



Possible Study Models to Assess the Utility of Autopsy in Contentious Medicolegal Categories of Death

A Report and Recommendations Prepared by the Research Committee of the
Scientific Working Group on Medicolegal Death Investigation (SWGMDI)

Controversy abounds within forensic pathology and death investigation. Long a discipline in which forensic pathologists expressed opinions as facts, forensic pathology is undergoing a gradual transition toward evidence-based practice. Despite this trending towards an evidentiary approach to diagnoses, limited evidence exists in some subject areas to guide fundamental facets of practice. Emblematic of this deficiency is the near-total lack of uniformity in the assessment of necessity for autopsy. Further complicating this matter is profession-wide ambiguity about the definition of a complete autopsy. Although the National Association of Medical Examiners (NAME) has developed autopsy standards, a general lack of agreement among practitioners still exists regarding what extent of examination should be performed in certain types of cases. We take as axiomatic that autopsy is the practice of medicine and is performed and interpreted in the context of a medicolegal death investigation.

Despite our current limitations in this area, research into the utility of autopsy in certain types of deaths falling under typical medical examiner and coroner jurisdiction is readily possible. A deliberate, staged approach to data gathering, mindful of international progress in this area, is a fundamental component. While the results of this research are likely to influence the practice style of death investigators and forensic pathologists across the country, we must accept that the innumerable variables associated with any one death (i.e., the concept that every death investigation is unique), combined with highly specific local and regional sociocultural and political influences, will prevent institution of strict standardization.

Stage 1: Define the “Complete Autopsy”

For the purposes of studying the utility of autopsy in certain types of cases, SWGMDI and its partners must accept a definition of the “complete autopsy”. At the very least, it should be established what constitutes the minimum extent of examination that defines a “complete autopsy”. This must be formed from standards published worldwide, from scientific writings in the area, and from individuals and groups working with SWGMDI.

Stage 2: Define Scope of Practice

Using retrospectively analyzed population-based data from variably sized medical examiner and coroner jurisdictions, the scope of practice of medicolegal death investigation must be defined. This statistical analysis of case categories allows the identification of the most common modes of death (i.e., causes, manners, and circumstances/types of deaths) within the United States and whether or not autopsies were performed. This step is critical and provides focus to what could otherwise be an infinitely broad spectrum of diseases and injuries.

Stage 3: Qualitative Assessment of Practice Derived Data

Using meetings, surveys and other means, commentary is to be sought on the value of autopsy in each of the categories identified in stage two. Individuals and agencies should be encouraged to cite specific case examples in which the absence of autopsy resulted in negative outcomes and in which the performance of an autopsy resulted in positive outcomes. Conversely, it would also be of interest to consider case examples in which the performance of an autopsy resulted in perceived negative outcomes and in which the absence of an autopsy resulted in perceived positive outcomes. The subsequent qualitative assessment of practice derived data is to be distilled into thematic lists of objectives for death investigation, in each of the defined categories of death.

Stage 4: Assessing the Utility of Autopsy

Using prospective population-based data from large and small medical examiner and coroner jurisdictions, the utility of autopsy in addressing the category-based objectives of death investigation (as created in stage three) is to be assessed. Outcome measures of utility could include not only accurate diagnoses of causes and manners of death, but also other areas of utility such as the ability to answer questions in the public interest and other public health issues. This is to be carried out through collaboration with systems of death investigation that routinely perform autopsies in each of the named categories of death. Offices participating in this stage of research will need to report in a scripted, synoptic-type fashion. The reviewing body, blinded to the institution and individual pathologist, will assess the features of each case, and report on the utility of autopsy in a given category, based on the large volume of amassed data.

The SWGMDI's Research Committee members who participated in preparation of this document include:

Laura Crandall, MA
Stacy Drake (Advisor)
Marie Herrmann, MD
Hannah Kinney MD (Advisor)

Evan Matshes, MD (Advisor)
R. Gibson Parrish, MD
Keith Pinckard, MD, PhD (Presiding Officer)
Mary Ann Sens, MD, PhD

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At that time, the SWGMDI Board Members were:**

Barbara Butcher, MPH
Steve Clark, PhD
Laura Crandall, MA
Tim Davidson, MBA-HA
John Fudenberg
Roberta Geiselhart, BSN
Randy Hanzlick, MD
Marie Herrmann, MD
Julie Howe
Bruce Hyma, MD
Donald Jason, MD, JD
David (Zeb) Johnson
Danielle McLeod-Henning, MFS
R. Gibson Parrish, MD
Keith Pinckard, MD, PhD
Lakshmanan Sathyavagiswaran, MD
Mary Ann Sens, MD, PhD
Lindsey Thomas, MD
Frederick Upchurch
Margaret Warner, PhD
Amy Wyman

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