/college-students-help-investigate-cold-case-murders-in-michigan/article\\_b7df6571-545b-582c-ba27-0f7344e8b6f1.html](https://www.southbendtribune.com/news/publicsafety/college-students-help-investigate-cold-case-murders-in-michigan/article_b7df6571-545b-582c-ba27-0f7344e8b6f1.html).

*The Baltimore Sun*, "Towson University Forensics Students Join Cold Case Investigations," September 4, 2016. <http://www.baltimoresun.com/brandpublishing/impacting-education/-towson-university-forensics-students-20160907-story.html>.

Begun Center. "Research Reveals New Insights Into Rapist Behavior, Assists Rape Investigations and Prosecutions," June 29, 2018. Cleveland, Ohio: Case Western Reserve University, Mandel School of Applied Social Sciences. <http://msass.case.edu/research-reveals-new-insights-into-rapist-behavior-assists-rape-investigations-and-prosecutions>.

Blanes i Vidal, J., and T. Kirchmaier. *The Effect of Police Response Time on Crime Clearance Rates*. July 16, 2015, rev. August 2, 2016. <http://www.restud.com/wp-content/uploads/2017/08/DetectedResponse09.pdf>.

Bowen, R., and Schneider, J. "Forensic Databases: Paint, Shoe Prints, and Beyond." *NIJ Journal* 258, October 2007. <https://www.nij.gov/journals/258/pages/forensic-databases.aspx>.

Bureau of Alcohol, Tobacco, Firearms and Explosives. *Fact Sheet – National Integrated Ballistic Information Network*, March 26, 2016. <https://www.atf.gov/resource-center/fact-sheet/fact-sheet-national-integrated-ballistic-information-network>.

Bureau of Justice Assistance website. <https://ojp.gov/about/offices/bja.htm>.

Bureau of Justice Assistance. *National Sexual Assault Kit Initiative (SAKI) FY 2018 Competitive Grant Announcement*. Washington, DC: U.S. Department of Justice, Bureau of Justice Assistance, 2018. <https://www.bja.gov/funding/SAKI18.pdf>.

Bureau of Justice Assistance. *Project Safe Neighborhoods*. [https://www.bja.gov/ProgramDetails.aspx?Program\\_ID=74](https://www.bja.gov/ProgramDetails.aspx?Program_ID=74).

Bureau of Justice Assistance. *Sexual Assault Kit Initiative (SAKI)*. Washington, DC: U.S. Department of Justice, Bureau of Justice Assistance. [https://www.bja.gov/ProgramDetails.aspx?Program\\_ID=117](https://www.bja.gov/ProgramDetails.aspx?Program_ID=117).

Bureau of Justice Assistance. *Training and Technical Assistance*. <https://www.bja.gov/Events/TTA.html>.

Bureau of Justice Assistance and International Association of Chiefs of Police. *10 Things Law Enforcement Executives Can Do to Positively Impact Homicide Investigation Outcomes*. Washington, DC: U.S. Department of Justice, Bureau of Justice Assistance and International Association of Chiefs of Police, 2013. [www.iir.com/Documents/IACP\\_Homicide\\_Guide.pdf](http://www.iir.com/Documents/IACP_Homicide_Guide.pdf).

Bureau of Justice Statistics website. <https://ojp.gov/about/offices/bjs.htm>.

Butler, J. *Fundamentals of Forensic DNA Typing*. San Diego, CA: Elsevier Academic, 2010.

CALEA. "Measuring the Performance of Law Enforcement Agencies." *CALEA Update Magazine*, September 2003.

Campbell, R., G. Fehler Cabral, S.J. Pierce, D.B. Sharma, D. Bybee, J. Shaw, S. Horsford, and H. Feeney. *The Detroit Sexual Assault Kit (SAK) Action Research Project (ARP), Final Report*. Washington, DC: U.S. Department of Justice, National Institute of Justice, grant number 2011-DN-BX-0001, December 2015 (updated). <https://www.ncjrs.gov/pdffiles1/nij/grants/248680.pdf#page=257>.

Carter, D.L. *Homicide Process Mapping: Best Practices for Increasing Homicide Clearances*. Institute for Intergovernmental Research. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance, 2013. [https://www.iir.com/Documents/Homicide\\_Process\\_Mapping\\_September\\_email.pdf](https://www.iir.com/Documents/Homicide_Process_Mapping_September_email.pdf).

CFNE International. *Sexual Assault Kit (SAK)*. CFNE International Glossary. <https://www.cfnei.com/glossary/sexual-assault-kit-sak>.

Charlotte-Mecklenburg (North Carolina) Police Department. *Charlotte-Mecklenburg Police Department 2005 Annual Report*. Charlotte-Mecklenburg, NC: CMPD, 2005. <http://charlottenc.gov/CMPD/Organization/Documents/OfcoftheChief/ResearchPlanning/2005AnIRpt.pdf>.

Charlotte-Mecklenburg (North Carolina) Police Department. *Homicide/ADW Unit*. <http://charlottenc.gov/CMPD/Organization/Pages/InvestSvcs/HomicideADW.aspx>.

Charlotte-Mecklenburg (North Carolina) Police Foundation. *Cold Case DNA Crime Lab*. <http://charlottepolicefoundation.org/about-the-foundation/dna-cold-case.php>.

City of Greenville (South Carolina) Police Department. "Cold Case Files." <https://www.greenvillesc.gov/560/Cold-Case-Files>.

Colorado Bureau of Investigation. *Colorado Bureau of Investigation Cold Case Review Team Application for Case Review*. Colorado Homicide Investigators Association, January 2012. <https://view.officeapps.live.com/op/view.aspx?src=http://www.cohia.com/Application2012Jan.doc>.

Community Oriented Policing Services. *Community Policing Defined*. Washington, DC: U.S. Department of Justice, 2014. <https://ric-zai-inc.com/Publications/cops-p157-pub.pdf>.

County of Los Angeles (California). (2003). *Year in Review 2003*. Los Angeles, CA: County of Los Angeles. <https://lasd.org/pdfjs/publications/YIR2003.pdf>.

CrimeSolutions.gov. *Program Profile: Group Violence Reduction Strategy (New Orleans, La.)*. National Institute of Justice. September 19, 2016. <https://www.crimesolutions.gov/ProgramDetails.aspx?ID=490>.

CrimeSolutions.gov. *Program Profile: Hot Spots Policing (Lowell, Mass.)*. National Institute of Justice, producer. December 20, 2011. <https://www.crimesolutions.gov/ProgramDetails.aspx?ID=208>.

Cronin, J.M., G.R. Murphy, L.L. Spahr, J.I. Toliver, and R.E. Weger. *Promoting Effective Homicide Investigations*. Washington, DC: Police Executive Research Forum, 2007. <https://ric-zai-inc.com/Publications/cops-p139-pub.pdf>.

Davis, R.C., C.J. Jensen, and K. Kitchens. *Cold Case Investigations: An Analysis of Current Practices and Factors Associated with Successful Outcomes*. RAND Corporation, 2011. [https://www.rand.org/pubs/technical\\_reports/TR948.html](https://www.rand.org/pubs/technical_reports/TR948.html).

Denver (Colorado) Police Department. *Cold Case Homicides*. <https://www.denvergov.org/content/denvergov/en/police-department/crime-information/cold-cases.html>.

Denver (Colorado) Police Department Victim Assistance Unit. *Homicide Cold Case Investigations: A Guide for Victims and Their Families*. Denver Police Department, ed., 2012. [https://www.denvergov.org/content/dam/denvergov/Portals/720/documents/VAU\\_Cold\\_Case\\_Program\\_Homicide\\_Booklet\\_2012.pdf](https://www.denvergov.org/content/dam/denvergov/Portals/720/documents/VAU_Cold_Case_Program_Homicide_Booklet_2012.pdf).

Doleac, J.L. "The Effects of DNA Databases on Crime." *American Economic Journal: Applied Economics* 9 no. 1 (2017): 165-201. <https://www.aeaweb.org/articles?id=10.1257/app.20150043>.

Drug Enforcement Administration. *Additional Charges Announced Against Two Bronx Men for a 2014 Murder and 2014 Drug-related Shooting*, December 22, 2017. <https://www.dea.gov/divisions/nyc/2017/nyc122217.shtml>.

Drug Enforcement Administration. *Intelligence*. U.S. Department of Justice. <https://www.dea.gov/ops/intel.shtml>.

Drug Enforcement Administration. *Intelligence Collection and Analytical Methods*. Washington, DC: U.S. Department of Justice, 1987.

Durose, M.R., A.D. Cooper, and H.N. Snyder. *Recidivism of Prisoners Released in 30 States in 2005: Patterns from 2005 to 2010 – Update*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2014. <https://www.bjs.gov/index.cfm?ty=pbdetail&iid=4986>.

Fayetteville (NC) Police Department. *Fayetteville Police Department*. <https://nextdoor.com/agency-post/nc/fayetteville/fayetteville-police-department/fayetteville-police-department-media-release-60816024>.

Federal Bureau of Investigation. “Behavioral Analysts,” May 2, 2011. Audio: <https://www.fbi.gov/audio-repository/news-podcasts-inside-bau-profilers.mp3/view>.

Federal Bureau of Investigation. *Behavioral Science*. <https://www2.fbi.gov/hq/td/academy/bsu/bsu.htm>.

Federal Bureau of Investigation. *CODIS–NDIS Statistics*. FBI Laboratory Services Biometric Analysis. <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/ndis-statistics>.

Federal Bureau of Investigation. *Computer Analysis and Response Team*. <https://www2.fbi.gov/hq/lab/org/cart.htm>.

Federal Bureau of Investigation. *Frequently Asked Questions on CODIS and NDIS*. <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/codis-and-ndis-fact-sheet>.

Federal Bureau of Investigation. *Next Generation Identification (NGI)*. FBI Services: <https://www.fbi.gov/services/cjis/fingerprints-and-other-biometrics/ngi>.

Federal Bureau of Investigation. *Notice of Release of the 2015 FBI Population Data for the Expanded CODIS Core STR Loci*. <https://ucr.fbi.gov/lab/biometric-analysis/codis/expanded-fbi-str-2015-final-6-16-15.pdf>.

Federal Bureau of Investigation. *Percent of Offenses Cleared by Arrest or Exceptional Means, by Population Group, 2016*. Washington, DC: FBI, 2017. <https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/tables/table-17/table-17.xls>.

Federal Bureau of Investigation. *Privacy Impact Assessment Violent Criminal Apprehension Program (VICAP), July 18, 2003*. FBI Services: <https://www.fbi.gov/services/records-management/foipa/privacy-impact-assessments/vicap>.

Federal Bureau of Investigation. Private correspondence with the National Institute of Justice. October 31, 2018.

Federal Bureau of Investigation. *ViCAP Homicides and Sexual Assaults*. FBI Most Wanted: <https://www.fbi.gov/wanted/vicap/homicides-and-sexual-assaults>.

Federal Bureau of Investigation. *Violent Gang Task Forces*. "What We Investigate" webpage. <https://www.fbi.gov/investigate/violent-crime/gangs/violent-gang-task-forces>.

Forensic Technology Center of Excellence. *Familial DNA Searching: Current Approaches*. January 2015. <https://forensiccoe.org/report-familial-dna-searching>.

Forensic Technology Center of Excellence. *NIJ and the American Registry of Pathology: Maximizing the Use of Mitochondrial DNA in Identifying Remains and Aiding Missing Persons Casework*. April 2018. <https://rti.connectsolutions.com/irwin>.

Forensic Technology Center of Excellence. *NIJ and JENSEN HUGHES: Advancing the Forensic Analysis of Ignitable Liquid Fuel Fires*. February 2018. <https://rti.connectsolutions.com/gottuk>.

Forensic Technology Center of Excellence website. <https://forensiccoe.org>.

Fox, J.A., and M.W. Zawitz. *Homicide Trends in the United States: 2000 Update*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2003. <https://www.bjs.gov/content/pub/pdf/htus00.pdf>.

