



### D3 Identification of Solvability Factors in Cold Case Homicide Investigation

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Attendees will gain a further understanding of the concept of “cold case” homicides; the background of the problem and identification of the means and methods for re-activation of these cases, and how changes in relationships and technology have allowed an increasing number of these cases to now be solved.

This presentation will demonstrate the solution of cold case homicide results only from the tri-fold team effort of investigators, prosecutors, and forensic laboratory personnel. The role and relationship of each is critical to these solutions. Changes in technology, including means and methods to process heretofore untested evidence, previously examined evidence, and the expansion of data banks such as CODIS and AFIS systems offer enormous possibilities to solve unsolved cases. Awareness and understanding of the inter-relationship required for successful cold case investigation and prosecution is necessary to successfully resolve these cases.

The objective of this presentation is to inform the forensic science audience of the results of a study designed to identify those solvability factors acknowledged by experienced homicide investigators as significantly contributing to the solution of previously investigated, yet unsolved, “cold case” homicides.

The number of unsolved murders in the United States is unknown. In the past decade, decreasing crime rates and increased forensic technology have combined to allow some law enforcement agencies the opportunity to re-investigate older, previously investigated but unsolved homicides. These cases have been dubbed by the media and public as “cold case” homicides. Groups of investigators dedicated to this facet of homicide investigation have been revealed in the literature as “cold case squads.”

This qualitative study sought to identify and examine critical solvability factors in “cold case” homicides which have been successfully solved. An interview methodology combined with supplementary document review of 20 solved “cold case” homicides and analysis of 100 additional cold case homicides previously selected by the agency for reinvestigation formulated the basis for the findings of this study. Six experienced cold case homicide investigators in the Unsolved Unit of a large urban sheriff’s department participated in this study. This data was further synthesized with data resulting from examination of the systematic review utilized by the agency to assess in excess of 2,000 unsolved homicides for future re-investigation.

After attending this presentation, attendees will understand the concept of “cold case” and the background of this problem in society. Attendees will learn the various methods by which law enforcement agencies have identified their particular “cold case” problem, and the means and methods by which a cold case file may be located, reviewed, and an investigative plan formulated. Cold case homicide investigation is founded in the previous written record. On some occasions, this record does not, or never did, exist. Restoration of the case file and identification of methods that may be used in cold case investigation will inform the attendees of those factors which have been found by experienced investigators to contribute significantly to the solution of cold case homicides. In addition, attendees will be presented with means and methods to identify and recover relevant physical and biological evidence, despite the passing of decades.

The results of this study identified significant factors that contribute to the solution of cold case homicides. These factors may be construed as 1) changes in relationships and 2) advances in technology. The author will present an in-depth analysis of these factors. Changes in relationships will be explored to illustrate the psychological, human component of the reinvestigation of cold case homicides. Advances in technology and the expansion of data banks as exemplified by CODIS and AFIS databases will be discussed in depth to illustrate the expanding role of forensic science in the identification of suspects in cold case homicides. Further understanding of the role of technology and human relationships in cold case homicide investigation resulted from this study.

A paucity of research exists in the field of homicide study, and even more so in the arena of cold case homicide investigation. This research study may be the first of its kind to address this issue in the construct of an academically based study offering pragmatic results that identify applicable tools and techniques which enable law enforcement investigators and their forensic partners in the laboratory to identify, investigate, and solve unsolved, “cold case” homicides.

#### **Cold Case, Homicide, Investigation**