



D13 Sudden Cardiac Death In Young Adults

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Attendees will learn about the incidence of Sudden Cardiac Death in young adults, the contribution of social factors and behaviors to health status, modification of these factors and behaviors, how to raise community awareness of sudden cardiac death, and inform them of available basic non-invasive cardiac diagnostic screening tests.

This presentation will impact the forensic community and/or humanity by identifying Sudden Cardiac Death as a major public health

problem; along with other community agencies identify populations at risk.

Introduction: Sudden Cardiac Death (SCD) is annually the leading cause of natural death in the United States. It is unexpected and often the result of untreated rapid ventricular tachycardia or ventricular fibrillation. Sudden cardiac death syndrome may be due to a wide variety of different conditions, including but not limited to acute myocardial infarction, coronary artery disease, cardiomyopathies, myocarditis, valvular heart disease, conduction abnormalities and drug toxicity (prescription and recreational). Therefore, the Harris County Medical Examiner's Office has identified SCD as a public health problem of great significance. Identifying populations at risk for sudden cardiac death and implementing interventions that will decrease morbidity and mortality.

Purpose: The study was completed to identify those populations at risk for sudden cardiac death and to implement interventions with other agencies within the community.

Methods: A retrospective record review was conducted at the Medical Examiner's Office, identifying deaths reported from 2002 to 2004. Specifically natural deaths were reviewed in which cardiac death was listed as the primary cause of death after autopsy (external exams included). All ages were queried with special attention to those individuals under the age of 50. Social factors, such as obesity, tobacco use, and chronic ethanolism and their significance in this population were also reviewed.

Results: Persons who died of sudden cardiac death in 2002 comprised of 1,453 or approximately 52% of those individuals autopsied at the Medical Examiner's Office. Of those cases, 20% were under the age of 50, 72% were male and 51% were Caucasian. A notable 43% of the individuals were smokers. Obesity was listed on the death certificate as a contributing factor in 5% of the cases and chronic ethanolism contributed in 3%. Atherosclerotic Cardiovascular Disease and Hypertensive Cardiovascular Disease were diagnosed in 54% of those individuals under the age of 20 years. From 2002 to 2004, cardiovascular disease was shown to be the cause of death in 16 children between the ages of 12 and 18 with the majority collapsing while participating in athletic events.

Implications: The important contribution of social factors and behaviors to health status has been documented in the medical and public health literature. Modifications of these behaviors may greatly reduce the risk of SCD. The Medical Examiner's Office and other public health agencies have a vital role in raising community awareness of SCD. A key goal of public health education concerning SCD should be to inform the community of the benefits offered by basic non-invasive cardiac diagnostic screening tests, such as requiring electrocardiograms for young athletes in order to detect potentially fatal arrhythmias prior to participating in sports programs.

Sudden Cardiac Death, Social Factors and Behaviors, Young Adults