Gallagher, C., E.R. Maguire, S.D. Mastrofski, and M.D. Reisig. *The Public Image of the Police: Final Report to the International Association of Chiefs of Police by the Administration of Justice Program, George Mason University*. IACP, October 2, 2001. <https://www.theiacp.org/resources/the-public-image-of-police>.

Gaston County (North Carolina) Police Department. *Mission Statement*. [http://www.gastongov.com/government/departments/police/mission\\_statement.php](http://www.gastongov.com/government/departments/police/mission_statement.php).

Gerber, M. "The Controversial DNA Search that Helped Nab the 'Grim Sleeper' Is Winning Over Skeptics." *L.A. Times*, October 25, 2016. <http://www.latimes.com/local/lanow/la-me-familial-dna-20161023-snap-story.html>.

Guilford College. *Bryan Brendley Helps Launch Cold Case Team*, April 20, 2017. <https://www.guilford.edu/news/2017/05/bryan-brendley-helps-launch-cold-case-team>.

Gurian, E.A. "Female Serial Murderers: Directions for Future Research on a Hidden Population." *International Journal of Offender Therapy and Comparative Criminology* 55 no. 1 (2011): 27-42. <http://journals.sagepub.com/doi/pdf/10.1177/0306624X09352451>.

Hagerstown (Maryland) Police Department. "Criminal Investigation" in *Policies and Procedures* (Hagerstown, MD: Hagerstown Police Department). <https://www.hagerstownmd.org/DocumentCenter/View/5524/Criminal-Investigation>.

*Helen Kilgore's (COLD CASE FUND)*. March 6, 2017. Gofundme: <https://www.gofundme.com/helen-kilgores-cold-case-fund>.

Hodel, S. "LAPD 'Dahlia Gatekeeper' Brian Carr Retires," May 29, 2009. [http://stevehodel.com/2009/05/lapd\\_dahlia\\_gatekeeper\\_brian\\_c](http://stevehodel.com/2009/05/lapd_dahlia_gatekeeper_brian_c).

Holtzclaw, M., and A. Williams. "Investigators Still Haunted by Unsolved Colonial Parkway Murders." *Daily Press*, October 4, 2016. <http://www.dailypress.com/news/crime/dp-investigators-still-haunted-by-unsolved-colonial-parkway-murders-20161004-story.html>.

Horn, S. "Cold Case Quick Facts." *The Restless Sleep*, August 11, 2006. <https://www.therestlessleep.com/?p=103>.

Houston Police Department. "Cold Cases — What is a Cold Case." Houston, Texas. [http://www.houstontx.gov/police/cold\\_cases/what\\_is\\_a\\_cold\\_case.htm](http://www.houstontx.gov/police/cold_cases/what_is_a_cold_case.htm).

International Association of Chiefs of Police Victims Summit. *What Do Victims Want? Effective Strategies to Achieve Justice for Victims of Crime*. IACP, 2000. <https://www.ncjrs.gov/pdffiles1/Digitization/189372NCJRS.pdf>.

International Association of Chiefs of Police Volunteers in Police Service. *Volunteer Programs: Enhancing Public Safety by Leveraging Resources: A Resource Guide for Law Enforcement Agencies*. Washington, DC: U.S. Department of Justice, Bureau of Justice Assistance, 2010. <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=252861>.

Jolly, J. "The Yorkshire Ripper and the Unsolved Swedish Murders." *British Broadcasting Corporation*. January 12, 2018. [http://www.bbc.co.uk/news/resources/idt-sh/the\\_ripper\\_and\\_the\\_swedish\\_murders](http://www.bbc.co.uk/news/resources/idt-sh/the_ripper_and_the_swedish_murders).

Jones, N., J. Roper Miller, H. Waltke, D. McLeod-Henning, D., Weiss, and H. Barcus. *Proceedings of the International Forensic Radiology Research Summit, May 10-11, 2016, Amsterdam, The Netherlands*. Research Triangle Park, NC: RTI Press, 2016. <https://www.rti.org/rti-press-publication/proceedings-international-forensic-radiology-research-summit-may-10%E2%80%9311-2016-amsterdam>.

Justia U.S. Law. 2014 Arizona Revised Statutes Title 13 – Criminal Code § 13-4271 Cold case register; law enforcement agencies; definition. <https://law.justia.com/codes/arizona/2014/title-13/section-13-4271>.

Keel, T.G. *Detecting Clues in Homicide Management: A Homicide "Best Practices" Research Project*. Washington, DC: Federal Bureau of Investigation, National Center for the Analysis of Violent Crime, April 2012.

Keel, T.G. "Homicide Investigations Identifying Best Practices." *Law Enforcement Bulletin*, February 2008.

Keel, T.G., J.P. Jarvis, and Y.E. Muirhead. "An Exploratory Analysis of Factors Affecting Homicide Investigations: Examining the Dynamics of

Murder Clearance Rates." *Homicide Studies* 13(1) (2009): 50-68. <https://doi.org/10.1177/1088767908326903>.

King, M., and G. Cooper. *Cold Case Investigations*. San Clemente, CA: LawTech Publishing Co., Ltd., 2010.

KPLC. "Tip from DNA Phenotype 'Snapshot' Leads to Arrest in 2009 Murder Cold Case." *Forensic Magazine*, July 25, 2017. <https://www.forensicmag.com/news/2017/07/tip-dna-phenotype-snapshot-leads-arrest-2009-murder-cold-case>.

LaBerge, G. "Cold Case Best Practices." Video interview with Gregory LaBerge, Scientific Director and Bureau Commander, Denver Police Department at NIJ conference, June 14-16, 2010. <https://nij.ncjrs.gov/multimedia/video-nijconf2010-laberge.htm#tab1>.

LaPorte, G.M., B. Johnson, and L.S. Schaeffer. "NIJ's NamUs and FBI Laboratory Collaboration: Using Next Generation Identification to Solve Unidentified Persons Cases." *American Academy of Forensic Sciences, 2018 Annual Scientific Meeting*, February 19-24, 2018, Seattle, WA. Program, p. 176, <https://www.aafs.org/wp-content/uploads/2018FINALPROGRAM.pdf>.

LaPorte, G., H. Waltke, C. Heurich, and R.J. Chase. *Fiscal Year 2016 Funding for DNA Analysis, Capacity Enhancement, and Other Forensic Activities*. Forensic Report. Washington, DC: U.S. Department of Justice, National Institute of Justice, 2017. <https://www.ncjrs.gov/pdffiles1/nij/250552.pdf>.

LePard, D., S. Demers, C. Langan, and D.K. Rossmo. "Challenges in Serial Murder Investigations Involving Missing Persons." *Police Practice and Research* 16 no. 4 (2015): 328-340. <http://dx.doi.org/10.1080/15614263.2015.1038030>.

Lewis, P. "Cold Case Database: Crime-fighting Computer Program Helping Heat up Unsolved Child Killings," *Q13 Fox News*, October 30, 2015. <http://q13fox.com/2015/10/30/cold-case-database-crime-fighting-computer-program-helping-heat-up-unsolved-child-killings>.

Los Angeles (California) Police Department. *The Los Angeles Police Department Murder Book*. Homicide Investigation Case File Profile, National Resource and Technical Assistance Center for Improving Law Enforcement Investigations, and Police Foundation, 2018. [https://crimegunintelcenters.org/wp-content/uploads/2018/03/Los-Angeles-Police-Department-Murder-Book-Profile\\_Police-Foundation.pdf](https://crimegunintelcenters.org/wp-content/uploads/2018/03/Los-Angeles-Police-Department-Murder-Book-Profile_Police-Foundation.pdf).

Los Angeles (California) Police Department. *Robbery-Homicide Division*. [http://www.lapdonline.org/detective\\_bureau/content\\_basic\\_view/6262](http://www.lapdonline.org/detective_bureau/content_basic_view/6262).

Mansoor, S. "Texas House Backs Crowdfunding Measure to Test More Rape Kits." *The Texas Tribune*, April 5, 2017. <https://www.texastribune.org/2017/04/05/rapekit-pre-write>.

Martin, S.A. "Lessons Learned about Obtaining Data from the Uniform Crime Reports (UCR) and the Supplemental Homicide Reports (SHR) as provided by the Federal Bureau of Investigation (FBI)." *Investigative Sciences Journal* 9 no. 3 (2017). <http://www.investigativesciencesjournal.org/article/view/17737>.

Mastrofski, S.D. "Policing for People." *Ideas in American Policing*, 1999. <https://www.policefoundation.org/wp-content/uploads/2015/06/Mastrofski-1999-Policing-For-People.pdf>.

Maxson, C., K. Hennigan, and D.C. Sloane. *Factors That Influence Public Opinion of the Police*. Research for Practice. Washington, DC: U.S. Department of Justice, National Institute of Justice, 2003. <https://www.ncjrs.gov/pdffiles1/nij/197925.pdf>.

McCollister, K.E., M.T. French, and H. Fang. "The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation." *Drug and Alcohol Dependence* 108 no. 1-2 (2010): 98-109. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2835847>.

Mercury News & East Bay Times Editorial Boards. "Editorial: Technology Key to Solving Antioch Cold Case." *The Mercury News*, December 13, 2017. <https://www.mercurynews.com/2017/12/13/editorial-solving-antioch-cold-case-provides-future-lesson>.

Mercyhurst University. *Dennis Dirkmaat, Ph.D., D-ABFA*. <http://www.mercyhurst.edu/faculty/dennis-dirkmaat>.

Metropolitan Police Department of the District of Columbia. *Investigating Unsolved Murders in DC*. <https://mpdc.dc.gov/page/investigating-unsolved-murders-dc>.

Miami-Dade County (Florida). *Help Us Solve Cold Cases*. [https://www8.miamidade.gov/global/service.page?Mduid\\_service=ser1523894877377877](https://www8.miamidade.gov/global/service.page?Mduid_service=ser1523894877377877).

Miami-Dade (Florida) Police Department. *Homicide Bureau – Cold Case Squad*. <https://www8.miamidade.gov/global/police/about-homicide-bureau.page>.

Michigan Department of Corrections. *DNA Profile Collection Completed*. <http://www.michigan.gov/corrections/0,4551,7-119--264812--,00.html>.

Moore, M.H., and A. Braga. *The "Bottom Line" of Policing*. Washington, DC: Police Executive Research Forum, 2003. [http://www.policeforum.org/assets/docs/Free\\_Online\\_Documents/Police\\_Evaluation/the%20bottom%20line%20of%20policing%202003.pdf](http://www.policeforum.org/assets/docs/Free_Online_Documents/Police_Evaluation/the%20bottom%20line%20of%20policing%202003.pdf).

Mulawka, M.H., and J.S. Craig. "Efficacy of Submitting Fingerprint of Unidentified Human Remains to Federal Agencies," *Journal of Forensic Identification* 61 no. 1 (2011): 92.

Musgrave, B. "State Failed to Collect Required DNA Samples From 6,300 Kentucky Felons." *Lexington Herald Ledger*, July 25, 2013. <http://www.kentucky.com/news/local/crime/article44435790.html>.

NamUs Fingerprint/AFIS Unit, 2014 Annual Staff Meeting. <http://www.untfsu.com/Documents/Colorado/NamUs%20Fingerprint%20Unit.pdf>.

*NamUs: National Missing and Unidentified Persons System*. Washington, DC: U.S. Department of Justice, National Institute of Justice. <https://www.namus.gov>.

National Center for Missing & Exploited Children. *Case Resources*. <http://www.missingkids.com/ourwork/caseresources>.

National Center for Victims of Crime. *Evidence Retention Laws: A State-by-State Comparison*. Updated August 21, 2013. <http://victimsofcrime.org/docs/default-source/dna-resource-center-documents/evidence-retention-check-chart-9-5>.

National Center for Victims of Crime. *Sexual Assault Kit Testing: What Victims Need to Know*. <https://victimsofcrime.org/docs/default-source/dna-resource-center-documents/dna-sak-victim-brofinal.pdf?sfvrsn=2>.

