

International SIDS Data is Misleading and Should Not Be Used

The fields of medicine, scientific research, and forensic investigations are all dependent on informational data to make advancements. The accuracy of that information has a significant impact on the degree of progression of the scientific. However, false data will result in a waste of resources, time, and misdirection away from the true cause of a phenomenon. A case in point the incidents of Sudden Infant Death Syndrome (SIDS). One of the greatest mysteries within the field of forensic medicine is the sudden and expected death of a healthy infant typically under 1 year of age. These deaths first described in the bible, are today refereed to as, Sudden Infant Death Syndrome.

In the late 1960's and early 1970's Forensic Epidemiologist, a subspecialty of forensic medicine, begin collecting the widely scattered epidemiological and pathological information of infants that died suddenly and unexpectedly. They reviewed the collected information from medical examiner and coroner's offices from around the county and discovering that these infants had unique characteristics. In 1969, the first working definition of SIDS was established and overtime, a clear definition of SIDS emerged and adapted by the CDC and WHO. This definition defined the three parameters required to classify an infant's death as SIDS.

A SIDS death requires the following:

1. A death scene investigation.
2. A complete forensic examination that includes a complete autopsy, toxicological analysis and genetic screening.
3. Review of the medical records of the mother and infant. This criteria was developed to ensure researchers that all infants that were classified as SIDS underwent the same level of investigation. In first world countries such as the United States, Canada, England, Germany, Austrian, New Zealand, and Japan the infants received a sophisticated level of investigation and a postmortem examination conducting by a forensic pathologist that are highly trained and understand the SIDS criteria. Therefore, the results are reliable and statically accurate. In the developed countries, the vast majority of infants labeled as SIDS have undergone a death scene investigation, a completed postmortem examination including toxicology and genetic screening, and a review of the PMH of the mother and infant. The system is not perfect, for example within the U.S., there are approximately 400 practicing forensic pathologist and they are not evenly distributed, most are clustered around major cities. Therefore, a very small number of infants labeled as SIDS did not undergo a complete postmortem examination or examination by a trained forensic pathologist.



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The overall level of forensic investigations in other countries especially among third world countries is a serious problem practically when it comes to SIDS investigations. There is a significant shortage of trained forensic investigates, forensic pathologist, and a lack of a comprehensive death investigative system. These factors result in a great number of infant death certificates being signed out as SIDS with limited or no investigation into their death. Currently, the poorest countries in the world also report the highest SIDS rate. A majority of infants labeled as SIDS do not meet the criteria set forth by the CDC and WHO. This practice has several major ramifications both for the fields of public health and research.

In the field of Public Health, the reported numbers of cases for a particular disease or illness sets the priority of research, the allocation of funding, and the amount of international aid. The practice of blindly calling uninvestigated and un-autopsied infants a SIDS death has two major impacts. First, it conceals the true cause of deaths within that pediatric population. A definite cause of death cannot be accurately determined without a detailed postmortem examination. This over-estimation of SIDS death results in a corresponding under-estimation of deaths from other causes, many treatable. Second, modifiable risk factors that have been associated with infant mortality go undetected. Factors associated with high mortality such as teenage pregnancy and smoking can be targeted by preventative programs. By attributing the cause of death as SIDS reduces the likelihood that resources and investigations will focus on other possible factors. Countries with the highest SIDS rate also have major environmental pollution, deficiencies in infant diets, malnutrition, infectious disease, and limited access to pediatricians and medical care. A majority of these deaths can be caused by compound in the environments such as lead, key nutrients missing from the infant's diet, or a lack of access to pre-natal visits or genetic screening.

Information is a two-edge sword. Valid and accurate information will guild research and science in the right direction and provide valid conclusions. However, poor and inaccurate data will cause research to go in the wrong direction and result in wasted time and of limited resources. This is particularly true regarding International SIDS Data.

Due to the enormous reliance on data and its impact on aid, research, and policy, I propose that **only** infants that met the CDC

and WHO criteria be identified as SIDS. All other infants that die suddenly, unexpectedly, and lack a significant past medical history to explain the death these Death Certificates must be completed with the Cause of Death as Undermined and the Manner of Death

as Undermined. This will result in a more accurate description of the true SIDS rate in each country and possibly highlight factors that maybe associated with the high levels of infant mortality.