H195 Jay Dix Day Lecture Series 2019

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Learning Overview: A proper medicolegal death investigation is a multidisciplinary process that often involves non-medical personnel as well as medical professionals. This annual series of lectures is intended to provide the non-forensic pathologist forensic scientist a comprehensive basic review of selected topics in forensic pathology to increase familiarity and understanding and enhance inter-discipline communication.

This year's lecturers will discuss the medicolegal investigation of deaths related to environmental conditions; deaths due to asphyxia; the investigation of suicide; deaths due to firearm injuries; and deaths related to sports. After attending this presentation, attendees will understand how and why deaths related to the previously specified topics occur and will learn a systematic approach to the evaluation of such deaths that can easily be implemented in their daily practices.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing a comprehensive review of what causes and contributes to deaths related to the previously specified topics. Attendees will be able to systematically evaluate deaths that they encounter in their daily practices in which the previously specified topics may have played a role.

There are multiple factors that can play a role in deaths that are related to the environment. This lecture will review human and environmental factors that potentially affect a person's ability to survive under a variety of environmental conditions. What constitutes "hostile" environmental conditions, how humans attempt to adapt to changes in the environment, and what prevents successful adaptation to changing environmental conditions will be discussed. There will be discussion on how humans get into hostile environments, how they attempt to adapt to these conditions, and what factors prevent adaptation and/or escape from inhospitable environments. Deaths caused or contributed to by cold, heat, altitude, drowning, animals, and lightning will be among the topics discussed.

Human life requires the uptake and utilization of oxygen along with the release of metabolic waste. Failure of these processes leads to asphyxia. Proper evaluation of asphyxial deaths requires knowledge of the entities that cause asphyxia, pathophysiologic mechanisms, asphyxia death scenarios, and factors that contribute to death. This lecture provides comprehensive discussion of the investigation of deaths that may involve asphyxia.

Suicide can be accomplished in many ways, some overt and others covert. The accurate recognition of suicide has important implications for the decedent's survivors, estate, and others. Unlike most other manners of death determinations, an assertive determination of the decedent's intent is fundamental in certifying a death as suicide. The proper investigation of a suicidal death may offer insight into the motivation for the death and provide information in the development and implementation of preventive strategies. This lecture will comprehensively discuss the investigation and interpretation of findings in suicidal deaths.

Firearm fatalities are a major cause of non-accidental morbidity and mortality in the United States. Multiple factors and mechanisms are involved in producing firearm injuries. Understanding and evaluating firearm injuries requires a basic understanding of how these injuries are produced and how to distinguish them from other types of trauma. This lecture will provide a comprehensive review of these issues.

There are multiple factors that can play a role in deaths that are temporally related to participating in and, occasionally, being a spectator at sporting or other recreational activities. This lecture will review several issues that arise in the context of investigating deaths that occur in relation to sports/recreational events. Understanding factors that are involved in these deaths also helps in instituting safety measures to protect participants and spectators.

The death of an apparently healthy infant is a devastating event for the infant's survivors and is accorded significant attention by society. Infant death may be caused by a wide variety of diseases and injuries. Accurate recognition of the cause, mechanism, and manner of death has important implications for the survivors, other interested investigative and health agencies, and society in general. Recognition of factors involved in sudden unexpected infant deaths can help in enhancing the safety of other family members and serve as a basis for formulating death-prevention strategies. This lecture will discuss the investigation and interpretation of findings in sudden unexpected deaths involving infants.

Medicolegal, Death Investigation, Forensic Pathology