National Homicide Investigators Association. *31st Annual NHIA Conference 2019*. Accessed February 2019. <http://nationalhomicideinvestigators.org/conference>.

National Institute of Justice website. <https://ojp.gov/about/offices/nij.htm>.

National Institute of Justice. *Awards Related to: Forensics AND Research and Development*. <https://www.nij.gov/funding/awards/pages/awards-list.aspx?tags=and%3aForensics%2cResearch%20and%20Development>.

National Institute of Justice. *Fiber Impurities Allow for More Detailed Forensic Fluorescence Comparisons*. <https://nij.gov/topics/forensics/evidence/trace/Pages/fiber-impurities-allow-for-detailed-forensic-comparisons.aspx>.

National Institute of Justice. *Identifying Missing Persons and Unidentified Decedents*. <https://nij.gov/topics/law-enforcement/investigations/missing-persons/Pages/welcome.aspx>.

National Institute of Justice. *Linking Suspects to Crime Scenes with Particle Populations*. <https://nij.gov/topics/forensics/evidence/trace/Pages/linking-suspects-to-crime-scenes-with-particle-populations.aspx>.

National Institute of Justice. *National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach*. Washington, DC: U.S. Department of Justice, National Institute of Justice, 2017. <https://www.ncjrs.gov/pdffiles1/nij/250384.pdf>.

National Institute of Justice. *The NIJ-FBI Sexual Assault Kit Partnership — A Research Initiative for Unsubmitted Sexual Assault Kits*. <https://www>.

nij.gov/topics/law-enforcement/investigations/sexual-assault/Pages/nij-fbi-sak-initiative.aspx.

National Institute of Justice. *Notifying Sexual Assault Victims After Testing Evidence*. Washington, DC: U.S. Department of Justice, National Institute of Justice, 2016. <https://www.ncjrs.gov/pdffiles1/nij/249153.pdf>.

National Institute of Justice. *President's DNA Initiative*. <https://nij.gov/topics/forensics/dna-initiative/pages/welcome.aspx>.

National Institute of Justice. *Sexual Assault Forensic Evidence – Inventory, Tracking, and Reporting Grant Program*. <https://www.nij.gov/topics/forensics/lab-operations/Pages/safe-itr.aspx>.

National Institute of Justice. *Sexual Assault Kits: Using Science to Find Solutions*. <https://nij.gov/unsubmitted-kits/Pages/default.aspx>.

National Institute of Justice. *Untested Evidence in Sexual Assault Cases*. <https://www.nij.gov/topics/law-enforcement/investigations/sexual-assault/Pages/untested-sexual-assault.aspx>.

National Institute of Justice. *Using Isotopes in Human Hair to Reveal Personal Characteristics for Forensic Investigations*. <https://nij.gov/topics/forensics/evidence/trace/Pages/using-isotopes-in-human-hair-to-reveal-personal-characteristics.aspx>.

National Institute of Standards and Technology. *Forensic Science*. <https://www.nist.gov/topics/forensic-science>.

National Institute of Standards and Technology. *Latent Print AFIS Interoperability Working Group*. <https://www.nist.gov/programs-projects/latent-print-afis-interoperability-working-group>.

National Sheriffs' Association website. <https://www.sheriffs.org/about-nsa>.

National Sheriffs' Association, Justice Solutions, and National Organization of Parents of Murdered Children, Inc. *Serving Survivors of Homicide Victims During Cold Case Investigations: A Guide for Developing a Law Enforcement Protocol*. Washington, DC: U.S. Department of Justice, Office for Victims of Crime, 2011. <http://www.pomc.com/docs/guidefordevelopingalawenforcementprotocolaugust172011.pdf>.

*Newsday*. DNA Advances Provide New Avenue to 9/11 Identifications, September 9, 2017. <https://www.newsday.com/news/new-york/dna-advances-provide-new-avenue-to-9-11-identifications-1.14126035>.

Office for Victims of Crime. "Sexual Assault Cold Case Program – Texas," SART Toolkit: Resources for Sexual Assault Response Teams, March 2011, <https://ovc.ncjrs.gov/sartkit/practices/law-cold-tx.html>.

Office for Victims of Crime. Vicarious Trauma Toolkit. <https://vtt.ovc.ojp.gov>.

Office of Justice Programs. *About Us*. <https://ojp.gov/about/about.htm>.

Office on Violence Against Women. *About the Office*. <https://www.justice.gov/ovw/about-office>.

Office on Violence Against Women website. <https://www.justice.gov/ovw>.

Olivet College. "Class Is a Real Mystery for Cold Case Students," April 27, 2017. <https://www.olivetcollege.edu/class-real-mystery-cold-case-students>.

Oregon Department of Justice. *Guidelines for a Memorandum of Understanding*. August 2017. [http://www.doj.state.or.us/wp-content/uploads/2017/08/mou\\_sample\\_guidelines.pdf](http://www.doj.state.or.us/wp-content/uploads/2017/08/mou_sample_guidelines.pdf).

Organization of Scientific Area Committees for Forensic Science (OSAC). *OSAC Lexicon*. <http://lexicon.forensicosac.org/Term/Home/index>.

Pew Research Center. *Fewer Than Half of Crimes Are Reported, and Fewer Than Half Are Solved*. Washington, DC: Pew Research Center, 2017. [http://www.pewresearch.org/fact-tank/2017/03/01/most-violent-and-property-crimes-in-the-u-s-go-unsolved/ft\\_17-02-28\\_reportedcrime\\_640px5](http://www.pewresearch.org/fact-tank/2017/03/01/most-violent-and-property-crimes-in-the-u-s-go-unsolved/ft_17-02-28_reportedcrime_640px5).

Phoenix (Arizona) Police Department. *Investigations Bureau, Sex Crimes Unit: Sexual Assault – Cold Case and Evidence Backlog Team*. <https://djcs.wv.gov/grant-programs/Specialized%20Programs/SAKI/Documents/Cold%20Case%20Sexual%20Assault%20Guidelines%20Manual%20V1.pdf>.

Pinto, J.K., and D.P. Slevin. "The Project Champion: Key to Implementation Success." *Project Management Journal* 20 no. 4 (1989): 15-20. Project Management Institute. <https://www.pmi.org/learning/library/project-champion-key-implementation-success-2135>.

Portland (Oregon) Police Department. *Non-Disclosure Agreement*. <https://www.portlandoregon.gov/police/article/49953>.

Price, D. "Utilizing Cold Case Review Teams." Presentation during the 5th Annual University of Florida Cold Case Conference, St. Pete Beach, FL, December 4, 2017.

Project Management Institute. *What Is Project Management?* <https://www.pmi.org/about/learn-about-pmi/what-is-project-management>.

Reading (Pennsylvania) Police Department. *Mission Statement*. <https://www.readingpa.gov/content/mission-statement>.

Reaves, B.A. *Census of State and Local Law Enforcement Agencies, 2008*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2011. <https://www.bjs.gov/content/pub/pdf/cslla08.pdf>.

Regensburger, D. "Colorado's Cold Case Task Force: A Blueprint for Improving Cold Case Investigation and Developing Trust between Co-victims and Law Enforcement." *Police Chief Magazine* 81 (2014). <http://www.policchiefmagazine.org/colorados-cold-case-task-force-a-blueprint-for-improving-cold-case-investigation-and-developing-trust-between-co-victims-and-law-enforcement>.

Regini, C.L. "The Cold Case Concept." *FBI Law Enforcement Bulletin* 66 no. 8 (1997): 1-6.

Reyes, N.C. "Cold Case Investigation Units." *Texas Law Enforcement Management and Administrative Statistics Program* 16 no. 1 (2009).

Rich, S., T. Mellnik, K. Kelly, and W. Lowery. "Murder with Impunity." *The Washington Post*, June 6, 2018. [https://www.washingtonpost.com/graphics/2018/investigations/unsolved-homicide-database/?noredirect=on&utm\\_term=.ae75039d82ea](https://www.washingtonpost.com/graphics/2018/investigations/unsolved-homicide-database/?noredirect=on&utm_term=.ae75039d82ea).

Ropero, J.D., and J.S. Morgan. "Knowledge Is Power – Using Technology to Gain Forensic Intelligence." *The Police Chief Magazine*, <http://www.policechiefmagazine.org/knowledge-is-power>.

RTI International. *2016 Annual Report, National Institute of Justice Forensic Technology Center of Excellence*. <https://www.justnet.org/pdf/FTCoE%20Annual%20report%202016.pdf>.

Rubin, J., and R. Winton. "Lawsuit Accuses LAPD Detective of Ignoring Cold Case Evidence." *Los Angeles Times*, October 30, 2013. <http://articles.latimes.com/2013/oct/30/local/la-me-lazarus-lawsuit-20131030>.

Russell, D. "8 Years Later, Parents Want Answers in Their Son's Unsolved Murder." *WBTV.com*, August 3, 2017. <http://www.wbvtv.com/story/36058608/8-years-later-parents-want-answers-in-their-sons-unsolved-murder>.

Russo, C. "Improving Police Response Time Doesn't Reduce Crime, So Why Is It Still Important?" *PoliceOne.com*, May 28, 2016. <https://www.policeone.com/police-products/continuing-education/articles/186062006-Improving-police-response-time-doesnt-reduce-crime-so-why-is-it-still-important>.

SAK Action-Research Task Force Houston, Texas. *Complainant Notification and Information Line Protocols*. *Victims of Crime.org*, 2013. <http://victimsofcrime.org/docs/default-source/dna-resource-center-documents/notification-and-hotline-protocol-final.pdf?sfvrsn=2>.

San Diego (California) Police Department. *Cold Case Homicide Team*. <https://www.sandiego.gov/police/services/units/coldcase>.

San Diego (California) Sheriff's Department. *Mission, Vision & Values*. [https://www.sdsheiff.net/about\\_mv.html](https://www.sdsheiff.net/about_mv.html).

Schuster, B. "Cold Cases: Strategies Explored at NIJ Regional Trainings." *NIJ Journal* 260 (July 2008). <https://nij.gov/journals/260/pages/cold-case-strategies.aspx>.

Sessions, J. *Attorney General Sessions Delivers Remarks to the Association of State Criminal Investigative Agencies 2018 Spring Conference*, May 7, 2018. <https://www.justice.gov/opa/speech/attorney-general-sessions-delivers-remarks-association-state-criminal-investigative>.

Shapiro, E. *Cost of Crime: A Review of the Research Studies*. St. Paul, MN: Minnesota House of Representatives Research Department, 1999. <https://www.house.leg.state.mn.us/hrd/pubs/costcrime.pdf>.

Sheriff's Association of Texas. *Cold Case Review Team (CCRT)*. <https://www.sheriffstx.org/pages?id=24>.

State of Hawaii Department of Public Safety. <http://dps.hawaii.gov>.

Stein, S.L., E. Kimmerle, J.M. Adcock, and S. Martin. "Cold Cases: An Exploratory Study into the Status of Unresolved Homicides in the USA." *Investigative Sciences Journal* 9 no. 2 (2017). <https://www.investigativesciencesjournal.org/article/view/17644/11423>.

Stevens, J.M., T.C. Webster, and B. Stipak. "Response Time: Role in Assessing Police Performance." *Public Productivity Review* 4 no. 3 (1980): 210-230. <http://www.jstor.org/stable/3379854>.

Sucherman, M. "People v. Robinson: Developments and Problems in the Use of John Doe DNA Arrest Warrants." *California Law Review* 99 no. 3 (2011). <http://scholarship.law.berkeley.edu/californialawreview/vol99/iss3/3>.

University of South Florida. "The Florida Missing and Unidentified Persons Cold Case Program." Progress report to National Institute of Justice award 2015-DN-BX-K041. Award abstract: <https://external.ojp.usdoj.gov/selector/awardDetail?awardNumber=2015-DN-BX-K041&fiscalYear=2015&applicationNumber=2015-91328-FL-DN&programOffice=NIJ&po=NIJ>.

