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Death Investigation in the United States, 1990: A Survey of Statutes, Systems, and Educational Requirements

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ABSTRACT: We conducted a survey to summarize the status of medicolegal death investigation in the United States in terms of system type, language in state statutes, and terms of service and educational requirements for coroners and medical examiners (death investigators). Certain types of deaths are often mentioned in statutes while others are inconsistently investigated in the various states. The majority of the U.S. population is served by death investigation that is organized on a local or district level, but often administered by a nonmedical branch of government. Many more jurisdictions have elected coroners than appointed medical examiners, but the majority of the population is served by a medical examiner. One-fourth of the population is served by death investigators who are not required to have a medical background or training or experience in death investigation. We recommend that all States adopt policies and minimum educational and training requirements for their death investigators that emphasize medical investigation of death, ongoing continuity and experience, and medically oriented administration. We also recommend that each state address in their statutes certain types of deaths that are inconsistently investigated, including fetal deaths, anesthetic and intra-operative deaths, peri-therapeutic or peri-diagnostic deaths, requested cremations, deaths of institutionalized individuals, suspected cases of sudden infant death syndrome, and deaths occurring shortly after arrival or admission to hospitals.

KEYWORDS: forensic science, jurisprudence, medical examiners, coroners, death investigation laws

Although recent compilations of medico-legal death investigation systems, statutes, and autopsy law have been published for individual states [*1–3*], a current summary of the overall status of death investigation statutes, systems, and terms of service and educational requirements for coroners and medical examiners in the United States is not available. We conducted a survey to summarize those aspects of medico-legal death investigation in the United States.

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Methods

In October 1989 and January 1990, we surveyed state attorneys general, vital registrars, medical examiners, coroners, and professional medical examiner/coroner associations to obtain copies of statutes and general information regarding death investigation in each state and the District of Columbia. The survey was designed to identify a) the existing type of death investigation system, b) the qualifications, training requirements, selection, and terms of office of death investigators, and c) the types of deaths specified for investigation in the language of statutes.

Results

Including the District of Columbia as a "state," we received death investigation statutes from 33 states and general summary information from 51 states.

Death Investigation Jurisdictions

In the 51 states, there are 3137 counties and 2185 death investigation jurisdictions. Of the death investigation jurisdictions, 20 are organized on a statewide level, 97 are regional or district in scope, and 2068 are county based. 75% of the U.S. population lives in areas with death investigation organized on a regional, district, or county level.

Administration of Death Investigation

Death investigation is administered by Departments of Forensic Science or other medicolegal agencies in 7 States, by Departments of Public Health in 12 States, and by Departments of Justice, Law Enforcement, or Public Safety in 17 States. Only 15 States have systems administered by County Government, but those States contain 43% of the U.S. population.

Medical Examiner, Coroner, and "Mixed" Systems

Thirty-five percent of the U.S. population lives in states served by a medical examiner system, 15% is served by a coroner system, and 50% lives in states with a mixed medical examiner and coroner system (Fig. 1). Although a much larger number of jurisdictions have coroners rather than medical examiners, the majority (58%) of the U.S. population is served by a medical examiner.

Medical Examiner and Coroner Education (Table 1)

In 39 of 40 states that utilize medical examiners, the medical examiner is required to hold a medical degree or equivalent, while only 4 of 28 states with coroners require a medical degree to qualify as a coroner. In terms of population served, 64% of the U.S. population resides in jurisdictions requiring the primary death investigator to hold a medical degree or equivalent. An additional 11% of the U.S. population is served by coroners who are not required to hold a medical degree but are required to have training in death investigation. Thus, 75% of the U.S. population has death investigators with either a medical degree or training or experience in death investigation. Slightly less than half (44%) of the population lives in areas where the primary death investigator is required to have not only a medical degree, but pathology board certification or training or experience in death investigation. Twenty-five percent of the U.S. population lives in

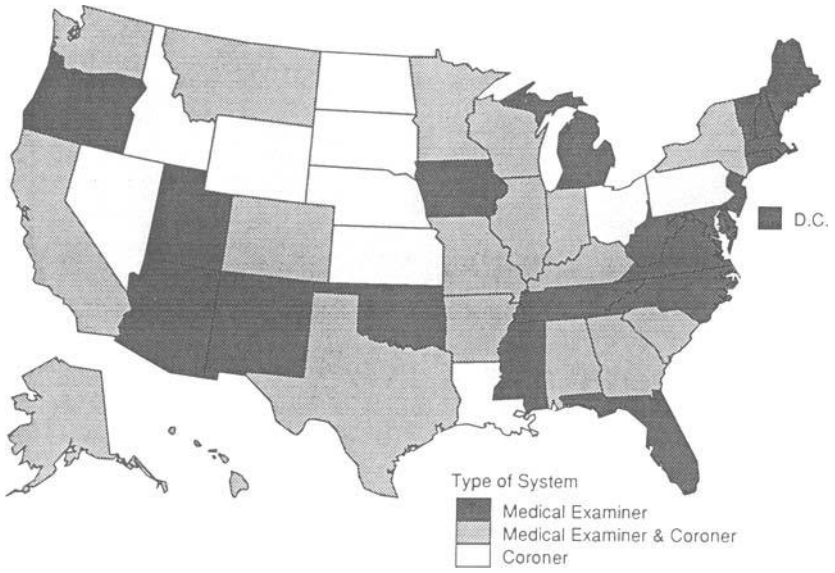

FIG. 1—*Death investigation system by state, 1990.*

areas with no requirement for medical or death investigation training for their death investigators.