University of South Florida Institute of Forensic Anthropology and Applied Sciences. *Art of Forensics: Solving Florida's Cold Cases*. <http://forensics.usf.edu/projects/coldcase>.

University of Texas System Police. *Forms*. <https://www.utsystem.edu/offices/police/forms>.

U.S. Attorney's Office, District of Puerto Rico. "104 Individuals Indicted for Drug Trafficking," U.S. Department of Justice, press release, January 18, 2018. <https://www.justice.gov/usao-pr/pr/104-individuals-indicted-drug-trafficking>.

U.S. Department of Homeland Security. *State and Major Urban Area Fusion Centers*. <https://www.dhs.gov/state-and-major-urban-area-fusion-centers>.

U.S. Department of Justice. "Acting Manhattan U.S. Attorney Announces Conviction of Frank Mercedes on Murder Charges." U.S. Attorney's Office, South District of New York, press release, November 22, 2017. <https://www.justice.gov/usao-sdny/pr/acting-manhattan-us-attorney-announces-conviction-frank-mercedes-murder-charges>.

U.S. Immigration and Customs Enforcement. "ICE Detainee Charged With 2007 Fort Worth Murder." Press release, December 19, 2017. <https://www.ice.gov/news/releases/ice-detainee-charged-2007-fort-worth-murder>.

U.S. Immigration and Customs Enforcement. *Law Enforcement Information Sharing Initiative*. Investigating Illegal Movement of People and Goods. Updated January 3, 2018. <https://www.ice.gov/le-information-sharing>.

Victim Support Services. "System-Based and Community Based Advocacy – The Need for Both." November 7, 2013. <http://victimssupportservices.org/system-based-and-community-based-advocacy-the-need-for-both>.

Wade, L. "Cold Hit: New Technology Reveals Old Evidence." *Forensic Magazine*, January 16, 2015. <https://www.forensicmag.com/article/2015/01/cold-hit-new-technology-reveals-old-evidence>.

Wang, C., and L.M. Wein, "Analyzing Approaches to the Backlog of Untested Sexual Assault Kits in the U.S.A.," *Journal of Forensic Sciences* 63 no. 4 (2018), <https://doi.org/10.1111/1556-4029.13739>.

Warshaw, C., E. Tinnon, and C. Cave. *Tools for Transformation: Becoming Accessible, Culturally Responsive, and Trauma-Informed Organizations*. Creating Trauma-Informed Services: Tipsheet Series. Chicago, IL: National Center on Domestic Violence, Trauma & Mental Health, 2018. [http://www.nationalcenterdvtraumamh.org/wp-content/uploads/2018/04/NCDVTMH\\_2018\\_ToolsforTransformation\\_WarshawTinnonCave.pdf](http://www.nationalcenterdvtraumamh.org/wp-content/uploads/2018/04/NCDVTMH_2018_ToolsforTransformation_WarshawTinnonCave.pdf).

Wisconsin Victim Resource Center. *Assisting Survivors During Cold Case Investigations: Recommendations for Providing Victim Witness Assistance in Reactivated Cases*. Wisconsin Department of Justice, Office of Crime Victim Services, December 2011. <https://www.doj.state.wi.us/sites/all/themes/wi-doj-ag/ocvs/files/specialized/wi-cold-case-vw-recommendations-201112.pdf>.

Yellowstone County (Montana) Sheriff's Office. *Cold Case Unit*. <http://yellowstonecoldcase.com>.



# Resources



This section contains a very limited sampling of the cold case resources available for agencies. Agencies are encouraged to develop relationships with local, state, and federal agencies to learn about current resources as well as receive notifications as new resources become available. Many federal resources are available at little or no cost to an agency.

## General Resources

### *Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)*

The Justice Department's Bureau of Alcohol, Tobacco, Firearms and Explosives provides many services for local law enforcement agencies. Unresolved case investigators can not only trace firearms recovered at a crime scene, but they can also enter recovered cartridge cases into the National Integrated Ballistic Information Network (NIBIN). Both of these searches could potentially provide an Investigating agency with a valuable investigative lead on a cold case.

- **E-TRACE:** a comprehensive search that identifies the origin of the weapon in question. The report will provide the investigator with the weapon's manufacturer along with the retailer in which the first sale of the weapon took place.
- **NIBIN:** a search that compares spent cartridge casings to other known ballistics available in the database. Once a casing is recovered, the investigator can enter the spent casing into NIBIN for a digital comparison to other known recovered casings, potentially linking violent crimes on a national level. NIBIN is constantly adding to its records and is the only database of its kind, making it a valuable resource for connecting crimes outside of the originating jurisdiction.

### *Cold Case Toolkit*

Through an NIJ award, the National Clearinghouse for Science, Technology and the Law at Stetson University College of Law created an online cold case toolkit to provide resources.

<http://www.ncstl.org/education/cold%20case%20toolkit>

### ***Computer Analysis and Response Team (CART)***

The FBI provides support to local and state agencies for computer evidence search and seizure as well as forensic examinations through each field office's CART.

<https://www2.fbi.gov/hq/lab/org/cart.htm>

### ***Forensic Technology Center of Excellence (FTCoE)***

NIJ's FTCoE facilitates the transfer of forensic technologies from research into practice, identifies best practices, and provides numerous trainings and publications. Examples of resources include: webinars such as "Science, Law and Politics of Cold Case Investigations and Forensics," and "Animal DNA in Criminal Investigations"; reports such as *Familial DNA Searching: Current Approaches and Aquatic Death and Homicidal Drowning Investigation*; and workshops such as "Discovery and Recovery: Death Investigations in Natural Environments" and "Navigating the Sea of Resources for Sexual Assault Programs."

<https://forensiccoe.org/>

### ***Military Service Records***

The National Archives maintains files of veterans' service records, including their:

- enlistment/appointment
- duty stations and assignments
- training, qualifications, performance
- awards and medals
- disciplinary actions
- insurance
- emergency data
- administrative remarks
- separation/discharge/retirement (including DD Form 214, Report of Separation, or equivalent)
- other personnel actions

<https://www.archives.gov/veterans>

### ***National Center for Missing and Exploited Children (NCMEC)***

With links to the National Crime and Information Center (NCIC) and CODIS, NCMEC offers access to significant forensic services, including forensic anthropology, forensic art, age regression, and age progression. The agency can also assist in both designing a cold case unit and

providing investigative resources. It can assist in making flyers for public posting and can provide training for investigators. It can offer on-site assistance concerning missing, abducted, and sexually exploited children. While NCMEC focuses on cases where the investigation involves someone under 21 years of age, the agency's resources can be valuable in other cases. In the case of found remains, NCMEC offers resources even if investigators suspect that the remains are of a person over 21 years of age.

<http://Missingkids.com>

### ***National Center for the Analysis of Violent Crime (NCAVC)***

The FBI's NCAVC contains five behavioral analysis units (BAUs), and the primary mission of the NCAVC is to provide behavioral analysis support to federal, state, and local law enforcement investigations. ViCAP is one of NCAVC's programs. The five BAUs are:

- BAU-1: National security, including counterterrorism, arson, and bombings
- BAU-2: Threat assessment, cyber crimes, and public corruption
- BAU-3: Crimes against children
- BAU-4: Crimes against adults/ViCAP
- BAU-5: Research, strategy, and instruction

<https://www2.fbi.gov/hq/isd/cirg/ncavc.htm>

### ***National Law Enforcement and Corrections Technology Center (NLECTC) and JUSTNET***

NLECTC is an NIJ program that connects researchers and practitioners in criminal justice.

- The Justice Technology Information Center (JTIC) provides a portal for professionals to gather information on innovations in the sustainable technology that is transforming the criminal justice system. It is the go-to source for those who make decisions regarding the evaluation, selection, and purchase of proven and tested methods, equipment, and technology. JTIC also hosts the NIJ Compliance Testing Program for ballistic- and stab-resistant body armor and other officer safety equipment.
- The Justice Innovation Center for Small, Rural, Tribal, and Border Criminal Justice Agencies seeks to identify, evaluate, and disseminate technology solutions to the operational challenges of small, rural, tribal, and border law enforcement, courts, and corrections agencies.
- The National Criminal Justice Technology Research, Test and Evaluation Center performs market surveys and hands-on research on new and developing technologies.

- The Forensic Science Technology Center of Excellence (FTCoE) supports the implementation of new forensic technology by end users.
- The Criminal Justice Priority Technology Needs Initiative assesses and prioritizes technology needs across the criminal justice community.

<https://www.justnet.org/about/nlectc-system.html>

### ***National Missing and Unidentified Persons System (NamUs)***

NamUs is a national information clearinghouse and resource center for missing, unidentified, and unclaimed persons cases across the United States. It is funded and administered by the Department of Justice through a cooperative agreement with the University of North Texas Health Science Center. The NamUs database is searchable by the public. The system proposes possible matches to vetted registered criminal justice professionals. NamUs provides technology, forensic services, and investigative support to resolve missing persons cases, including DNA, fingerprint, and anthropology services, free of charge to law enforcement, medical examiners, and coroners.

The National Personnel Records Center, Military Personnel Records, collaborates with NamUs in order to obtain military dental and medical records that may assist in identification. Law enforcement can provide NamUs with information about a missing person, including their name, branch of service, social security number, date of birth, and anything else that may help locate the records. NamUs can employ this service for law enforcement, medical examiners, and coroners to garner information that may not be available outside of the military files. It will also allow records to be transferred directly from the military to NamUs staff.

<https://www.namus.gov>

<https://www.archives.gov/personnel-records-center/military-personnel>

### ***Next Generation Identification (NGI) System***

The FBI's Criminal Justice Information Services (CJIS) Division manages the Next Generation Identification (NGI) System, one of the world's largest repositories of biometric and criminal history information. Use of the NGI System has led to the identification of hundreds of unidentified decedents.

The NGI System is not limited to tenprint and latent fingerprint services; it also includes biometric capabilities such as palm prints and facial recognition.

NGI services include:

- **Advanced Fingerprint Identification Technology (AFIT):** The AFIT replaced the legacy Automated Fingerprint Identification System segment of the IAFIS in 2011. The AFIT offers enhanced fingerprint

and latent processing services, improved system availability, and a fingerprint matching algorithm that has improved matching accuracy from 92 to 99 percent.

- **Cold case/unknown decedent:** Using advanced fingerprint search algorithms, including evidence-based data, the NGI System can conduct searches against the NGI criminal and civil file repositories.
- **Latent and palm prints:** Prior to the NGI System, latent images were searched against a criminal repository; now latent prints (tenprints, palm prints, and supplemental fingerprints) can be searched in criminal, civil, and unsolved latent file repositories. The FBI's CJIS Division recommends that latent fingerprints submitted before 2013 be resubmitted, if no identification was made during the initial search. Additionally, in 2013, the NGI System added the National Palm Print System to further assist in identification services.
- **Rap Back:** Rap Back is an FBI subscription service that allows agencies to receive ongoing notifications of criminal activity by people who hold positions of trust (such as school teachers and daycare workers) or who are under criminal justice supervision or investigation.
- **Facial recognition (FR):** The Interstate Photo System (IPS) uses facial recognition to search millions of criminal mugshots that have been retained by the FBI for decades and generates a ranked list of candidates as potential investigative leads. Agencies with an existing FR system may program a type of transaction to perform FR searches. Agencies without an existing FR system will need to acquire software and work with the FBI CJIS Division to establish IPS FR search capabilities.

<https://www.fbi.gov/services/cjis/fingerprints-and-other-biometrics/ngi>

### ***Project EDAN***

Project EDAN (Everyone Deserves a Name) utilizes forensic artists to create facial reconstructions of unidentified decedents.

<http://www.angelfire.com/planet/edan/CaseSubmissions.html>

### ***Sexual Assault Kit Initiative (SAKI)***

SAKI provides resources including funding and training for law enforcement to address investigations with sexual assault kits.

SAKI has added the newly launched SAKIToolkit, which serves as a comprehensive resource for all practitioners involved in working sexual assault cases (old and new).

<https://sakitta.org/toolkit/>

## ***The Violent Criminal Apprehension Program (ViCAP)***

The Violent Criminal Apprehension Program (ViCAP) is a unit of the FBI responsible for the analysis of serial violent and sexual crimes, organizationally situated within the Critical Incident Response Group's National Center for the Analysis of Violent Crime (NCAVC).

The BJA SAKI team partnered with ViCAP in 2017 in an effort to increase the use of the database and the sharing of crime intelligence information from SAKI-related cases across jurisdictions and the country. ViCAP staff are available to assist sites in gaining entry into the system; provide training on optimal use of the database; and conduct crime analysis on specific offenders/cases upon request.

<https://www2.fbi.gov/hq/isd/cirg/ncavc.htm#vicap>

## **Federal Agencies**

- Bureau of Alcohol, Tobacco, Firearms and Explosives  
<https://www.atf.gov/firearms/tools-services-law-enforcement>
- Bureau of Prisons  
<https://www.bop.gov/resources/>
- Federal Bureau of Investigation  
<https://www.fbi.gov/services>
- Drug Enforcement Agency  
<https://www.dea.gov/law-enforcement>
- U.S. Marshals Service  
<https://www.usmarshals.gov/>
- U.S. Postal Service  
<https://www.usps.com>
- U.S. Customs and Border Protection  
<http://www.cbp.gov/about/labs-scientific-svcs/org-operations>
- U.S. Secret Service  
<https://www.secretservice.gov/>
- U.S. State Department
  - Bureau of International Narcotics and Law Enforcement Affairs (INL)  
<https://www.state.gov/j/inl/>
  - Bureau of Diplomatic Security  
<https://www.state.gov/m/ds/>
- International Criminal Police Organization (INTERPOL)/Interpol Washington, the United States National Central Bureau  
<https://www.justice.gov/interpol-washington/services-law-enforcement-agencies>
  - Criminal investigative support to domestic and foreign law enforcement agencies

- Secure communications with foreign police officials in INTERPOL member countries
- Criminal history information and record checks from INTERPOL member countries
- Assistance with preparing and submitting INTERPOL notices for publication
- Tracing and locating fugitives wanted for prosecution or to serve sentences
- Tracing and locating missing adults or children
- International fingerprint and DNA checks
- Firearm and vehicle traces
- Stolen or lost travel document checks
- Disaster victim identification
- Identification and location of stolen art and cultural artifacts

## Victim Advocacy Groups

- The National Organization of Parents of Murdered Children, Inc.  
<http://www.pomc.com>  
1-818-888-POMC
- The National Organization for Victim Assistance  
<https://www.trynova.org>  
800-879-6682
- The National Center for Victims of Crime  
<https://victimsofcrime.org/>  
202-467-8700
- The National Crime Victim Law Institute  
[https://law.lclark.edu/centers/national\\_crime\\_victim\\_law\\_institute/](https://law.lclark.edu/centers/national_crime_victim_law_institute/)  
503-768-6819
- The National Institute of Justice's National Missing and Unidentified Persons System (NamUs)  
<https://www.namus.gov/>  
1-855-626-7600
- Office for Victims of Crime  
<https://www.ovc.gov>  
202-307-5983
- Serving Survivors of Homicide Victims During Cold Cases  
<http://www.pomc.com/docs/guidefordevelopingalawenforcementprotocolaugust172011.pdf>
- The Compassionate Friends  
<https://www.compassionatefriends.org/>  
630-990-0010

- Mothers Against Drunk Driving  
<https://www.madd.org/>  
877-MADD-HELP
- Joyful Heart Foundation  
<http://www.joyfulheartfoundation.org>  
212-475-2026
- Rape, Abuse & Incest National Network  
<https://www.rainn.org>  
800-656-4673

## Databases

A few sample databases are listed below. A more comprehensive list of forensic databases can be found on the NIST Forensic Database website, <https://www.nist.gov/oles/forensic-database>.

- **Combined DNA Index System (CODIS)**  
FBI's national DNA database  
<https://www.fbi.gov/services/laboratory/biometric-analysis/codis>
- **Forensic Information System for Handwriting (FISH)**  
U.S. Secret Service database used to digitize test writings  
<http://www.secretservice.gov/investigation/#forensic>
- **Glass Evidence Reference Database**  
Technical Support Working Group, with members such as U.S. Department of State and U.S. Department of Defense, maintains this glass reference database  
[isfsubgroup@tswg.gov](mailto:isfsubgroup@tswg.gov)
- **International Ink Library**  
U.S. Secret Service and Internal Revenue Service database containing ink formulas dating from the 1920s onward
- **National Integrated Ballistic Identification System (NIBIN)**  
ATF national ballistic database  
[www.atf.gov](http://www.atf.gov)
- **Next Generation Identification (NGI) System**  
<https://www.fbi.gov/services/cjis/fingerprints-and-other-biometrics/ngi>
- **Paint Data Query (PDQ)**  
Royal Canadian Mounted Police paint database for foreign and domestic cars found in North America  
<http://www.rcmp-grc.gc.ca>

## Publications

- ***10 Things Law Enforcement Executives Can Do to Positively Impact Homicide Investigation Outcomes, Bureau of Justice Assistance***  
[https://www.iir.com/Documents/IACP\\_Homicide\\_Guide.pdf](https://www.iir.com/Documents/IACP_Homicide_Guide.pdf)

- ***A Criminal Flush: Playing Cards and Solving Cases***  
<http://www.ncstl.org/news/Mitchell3-06>
- ***After the Match: Dealing with the New Era of DNA***  
<https://www.ncjrs.gov/app/publications/abstract.aspx?id=242073>
- ***An Analysis of Current Practices and Factors Associated with Successful Outcomes***  
[https://www.rand.org/content/dam/rand/pubs/technical\\_reports/2011/RAND\\_TR948.pdf](https://www.rand.org/content/dam/rand/pubs/technical_reports/2011/RAND_TR948.pdf)
- ***Cold Case Best Practice***  
<https://nij.ncjrs.gov/multimedia/video-nijconf2010-laberge.htm#tab1>
- ***Cold Case Concept***  
<https://www.ncjrs.gov/app/publications/abstract.aspx?id=171208>
- ***Cold Case Squads: Leaving No Stone Unturned***  
<https://www.ncjrs.gov/html/bja/coldcasesquads/199781.pdf>
- ***Cold Cases: Resources for Agencies***  
<https://www.ncjrs.gov/pdffiles1/nij/222903.pdf>
- ***Cold Cases: Strategies Explored at NIJ Regional Trainings***  
<https://www.ncjrs.gov/pdffiles1/nij/222904.pdf>
- ***Cold Sexual Assault Investigations: Key Considerations & Recommendations. Sexual Assault Kit Initiative***  
<https://www.sakitta.org/resources/docs/SAKI-Cold case-Recommendations.pdf>
- ***Detecting Clues in Homicide Management***  
<https://www.nationalpublicsafetypartnership.org/clearinghouse/Content/ResourceDocuments/Detecting%20Clues%20in%20Homicide%20Management.pdf>
- ***Emerging Forensic Identification Technologies: Heat Shock for Cold Cases***  
<http://www.ncstl.org/news/DaggettApril07>
- ***Forensic Art: Project EDAN and the Doe Network***  
<https://www.forensicmag.com/article/2008/01/forensic-art-project-edan-and-doe-network>
- ***Forensic Databases: Paint, Shoe Prints, and Beyond***  
<https://www.nij.gov/journals/258/pages/forensic-databases.aspx>
- ***Helping Local Police Departments Solve Cold Cases***  
<http://www.policechiefmagazine.org/helping-local-police-departments-solve-cold-cases/>
- ***Homicide Investigation Case File Profile: The Los Angeles Police Department Murder Book National Resource and Technical Assistance Center for Improving Law Enforcement Investigations***  
[https://crimegunintelcenters.org/wp-content/uploads/2018/03/Los-Angeles-Police-Department-Murder-Book-Profile\\_Police-Foundation.pdf](https://crimegunintelcenters.org/wp-content/uploads/2018/03/Los-Angeles-Police-Department-Murder-Book-Profile_Police-Foundation.pdf)

- ***Homicide Process Mapping: Best Practices for Increasing Homicide Clearances***  
[https://www.iir.com/Documents/Homicide\\_Process\\_Mapping\\_September\\_email.pdf](https://www.iir.com/Documents/Homicide_Process_Mapping_September_email.pdf)
- ***Implementing a Cold Case Unit: A Challenging Task***  
<https://www.ncjrs.gov/app/publications/abstract.aspx?id=209317>
- ***Killing Time: The Application of John Doe Indictments to Keep Cases Warm***  
<http://www.ncstl.org/news/GuthrieApril07>
- ***Long-Term Missing Child Guide for Law Enforcement by NCMEC***  
<https://ncjtc-static.fvtc.edu/Resources/RS00002451.pdf>
- ***Missing Persons: Volunteers Supporting Law Enforcement***  
[https://www.bja.gov/Publications/VIPS\\_MissingPersons.pdf](https://www.bja.gov/Publications/VIPS_MissingPersons.pdf)
- ***NCIS Handbook***: The Naval Criminal Investigative Service (NCIS) offers a handbook and training seminar that address cold case homicide units and investigations. The handbook discusses establishing a cold case unit, working with the media, investigating and prosecuting cases, and interacting with families. The seminar, *Cold Case Homicide Investigations: Methodology and Protocol*, provides information on videotape interviewing, psychological consultations, use of the media in cold case investigations, and other investigative methods.
- ***New Technology and Old Police Work Solve Cold Case Sex Crimes***  
<https://www.ncjrs.gov/app/publications/abstract.aspx?id=202157>
- ***Resurrecting Cold Case Serial Homicide Investigations***  
<https://www.ncjrs.gov/app/publications/abstract.aspx?id=232364>
- ***Serving Survivors of Homicide Victims During Cold Case Investigations: A Guide for Developing a Law Enforcement Protocol***  
<http://www.sheriffs.org/sites/default/files/guidefordevelopinglawenforcementprotocolaugust172011.pdf>
- ***Using DNA to Solve Cold Cases: Special Report***  
<https://www.ncjrs.gov/pdffiles1/nij/194197.pdf>
- ***Volunteers in Police Service Add Value While Budgets Decrease***  
[https://www.bja.gov/Publications/VIPS\\_add\\_value.pdf](https://www.bja.gov/Publications/VIPS_add_value.pdf)

# Appendices



## APPENDIX A: Standard Operating Procedures

This appendix outlines the recommended format for a cold case unit's operation guidelines. Since each cold case investigation unit operates under its own unique conditions, this document is intended as a starting point for creating an individualized set of standard operating procedures.

### ***1.0 CASE IDENTIFICATION TO CASE CLOSURE***

- 1.1 The investigation of a cold case begins with the examination of work conducted by the original investigating officers and entities.
- 1.2 The review and investigative processes require the efforts of personnel with varied abilities, skills, and experience.
- 1.3 These processes require sufficient time, resources, and organizational and administrative support to accomplish case review and investigative goals and objectives.
- 1.4 Cold cases may include homicides, sexual assaults, long-term missing persons cases, and unidentified human remains investigations.<sup>1</sup>

### ***2.0 CASE IDENTIFICATION & PRIORITIZATION***

Investigators should identify cases that meet predefined criteria for an unresolved or open case within the jurisdiction of the particular investigative agency. Case priorities should be implemented to guide the review of cases.

- 2.1 Case Selection Criteria:
  - 2.1.1 The statute of limitations for each criminal offense potentially applicable to the case has not expired, and the case has not previously reached a final judicial disposition.<sup>2</sup>
  - 2.1.2 Evidence exists that can potentially provide leads through additional forensic analysis or other investigative means.
  - 2.1.3 Victim(s) and/or critical witnesses are available, and other essential evidence exists.
  - 2.1.4 The case has a named suspect or person(s) of interest.