Electoral and Appointed Terms for Medical Examiners and Coroners

Medical Examiners are appointed in all 40 States where a medical examiner has responsibility for death investigation. The duration of appointment is unspecified in 28 States and 1 to 10 years in 12 States. Coroners are elected in 26 States and appointed in 2 States, holding office for 2 to 4 year terms.

Deaths Investigated

The language in state statutes varies considerably between states. There are certain types of deaths that are commonly mentioned in statutes, while others are only occa-

TABLE 1—*Education and experience requirements for death investigators (medical examiners and coroners) in the United States—1990.*

Requirements	% of U.S. Population
Served by physician death investigators[a]	64%
Served by death investigators who are not physicians but are required to have death investigation training	11%
Served by death investigators with medical degree or death investigation training	75%
Served by physician death investigators with pathology board certification or training or experience in death investigation	44%
Served by death investigators with no requirement for medical or death investigation training	25%

[a]39 of 40 states with medical examiners require the medical examiner to be a physician; 4 of 28 states with coroners require the coroner to be a physician.

TABLE 2—*Types of deaths investigated according to state statutes.*

Type of death	Number of states with this language in statute
Suspicious, unusual, unnatural	42
Suicide	41
Violence	40
Sudden, unexpected, unexplained	39
Unattended by physician (not under care)	37
Accidental	26
Homicide	25
Thermal, electrical, chemical, or radiation injury	14
Poison, chemical toxicity	12
Institutionalized	11
Any of the following: fire, hanging, gunshot, stabbing, cutting, exposure, starvation, malnutrition, drowning, strangulation, aspiration, suffocation, explosion, disaster	10
If body to be cremated	9
For workmen's compensation	7
During surgical or therapeutic procedures or while under anesthesia	5
Within 24–36 hours of hospital admission	5
Stillbirth or fetal death	5
Trauma	4
Motor vehicle accident	3

sionally or rarely mentioned (Table 2). Many statutes contain redundant language; investigation might be mandated for certain types of deaths that fall within other broader categories also requiring investigation. For example, a statute might require investigation of deaths due to injury, but further specify that deaths due to stabbing or gunshot wounds must be investigated (see Table 2).

Discussion

Considering that death investigation has impact on judicial decisions involving a defendant's personal liberty, financial security, or professional status (through the supplying of death investigation information or opinion in criminal or civil legal proceedings), high quality death investigation is desirable. Quality death investigation is also needed for the fair prosecution of alleged criminals, and to provide accurate data for guiding public health programs aimed to reduce preventable mortality. The quality of death investigation depends partially on the education and experience required of death investigators as well as the quality and comprehensiveness of the laws governing death investigation systems. For these reasons, we have summarized the overall national status of death investigation statutes, systems, terms of service, and educational requirements. A discussion of death investigation manpower needs and the respective merits and shortcomings of coroner and medical examiner systems is beyond the scope of this paper.

Our survey shows that death investigation varies from state to state in organizational structure, scope of investigations mandated by statutory language, and terms of service and educational requirements for death investigators. Some types of deaths such as suicides, violent deaths, suspicious deaths, and unexpected deaths are investigated in many states because of their specific mention in the language of many state statutes. However, the absence of particular language in a statute does not necessarily preclude investigation of certain categories of death. For example, homicides are mentioned in only 25 statutes but are investigated to some degree in every jurisdiction, such deaths

being investigated because they fall under other statutory categories such as "violent," "suspicious," or "injury-related." Some types of death (such as anesthesia deaths and deaths involving possible workman's compensation claims) are referred to in only a few state statutes and, accordingly, might not be investigated in states where specific statutory language is lacking and the death does not fall into another category for which investigation is clearly mandated. It is apparent that differences and vagueness in, and personal interpretation of the language in statutes could cause inconsistent death investigation practices. Death investigation might be more consistent in scope if statutes were made more uniform, comprehensive, and concise.

Although death investigators are required to have some training in most areas of the United States, one-third of the population is served by death investigators with no medical training, and death investigators for 25% of the population are not required to possess death investigation skills or to obtain training. Conceptually, the elected nature of many death investigators might present obstacles to continuity in education and experience in comparison to unspecified or unrestricted terms of appointment that are applied to some death investigators.

We recommend that states adopt minimum training requirements for medical and non-medical death investigators. Because many medico-legal death investigations involve natural disease and medical conditions or issues, requirements for medico-legal death investigators should encourage a medical orientation and background. In turn, agencies administering death investigation systems should be medically oriented. Long term death investigation strategies should include measures that promote continuity and ongoing experience and education in death investigation. In order to unify death investigation practices, we also recommend that each state address in their medico-legal death investigation statutes certain types of deaths including, but not limited to fetal deaths, peri-therapeutic or peri-diagnostic deaths, anesthetic deaths, requested cremations, deaths of institutionalized individuals, suspected child abuse, deaths of persons shortly after admission to hospitals, and suspected cases of the sudden infant death syndrome.

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