---

<sup>1</sup> Most cold case investigations focus on cases where a violent crime was committed. Other types of cases may be considered on a case-by-case basis. Many agencies do not generally include missing persons and unidentified remains cases in the purview of their cold case investigation units; however, these cases often involve violent crimes and should be included in the unit's caseload.

<sup>2</sup> There may be reasons to investigate a cold case even though prosecution is not possible.

### 3.0 CASE REVIEW

A case review should be conducted for those unsolved cases that meet case selection criteria.

- 3.1 If the case review is being conducted by a task force or multidisciplinary team, investigators should ensure that the local agency (where case the originated) is consulted or included in the review and subsequent investigation.
- 3.2 The case review should be conducted by investigators different than those who originally investigated the case. This separation is necessary to minimize the potential impact of cognitive biases, including investigative “tunnel vision.”<sup>3</sup>
- 3.3 Investigators should develop a case review plan to determine which tasks will need to be completed, by whom, and in what order.<sup>4</sup>
- 3.4 Investigators should obtain all case-related documentation and electronic media, including police reports, crime scene photographs, and third-party records (e.g., medical records, cell phone records, financial records, media reports). These records should then be compiled, collated, and stored in a searchable electronic format.
- 3.5 Investigators should determine 1) the identities of critical witnesses; 2) their current locations and contact information; and 3) the quantity and quality (consistency, credibility, and completeness) of the information they provide.<sup>5</sup>
- 3.6 Investigators should obtain background information (criminal, biographical, and social history) for all critical witnesses, persons of interest, and suspects.
- 3.7 Investigators should identify and obtain all records and evidence that are referenced but not already included in the case file (e.g., hospital/autopsy records, business records, crime scene photographs, videotapes, audiotapes, other photographs, lineups).
- 3.8 Investigators should attempt to locate all case-related physical evidence and determine its present nature and condition. Locations that should be searched for evidence include, but are not limited to:
  - 3.8.1 Investigative agency evidence rooms.
  - 3.8.2 Coroner or medical examiner’s offices.
  - 3.8.3 The crime laboratory that may have originally analyzed case evidence.
  - 3.8.4 Other agencies (e.g., prosecutor’s office casefiles, evidence vaults, courtroom storage).
- 3.9 Once evidence is located, investigators should determine its probative value, in light of the critical case questions that must be answered. Experience shows a multidisciplinary team will help determine the probative value.
- 3.10 Investigators should determine whether the chain of custody of located evidence is intact. If gaps exist, investigators should consider ways in which those gaps may be addressed.
- 3.11 Investigators should ensure that the available physical evidence has been tested/analyzed with the latest available forensic technology, methods, and interpretive knowledge and expertise.

---

<sup>3</sup> Interviews and coordination with the original investigators can be valuable, especially in older investigations where many changes may have occurred in the organization, the area, and society since the date of the offense. In rare cases the original investigators may have taken key case information with them upon retirement.

<sup>4</sup> For information on developing a case review plan, see Adcock & Stein, “Cold Case Models for Evaluating Unresolved Homicides,” 2013.

<sup>5</sup> Critical witnesses include the victims.

## 4.0 CASE DEVELOPMENT

4.1 Conduct interdisciplinary case review meetings with relevant stakeholders (e.g., prosecutor, medical examiner/coroner, crime lab personnel) to leverage expertise and obtain an interdisciplinary perspective on case-related medical, legal, and forensic science issues and questions. Examples of issues and questions that may need to be considered include:

### 4.1.1 Legal—

- 4.1.1.1 Has an applicable statute of limitations expired for one or more potential charges?
- 4.1.1.2 Does a statutory/judicial exception to the apparent expiration of the applicable statute(s) exist? Are alternative charges/remedies possible?
- 4.1.1.3 Given the current availability of victim(s), witnesses, and evidence, can a legally admissible case be made?
- 4.1.1.4 Can a legally sufficient chain of custody for contextually probative evidence be established?
- 4.1.1.5 From a qualitative perspective, are the statements made by the victims and witness consistent, credible, and complete in light of the balance of known case facts, or are they inconsistent, contradictory, dubious, or incomplete?
- 4.1.1.6 In the case of dead, missing, or unavailable expert witnesses (e.g., medical examiners or forensic analysts), can a stand-in expert legally testify in the jurisdiction in question, or will such testimony be prohibited by the confrontation clause of the Sixth Amendment, as interpreted by courts in that jurisdiction?
- 4.1.1.7 New technology may not be accepted in court or permissible under jurisdictional codes. Can the evidence be legally submitted in court? What happens if all of the evidence is consumed or compromised during testing?

### 4.1.2 Medical—

- 4.1.2.1 In cases involving death by apparent homicide, or in cases of discovered human remains, can the cause and manner of death be clearly determined? Are there alternative medical explanations for the cause of death other than the originally autopsy ruling? Are there alternative noncriminal medical explanations for the manner of death other than homicide?
- 4.1.2.2 If the original medical examiner is deceased or otherwise unavailable, will the stand-in expert agree or disagree with the original medical examiner's findings and ruling at autopsy?
- 4.1.2.3 Are sufficient records, photographs, and other materials available for the stand-in expert to form an independent opinion about the manner and cause of death?
- 4.1.2.4 In cases involving missing persons or unidentified human remains, what methods or techniques exist to make a positive identification? What information can be gleaned from the remains and the contextual significance of their surroundings to determine whether the death was the result of homicide or other causes?
- 4.1.2.5 In cases of sexual assault, what medical information and physical evidence is available to corroborate the victim's account of the attack?

### 4.1.3 Forensic—

- 4.1.3.1 Is forensic technology currently available that was not available at the time of the original investigation and that can now be utilized to test or reanalyze existing evidence?
- 4.1.3.2 Is forensic/medical expertise currently available that did not exist or was not fully developed and available at the time of the original investigation?
- 4.1.3.3 Is there evidence or information that was never analyzed, acted upon, or forensically tested?
- 4.1.3.4 If the original forensic analyst is deceased or otherwise unavailable, and the evidence cannot for some reason be retested, will the stand-in forensic expert witness agree with the original expert's findings and conclusions?
- 4.1.3.5 Types of evidence that should be considered for examination/analysis or re-examination/reanalysis include, but are not limited to:
  - 4.1.3.5.1 Items/stains potentially containing contextually probative DNA.
  - 4.1.3.5.2 DNA evidence with indeterminate results, e.g., DNA from more than one person or DNA analysis that did not provide enough information to determine an identity.<sup>6</sup>
  - 4.1.3.5.3 Friction ridge impression evidence and other impression evidence (e.g., shoe prints, tire treads).<sup>7</sup>
  - 4.1.3.5.4 Firearms, casings, and bullets.
  - 4.1.3.5.5 Trace evidence (i.e., hair, fibers, glass, and paint).
  - 4.1.3.5.6 Video or audio recordings (for enhancement purposes).
  - 4.1.3.5.7 Digital/electronic evidence (cell phones, other personal devices, media).

### 4.2 Develop and document a detailed victimology.

- 4.2.1 Gather all available biographical information and history on the victim.
- 4.2.2 In all cases, obtain photographs of the victim taken near in time to the offense under investigation. Photographs such as these are for investigative reference and potential use during interviews or interrogations of the suspect, persons of interest, and witnesses.
- 4.2.3 In long-term missing persons or unidentified remains cases:
  - 4.2.3.1 Check available records (e.g., credit cards, social security records, bank accounts) to verify that the individual is still missing.
  - 4.2.3.2 Ensure that all relevant case information is entered into NamUs.
  - 4.2.3.3 Verify the completeness and accuracy of all data entered into NCIC, Violent Crime Information Network (VCIN), and/or NamUs.

---

<sup>6</sup> DNA evidence from multiple sources may be mixed together. New technologies may be able to discern the different sample contributors. Coordinate with a legal advisor in order to determine what processes may interfere with potential prosecution. Decisions of prosecution versus case closure may be required.

<sup>7</sup> Friction ridge impressions include fingerprints, palm prints, and footprint pattern evidence. Note that prints may be latent, i.e., not visible with the unaided eye. Newer technologies may be applied to locate latent prints or to analyze previously recovered impression evidence.

4.2.3.4 Check missing persons records from the originating jurisdiction (if known) and surrounding jurisdictions.

4.2.3.5 Consider transient population trends such as truck driver routes, migrants, and military relocations.

#### 4.2.4 Persons of interest.

4.2.4.1 Determine whether one or more persons of interest are named in the case file and determine if any previous investigation has been conducted regarding that person or persons.

4.2.4.2 If a person of interest is developed through a CODIS hit or the analysis of other physical evidence, determine what past relationship the victim may have had with that individual. It must be determined whether the DNA hit has probative value or is possibly the result of previous legitimate contact.

4.2.4.3 Other means by which a person or persons of interest may be developed are through witness interviews; informants; media reports; the existence of a modus operandi in common with the case under investigation and other crimes; and case-to-case linkage by forensic or nonforensic means.

4.2.4.4 Obtain photographs of all persons of interest taken close in time to the offense under investigation for: 1) reference purposes; 2) potential use during victim/witness interviews; and 3) use during the interview/interrogation of the person of interest.

4.2.4.5 Obtain a biographical and social history for each person of interest.

4.2.4.6 Interview or reinterview individuals who may have had a prior association with persons of interest.

4.2.4.7 Interview or reinterview the person of interest, as needed.

4.2.4.8 Assess whether, based on the totality of the information developed, the person of interest should be considered a suspect or can be eliminated from involvement in the case under investigation.

## 5.0 SUSPECT INVESTIGATION

5.1 After a suspect has been developed in a reopened cold case investigation, a case reinitiation report should be completed which documents the date, reason, and circumstances under which the case was reopened. This report creates a benchmark and a timeline from which all future cold case investigative efforts can be measured. The report also helps to orient future detectives, prosecutors, and jurors to the investigative timeline and differentiate cold case investigation from the original investigation.

5.2 Victims or their family members (if the victim is deceased) should be contacted soon after a suspect is developed. This allows investigators to determine whether the victim (if alive) is willing and able to cooperate with the ensuing investigation and prosecution. If the victim is deceased, investigators may be able to acquire valuable information from family members about the victim's habits, routines, relationships, and associations at the time of the crime.<sup>8</sup>

---

<sup>8</sup> Victims and the families of victims should learn about the reopening of an investigation from the investigating agency rather than from another source such as the media. Consider involving a victim advocate who is familiar with victim interactions.

- 5.2.1 Immediate contact with the victim and/or family members allows investigators to establish a rapport with them and build trust that will continue to develop during both the investigation and prosecution phases of the case.
  - 5.2.2 Immediate contact with the victim after a suspect is developed also allows investigators to acquire any additional case-related facts, information, or details of current interest that may not have been discovered or documented during the original investigation.
  - 5.2.3 Items which can be obtained from the victim or victim's family, such as personal photographs taken near in time to the offense under investigation and any records or documents that may be of value to renewed investigative efforts can be acquired and used by investigators.
- 5.3 In cold case sexual assaults, a consensually collected buccal swab should be obtained from the victim for DNA testing as a reference sample. The DNA profile developed from this sample can be compared to the profile detected on the evidence (e.g., a 25-year-old vaginal swab). This match can provide strong circumstantial evidence that helps the prosecutor establish a legally sufficient chain of custody for the evidence even when gaps in the chain exist. These gaps may be due to deceased medical, laboratory, or police personnel, or due to missing documentation about storage and safekeeping of the evidence.
  - 5.4 In missing persons cases, DNA samples from close relatives may need to be acquired by investigators to help identify human remains.
  - 5.5 After a CODIS hit has been obtained, in order to determine the contextual significance and probative value of the match, investigators must determine whether the victim had a previous consensual relationship or — depending on the nature of the evidence — consensual contact with the subject of the hit. If the subject of the hit was a previous consensual sexual partner of the victim, or if the victim knew or had past consensual contact with the subject of the hit, the hit may not constitute a probative association with the true offender.
  - 5.6 To help determine the probative value of the evidence, investigators should obtain DNA elimination reference samples from any recent consensual partners (in cases involving sexual assault or sexual homicide) and, in other cases, from any individuals with whom the victim may have had intimate or close contact near the time of the crime, or who may have innocently left behind DNA at the crime scene. These elimination samples will help investigators determine the contextually probative value of foreign DNA profiles detected at the scene or in the evidence.
  - 5.7 In many cold cases, there will be multiple persons of interest or suspects identified in the case file by the original case investigators. In some cases, the victim may have even identified one of these individuals as the perpetrator. In these cases, if a CODIS hit has been obtained that matches a suspect not originally named in the case file (or not identified by the victim), investigators should seek reference samples from the original persons of interest or suspects for comparison with and exclusion from the probative foreign evidence profile that was the subject of the hit. At trial, this allows the DNA analyst to quickly exclude those third-party suspects as potential contributors of the evidence, and eliminate them from consideration by the jury as alternative suspects.
  - 5.8 The same general principles applicable to DNA evidence hold true if the suspect is developed from forensic evidence other than DNA. If the victim is deceased or otherwise unavailable, interviews with any relevant friends or family members of the victim should be conducted to help determine the contextual significance of any evidentiary associations.
  - 5.9 After a suspect has been developed from a cold hit, other evidentiary association, or additional investigative efforts, the prosecuting attorney with jurisdiction over the case should be contacted for purposes of legal consultation and to help determine a case-specific investigative strategy.

- 5.10 Investigators should obtain and review all available biographical, legal, work, school, and social history on the suspect, as well as any other relevant records and documents. These documents may include, but are not limited to: prior prosecution case files, prior addresses, deeds, leases, prison and jail records, probation and parole records, utilities records, bank records, vehicle records, and past police reports.
- 5.11 From these documents and witness interviews, investigators should create a timeline of the suspect's life, movements, routines, associations, and relationships at the time of the offenses under investigation. This timeline can be effectively used both during the suspect's police interview/interrogation and at a subsequent trial as evidence on issues such as motive, intent, and opportunity to commit the charged offenses.
- 5.12 If the suspect's residence, workplace, or school at the time of the offense can be located, the distance between one or more of these locations and the victim's residence, workplace, school, or the scene of the crime should be determined and documented in a police report. This helps to establish the suspect's access to the victim at the relevant time, and an opportunity to have committed the crime.
- 5.13 Investigators should identify and interview all associates and family members of the suspect who may have information relevant to the investigation.
- 5.14 Investigators should obtain all prior police booking photographs of the suspect taken contemporaneously with the offenses under investigation for reference purposes and potential use during interviews and interrogations.
- 5.15 Investigators should discuss with the prosecutor which interview/interrogation strategies and styles may be most beneficial to the case under investigation. The chosen approach will depend upon the unique set of facts in each case.
- 5.16 Arrest versus request: In some cold cases, it may be most beneficial to first seek the suspect's consent to voluntarily accompany case detectives to the station before resort is made to a formal arrest. This is especially true when an interview, rather than an interrogation, is contemplated. Placing the suspect at ease may facilitate and promote maximal sharing of useful information. The suspect can always be arrested, if warranted, after the interview has concluded.
- 5.17 In cases involving a suspect incarcerated at a correctional facility, investigators should coordinate with corrections officials to ensure that the suspect is not informed in advance of the impending visit and interview by investigators; that adequate private facilities are available for the interview that are equipped with, or can accommodate, electronic recording devices; and that if the suspect will be arrested and transported back to the investigating agency's jurisdiction upon completion of the interview, prison officials do not inform the suspect of these facts ahead of time. In sum, strategic investigative secrecy should be maintained to protect the integrity of the investigation.
- 5.18 Photographs of the victim at the time of the offense, photographs of the suspect, and crime scene photographs should all be assembled for strategic use by investigators before the suspect's interview/interrogation.<sup>9</sup>
- 5.19 Investigators should interview/interrogate the suspect and digitally record the event. Video interviews are extremely helpful as courtroom tools for real-time impeachment if the suspect's defense changes from its pretrial iteration to its final trial version.

---

<sup>9</sup> One very useful investigative tactic in cold hit DNA cases is to present the suspect with photos of the victim and the crime scene and obtain the suspect's denials that he/she has ever seen the victim before, has ever had a previous relationship with him/her or had consensual contact with him/her, or has ever been at the crime scene with him/her. The suspect should then be asked to document that denial on the back of the photograph and sign his/her name to that assertion. If the suspect's defense changes at trial from denial or alibi to consensual contact, then the video-recorded interview, the documented assertion of no contact, and the suspect's attestation with his/her signature can all be effectively used to impeach his/her credibility, in real time, before the jury.

- 5.20 Investigators should immediately locate and interview any individuals named by the suspect as potential witnesses to corroborate the suspect's version of events.
- 5.21 Immediately interviewing individuals named by the suspect (before the suspect has a chance to speak to them) maintains the independence of their statement from any influence of the suspect or the media and helps protect the integrity of the investigation.
- 5.22 The service of any search warrants, consent forms, or subpoenas on the suspect for purposes of collecting biological reference samples should not be executed until after the interview/interrogation is completed. To do so before may unwittingly tip the investigator's hand, causing the suspect to prematurely question why a sample is needed and to withhold or alter information in a way that would adversely affect the integrity of the investigation. It may also cause the suspect to request an attorney or refrain from answering questions.
- 5.23 The suspect's friends, family, and associates should be approached and interviewed contemporaneously with the suspect's interview/interrogation so that they do not have the opportunity to confer with the suspect before being asked to provide investigators with case-related information.
  - 5.23.1 Since alibi defenses are common in cold cases, it is critical that investigators not provide the suspect's friends and family with the exact date, time, and location of the offense(s). Disclosing this case-sensitive information may allow these individuals to provide the suspect with a false alibi.
  - 5.23.2 Witnesses should be asked if they can account for the suspect's whereabouts on any particular dates and times during period at issue, such as the month and year during which the offense(s) occurred.
- 5.24 After the suspect has been arrested and criminal charges are imminent, investigators and/or the prosecutor, in conjunction with a victim advocate, should contact the victim or the victim's family members to notify them of impending charges. Trust between victims, family members, prosecutors, and investigators is enhanced when information about the victim's case is shared through personal or telephonic contact, rather than being learned through media reports.
- 5.25 As a general rule, case-related information should not be released by investigators to the media, either before or after charges are filed, until all potential witnesses are located and interviewed. If necessary, the prosecutor can file a temporary motion to seal the filing of charges from public access until all witnesses are located and interviewed.
- 5.26 Case-specific information broadcast by the media and learned by witnesses before they have been interviewed by investigators has the potential to bias or shape the witnesses' independent recollection of dates, times, locations, and events. It also permits unscrupulous or untruthful witnesses to provide a suspect with a false alibi based on information not acquired from first-hand experience but rather learned from media sources.
- 5.27 Investigators and prosecutors should determine if any additional supplemental evidence (other than the cold hit or other evidence that restarted the investigation) is available for testing. If additional, potentially probative evidence is available, prosecutors and investigators should request that it be analyzed to provide additional corroborative evidence for the prosecution of the case. These decisions should be made during interdisciplinary meetings with investigative partners.
- 5.28 Investigators must ensure that lessons learned during the course of each cold case investigation are disseminated to all investigators and interdisciplinary partners involved in cold case review and investigation. This information can be conveniently shared in after-action case review

meetings. The lessons learned from cold case reviews, investigations, and prosecutions should form the basis for interdisciplinary cold case protocol modifications and trainings so that mistakes are not repeated and investigative techniques that worked well can be continued, enhanced, and fully disseminated to all partner agencies.

## **6.0 CASE CLOSURE**

Cold case investigations may be closed for a number of reasons. These include:

- 6.1 Clearance by arrest, charge, or issuance of a warrant.
- 6.2 Exceptional clearance. Reasons for exceptional clearance include the suspect's death; the victim's refusal to cooperate; the victim's death; cases in which charges against a juvenile offender are not pursued in the interests of justice; and circumstances (such as a statute of limitations) beyond the control of law enforcement that prevent an arrest.
- 6.3 The report of a crime is unfounded. Examples include cases determined to be suicide, accident, noncriminal homicide, or the false report of a crime.
- 6.4 Cases that are inactivated but not cleared. In these cases, the investigation is essentially dormant, but the case has not been formally closed because a suspect has not been developed.

## **7.0 COLD CASE INVESTIGATION FOR NONPROSECUTION PURPOSES**

There are reasons that cold case investigators may wish to pursue a case for purposes other than prosecution. These reasons include activities designed to:

- 7.1 Identify violent offenders for public safety purposes (even in those cases where an applicable statute of limitations may have expired).
- 7.2 Provide information to a correctional institution at which a cold case suspect is incarcerated (e.g., in DNA hit cases) to guide institutional classification and security designations, or to change parole release dates based on investigative information that connects the inmate with other crimes.
- 7.3 Provide probation and parole officers with additional intelligence about a subject under their supervision. For example, informing a probation officer who currently supervises a probationer convicted of a minor offense that the probationer has been identified through DNA evidence as the suspect in the sexual assault of a young child may impact the officer's future supervision of the suspect (e.g., prohibiting him from continued employment as a school bus driver).
- 7.4 Identify candidates for sexually violent offender status in a state or initiate federal civil proceedings when criminal prosecution is no longer possible.
- 7.5 Use the cold case under investigation as a link to a different case that will be prosecuted.
- 7.6 Provide the cold case victim or victim survivors with information about the identity and current status of the perpetrator (e.g., deceased, incarcerated for life) to help alleviate lingering concerns about personal safety, promote closure, and provide case-related answers to questions the victim may still have.
- 7.7 Refer the case to a different governmental agency (e.g., referral to the federal government for consideration of potential charges not available at the state level, referral to state-level agency responsible for sexual violent predator civil commitment prosecutions).

## APPENDIX B: Investigation Checklist Template

### UNIVERSITY OF TEXAS SYSTEM POLICE COLD CASE QUESTIONNAIRE

Was this case classified as a homicide or sexual assault per penal code definition at the time of incident?		
If not, how was this case classified?		
If a homicide, was the victim's body located?		
If a sexual assault, was a rape kit collected?		
Were there witnesses to the homicide/sexual assault?		
Are the witnesses still available?		
Is the victim of the sexual assault available and willing to testify?		
Is there evidence related to the homicide/sexual assault still available?		
Was a crime laboratory analysis performed?		
If "Yes," were any DNA results obtained?		
Was this case presented to the County Attorney's Office for issuing?		
If "Yes," what was their opinion?		
Was all the evidence related to this case reviewed?		
By which investigator?		
By which crime lab DNA analyst?		
Is the evidence viable for current scientific examination standards?		
By which DNA analyst?		
Is the evidence viable for current prosecution standards?		
By which investigator or prosecutor?		
After round table review, is this a workable "cold" case?		
Assigned Investigator		Date
DNA Analyst Date		Prosecutor (if applicable) Date

Note: This sample Cold Case Questionnaire can be found on the University of Texas System Police website at <https://www.utsystem.edu/offices/police/forms>.

## APPENDIX C: Sample Contents of an Investigative Case File

No two cases are the same; no two case files will have the same content. Below is a list of items that should be considered to be included in the investigative case file. Note that some agencies have traditionally referred to the investigative case file as the “murder book.” This list is modified from the 2018 *Los Angeles Police Department Murder Book*.<sup>1</sup>

- Chronological Record
- Crime Scene Log
- Police Reports
- Death Report
- Property and Evidence Reports
- Crime Lab Reports
- DNA
- Latent Prints
- Chain of Custody Records
- Vehicle Reports
- Arrest Reports
- Related Crime Reports
- Supplemental/Follow-Up Reports
- Victim Information
  - Statements
  - Photographs
  - Background Information
  - Probation/Parole Status
  - Rap Sheet
- Suspect Information
  - Statements
  - Arrest Warrant
- Photographs
- Probation/Parole Status
- Rap Sheet
- Photo Line-Ups
- Witness List
  - Statements
- Officer at Scene Reports/Notes
- Crime Scene Notes/Diagrams
- Crime Scene Photographs
- Ambulance/Medical Records
- Medical Examiner’s Report
- Communications
  - Teletypes
  - Press Releases
  - Police Bulletins
  - Newspaper Clippings
- Search Warrants
  - Cell Phone Records
- Miscellaneous Notes
- Miscellaneous Computer Runs
- Video/CCTV
- Eliminated Suspects

<sup>1</sup> Los Angeles (California) Police Department, *The Los Angeles Police Department Murder Book*.

## APPENDIX D: Memorandums of Understanding (MOUs)

Samples of MOU templates with guidance can be found online:

- Office on Violence Against Women  
<https://www.justice.gov/sites/default/files/ovw/legacy/2008/10/21/sample-mou.pdf>
- Oregon Department of Justice  
[http://www.doj.state.or.us/wp-content/uploads/2017/08/mou\\_sample\\_guidelines.pdf](http://www.doj.state.or.us/wp-content/uploads/2017/08/mou_sample_guidelines.pdf)

Examples of completed MOUs can be found on the U.S. Department of Justice's Justice Information Sharing website: <https://it.ojp.gov/implementation/ppm/collaboration>.

The following MOU was adapted from an online sample MOU published by the Oregon Department of Justice.<sup>1</sup>

### MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is entered into by and between:

---

---

---

#### A. Purpose

---

---

---

#### B. Roles and Responsibilities

---

---

---

\_\_\_\_\_ agrees to:

---

---

---

\_\_\_\_\_ agrees to:

---

---

---

#### C. Reporting Requirements

---

---

---

<sup>1</sup> Oregon Department of Justice, *Guidelines for a Memorandum of Understanding*.

**D. Time Frame**

This MOU will commence on \_\_\_\_\_  
and will dissolve upon \_\_\_\_\_.

**E. Confidentiality**

In order to ensure the safety of clients, all parties to the MOU agree to adhere to the confidentiality expectations as outlined in the agreement.

The designated lead agency accepts full responsibility for the performance of the collaborative organizations/agencies.

This MOU is the complete agreement between \_\_\_\_\_ and \_\_\_\_\_ and may be amended only by written agreement signed by each of the parties involved.

Authorized Official:

\_\_\_\_\_  
Signature Printed Name and Title

Address:

\_\_\_\_\_  
Telephone(s): \_\_\_\_\_

Email Address: \_\_\_\_\_

Authorized Official:

\_\_\_\_\_  
Signature Printed Name and Title

Address:

\_\_\_\_\_  
Telephone(s): \_\_\_\_\_

Email Address: \_\_\_\_\_



## APPENDIX E: Nondisclosure Agreement (NDA)

Below is an example of a nondisclosure agreement (NDA) that was adapted from the Portland (Oregon) Police Bureau's NDA.<sup>1</sup>

### NONDISCLOSURE AGREEMENT

I understand that:

1. As a result of my association with the AGENCY and my association with AGENCY personnel, files, and documents, I may be the recipient of information which, in itself or by implication, is confidential or sensitive. These confidentiality provisions include information contained in all law enforcement data systems, manual or automated, and accessed by the AGENCY.
2. I will be responsible for not disclosing such information by any means except in accordance with the AGENCY regulations. I am responsible for the safekeeping of such information, documents, and material in the facilities and in the manner approved by the AGENCY and for the handling of such information, material, and documents so as to prevent their disclosure to unauthorized persons.
3. I have a personal and individual responsibility for the protection of all such information, documents, and material in my possession, no matter how acquired.
4. I am not to disclose to anyone, after separating my association with the AGENCY, any confidential or sensitive information, documents, or material of any kind obtained by me as a result of my association with the AGENCY without the authorization of the AGENCY HEAD.
5. I have not been convicted of a felony, nor have I or will I be involved in serious criminal activity during my association with the AGENCY. I will not associate with persons involved in criminal activity during my period of association with the AGENCY.
6. If a breach of any provision of this agreement occurs, it may result in loss of my association with the AGENCY, access to AGENCY facilities, documents, and records.

I am aware that the signing of the Nondisclosure Agreement is a condition of my association with the AGENCY as required by the AGENCY REGULATIONS/GENERAL ORDERS.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Personnel Commander

\_\_\_\_\_  
Date

<sup>1</sup> Portland (Oregon) Police Department, *Non-Disclosure Agreement*.

## APPENDIX F: Sample Application for Case Review

This sample is adapted from the Colorado Bureau of Investigation's Cold Case Review Team Application for Case Review.<sup>1</sup>

### *Application for Case Review*

Agency Name:	
Agency Contact:	
Agency Phone:	
Agency Case Number:	
Type of Crime:	
Date of Crime:	
Victim's Name:	

### *Agency Reports:*

Are all police reports available?	Y	N
Investigating Agency	Y	N
Other Agency Reports	Y	N
Interviews	Y	N
Are all case investigator/detective notes accounted for?	Y	N
Does a complete index of all names associated with the case exist?	Y	N
Are all current and available leads exhausted?	Y	N
Are all laboratory reports available?	Y	N
Is a crime scene reconstruction available?	Y	N
Are crime scene photographs available?	Y	N
Are additional photographs available from the crime lab?	Y	N
Is a crime scene video available?	Y	N
Is a crime scene sketch/diagram available?	Y	N
Is a crime scene description available?	Y	N

<sup>1</sup> Colorado Bureau of Investigation, *Colorado Bureau of Investigation Cold Case Review Team Application for Case Review*.

**Victimology (If multiple victims, please complete for each victim):**

Name	
Photograph from the time of the offense	
Aliases	
Nicknames	
Address	
Social Security Number	
Date of birth	
State Identification Number (SID)	
FBI number	
Gender	
Race	
Age	
Physical age	
Height	
Weight	
Hair color	
Hair length	
Eye color	
Facial hair	
Dental characteristics	
Description of clothing, jewelry, glasses	
Scars, marks, and tattoos	
Location	
Outstanding features	
Occupation	
Employer	
Lifestyle	
Did the lifestyle contribute to the crime?	
Member of associated group, organization, or gang	
Marital status	
Living arrangements	
Was the victim's property taken?	
Was stolen property entered into NCIC?	
Involvement in other crimes	
If so, are reports available?	
Is this case suspected to be part of a series of homicides or sexual assaults?	

**ViCAP:**

Was a ViCAP entry made?	
Was a ViCAP report obtained?	
Is the report available?	
Is any investigation currently in progress?	
Is any investigation currently in progress by any other agency?	
Is this case suspected to be part of a series of homicides?	
Copies of all property receipts	

**Suspect/Person of Interest:**

Is there a suspect/person of interest?	
Photograph from the time of the homicide	
Suspect background	
Current location of suspect known	
DNA known sample obtained	
DNA known sample analyzed	
Lifestyle	
CCIC Work-up QH/DL/PHOTO	
Suspect interview conducted	
Audio recording	
Video recording	

**Complete Timelines for:**

Crime scene	
Victim	
Suspect, if known	
Completed case	

**Medical Examiner/Coroner Information:**

Are all autopsy photographs available? (agency, pathologist, coroner's office)	
Is the autopsy report available?	
Are all coroner's office reports and toxicology reports available?	
Are any reports by anyone else who examined the case available?	
If reports are not available, please explain:	

**Sexual Component to the Crime:**

Indication of sexual activity or attempted sexual activity with the victim	
Type of sexual activity or attempt	
Sequence of sexual activity	
Foreign object insertion	
Where?	
Type of object?	
Was the victim sexually assaulted?	
Semen located?	
Where?	
Did the offender possess any sex-related paraphernalia/devices?	
What type?	
Did the offender possess sex-related collections?	
What type?	
The offender's sexual practices and preferences	
Did the offender experience sexual dysfunction?	
What type?	
Level of force used by the offender	
Offender verbal activity	
What was said?	
Did it appear the offender was operating from a ritual/mental script or fantasy?	
Did the offender display any obvious fetishes?	
Did the offender use any special props?	
Who disrobed whom?	
How did the offender/victim contact end?	
Was the victim sexually mutilated?	

**Laboratory Information:**

Is there physical evidence?			
Has the physical evidence been inventoried recently, and is it still available?			
Has the evidence been examined by the current detective?			
Has all physical evidence been located?			
<b>Prints</b>			
Were fingerprints recovered?	Victim:	Suspect:	Other(s):
Where were the fingerprints recovered?			
Have fingerprints been retained in the fingerprint databases they were submitted to?		Date	
If not, are fingerprints periodically resubmitted/rerun?		Date	
Into which databases have the fingerprint records been entered?		Date	
Which local, state, regional, and/or federal databases were used to search fingerprint records?		Date	
<b>Biological Evidence</b>			
DNA			
Known			
Unknown			
Blood			
Spermatozoa			
Saliva			
CODIS		Date	
Other			
What type of DNA testing was performed?			

Has a DNA identification been made?			
Has DNA analysis been completed?			
Are results of the DNA analysis available?			
DNA profile obtained			
<b>Trace Evidence</b>			
Trace evidence			
Fiber, glass, paint, other _____			
Analyzed		Date	
Results			
<b>Bite Marks</b>			
Bite marks			
Examined by a forensic odontologist		Date	
Results			
<b>Other Pattern Injuries</b>			
Other pattern injuries			
Examined by a forensic odontologist		Date	
Results			
<b>Tire Impressions</b>			
Are there tire impressions?			
Evaluated		Date	
Results			
<b>Tool Marks</b>			
Is there toolmark evidence?			
Evaluated		Date	
Results			
<b>Footwear/Print Impressions</b>			
Are there footwear/print impressions?			
Evaluated		Date	
Results			

<b>Handwriting Analysis</b>			
Was handwriting analysis conducted?			
Evaluated		Date	
Results			

**Investigation Information:**

Are there witnesses?	
Are the witnesses showing deception?	
Are the witnesses living?	
Are key witnesses' locations known?	

<b>Polygraph</b>			
------------------	--	--	--

Polygraph administered			
Results		Date	

**Weapon Information:**

What kind of weapon was used?	
Was the weapon recovered?	

<b>Firearms</b>			
-----------------	--	--	--

Firearm			
Type			
Evaluated		Date	
Results			
Were projectiles/casings recovered?			
Were the projectiles/casings entered into NIBIN?		Date	
Results			
NIBIN hits received			

<b>Blunt Force Trauma</b>	
---------------------------	--

Blunt force object	
What type of object?	

Recovered			
Analyzed		Date	
<b>Edged Weapon (e.g., knife)</b>			
Edged weapon			
Recovered			
Analyzed		Date	
<b>Other Evidence</b>			
Other evidence			
Type			
Recovered			
Analyzed		Date	
Other evidence			
Type			
Recovered			
Analyzed		Date	
Other evidence			
Type			
Recovered			
Analyzed		Date	

***Complete Case Timeline (Include case personnel, and indicate when duties changed):***

Are the detectives previously involved in this case available?	
Name(s)	
By phone?	
In person?	
Has the case ever been reviewed before?	
By whom?	
When?	
Findings	

**Questions:**

How much time is needed to present your case to the Review Team?	
--	--

**Media Releases:**

CrimeStoppers	
Copy of what was done	
Newspaper	
Copy of what was done	
Television	
Copy of what was done	
Radio	
Copy of what was done	
Internet	
Copy of what was done	

**Potential Legal Concerns:**

Chain of custody	
Miranda rights	
Search and seizure	

Attach a brief synopsis of the case in 1,000 words or less (or 6,000 characters or less):





U.S. Department of Justice  
Office of Justice Programs  
National Institute of Justice  
8660 Cherry Lane  
Laurel, MD 20707-4651



PRESORTED STANDARD  
POSTAGE & FEES PAID  
DOJ/NIJ/GPO  
PERMIT NO. G - 26

---

Official Business  
Penalty for Private Use \$300

