STATE OF IOWA DEPARTMENT OF Health and Human services

Annual Report 2022

IOWA OFFICE OF THE STATE MEDICAL EXAMINER

Iowa Office of the State Medical Examiner

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INTRODUCTION

The Iowa Office of the State Medical Examiner (IOSME) was established in 1976. In May 1999, Governor Thomas J. Vilsack signed legislation approving the move of the office from the Department of Public Safety to the Department of Public Health.

The primary role of the office is to provide support, guidance, education, consultation, and training to county medical examiners and their investigators and to provide medical legal autopsy services. County medical examiners investigate violent, suspicious, and unexpected natural deaths that occur in their counties. Upon a county medical examiner's request, the Iowa Office of the State Medical Examiner will assist at the death scene and perform the autopsy. Board certified forensic pathology staff at the IOSME provide expert testimony in depositions and trials in homicide and other wrongful death cases.

The lowa Office of the State Medical Examiner is committed to providing support to each of the county medical examiner offices to assist them in the investigation of deaths throughout the state.

MISSION STATEMENT

To establish and maintain credibility in death investigation in a system that will operate efficiently and serve the needs of the citizens of Iowa.

STATE MEDICAL EXAMINER INTERAGENCY COORDINATING COUNCIL

The State Medical Examiner Advisory Council was established in 1999 via Iowa Code 691.6C. This Council was established to "advise and consult with the state medical examiner on a range of issues affecting the organization and functions of the office of the state medical examiner and the effectiveness of the medical examiner system in the state."

During the 2020 legislative session a law was enacted that merged the Advisory Council into the Interagency Coordinating Council (Iowa Code 691.6 B). This Council meets on a biannual basis.

2022 Membership

Kelly Garcia- Director, Public Health

Dennis Klein, MD – IOSME

Jonathan Thompson, MD – IOSME

Julie Breiner, MD – IA Association of Pathologists

Scott Brown J.D.– IA State AG's Office Assistant Attorney General

Joshua Cook, MD – IA Medical Society Pathologist at Iowa Pathology Associates

Dennis Firchau, MD – U of I - Dept of Path

James Fullerton – IA Funeral Directors Association

Keith Hansen, DO – IA Association of CME

Mitch Mortvedt – Department Of Public Safety DCI

Marcus Nashelsky – Assistant State ME

Paul Hermsen – Department of Public Safety DCI Lab Administrator

Thomas Summitt – IA EMS Association

Clare Kelly– Governor's Office

Robert Kruse, MD, MPH - State Medical Director - Division of Public Health

COUNTY MEDICAL EXAMINERS

The primary function of the county medical examiner is to determine a truthful, logical, and scientifically unbiased statement of the cause and the manner of death. (Iowa Code 331.801 805 and Administrative Code 641 127 govern county medical examiner activities).

County medical examiners are uniquely qualified to investigate the deaths of individual citizens in their counties, not only because of their medical training, but also by virtue of the fact they usually live and work in the counties in which they serve. County medical examiners must display uncompromising honesty, integrity, and loyalty to their community and their oath, regardless of any pressure they may receive from outside sources.

The county medical examiner of any of the counties is a physician appointed by the Board of Supervisors of that county to act in an official capacity to investigate and make a report of any death as described in Iowa Code section 331.802(3).

The county medical examiner shall be licensed in Iowa as a doctor of medicine and surgery or a doctor of osteopathic medicine and surgery.

The county medical examiner shall be appointed, from lists submitted by the medical society and the osteopathic society of the particular county, for a period of two years (a period of time that shall commence on January I, if it is not a Sunday). If a qualified physician in the particular county cannot be identified, the Board of Supervisors may appoint a physician from outside the particular county.

The county medical examiner is required by law to make inquiry into the cause and manner of death of any individual meeting the criteria outlined in Iowa Code section 331.802(3) and make a report of this to the state medical examiner, the county attorney where the incident occurred and/or any law enforcement agency having jurisdiction.

The county medical examiner shall make a determination as to the most probable cause and manner of death, and issue the death certificate for those deaths within their jurisdiction as outlined by statute.

The county medical examiner will determine if an autopsy is needed, complete an investigation form, and notify the state medical examiner's office for arrangements to complete a medicolegal autopsy.

The county medical examiner shall issue permits as required by the county and/or state which are necessary for the disposition of a dead body (including cremation permits).

The duties of a county medical examiner can be quite time-intensive, as someone must be available 24 hours per day, 7 days per week. Therefore, the county medical examiner is authorized to appoint deputy or assistant county medical examiners and county medical examiner investigators to assist him/her in the fulfillment of his/her duties.

These deputy medical examiners must be physicians who are licensed in the state of lowa and who have been approved for service by the state medical examiner. The county medical examiner is responsible to train and/or secure training for his/her deputies and investigators. The state medical examiner's office offers guidance and provides training lectures as well as one on one training in death investigation skills and proper procedures.

FACILITY

A laboratory facility housing the IOSME also houses the Department of Public Safety, Agriculture & Land Stewardship, and the University of Iowa Hygienic Laboratory. The facility opened in March 2005 on the Des Moines Area Community College (DMACC) campus in Ankeny, Iowa. The facility was designed for a capacity of performing up to 800 autopsies per year.

The facility allows the IOSME to house both the office and the morgue in one building allowing the IOSME to maintain accreditation with the National Association of Medical Examiners, aiding recruitment of high-quality workers and federal grant eligibility.

The facility improves services provided by the IOSME and provides the capabilities to:

- Perform complex autopsies efficiently in a biologically safe and physically secure facility.
- Protect and secure evidence and records for criminal cases in a manner that meets or exceeds stringent court scrutiny as well as state and national standards.
- Operate cooler space for deceased individuals awaiting identification and/or autopsy.
- Meet building accreditation requirements with the National Association of Medical Examiners.

The IOSME staff is available to perform autopsies and assist with medicolegal death investigations 24 hours per day, 7 days per week, and 365 days per year.

REPORTABLE DEATHS

As per lowa Code 331.802(3), certain types of deaths are to be reported to the county medical examiner. A medical examiner death is defined as a death that affects the public interest and is unexpected, unexplained, and/or unwitnessed. These deaths affect the public interest and include, but are not limited to, any of the following:

- a. Violent death, including homicidal, suicidal, or accidental death.
- b. Death caused by thermal, chemical, electrical, or radiation injury.
- c. Death caused by criminal abortion including self-induced, or by sexual abuse.
- d. Death related to disease thought to be virulent or contagious which may constitute a public hazard.
- e. Death that has occurred unexpectedly or from an unexplained cause.
- f. Death of a person confined in a prison, jail, or correctional institution.
- g. Death of a person who was pre-diagnosed as a terminal or bedfast case who did not have a physician in attendance within the preceding thirty days; or death of a person who was admitted to and had received services from a hospice program as defined in section 135J.1, if a physician or registered nurse employed by the program was not in attendance within thirty days preceding death.
- h. Death of a person if the body is not claimed by a relative or friend.
- i. Death of a person if the identity of the deceased is unknown.
- j. Death of a child under the age of two years if death results from an unknown cause or if the circumstances surrounding the death indicate that sudden infant death syndrome may be the cause of death.

STATUTORY DUTY STATE MEDICAL EXAMINER

Iowa Code 691.5 6C and Administrative Rule 641 126 govern the Iowa Office of the State Medical Examiner. Autopsies are performed at the request of county medical examiners for those deaths that are reportable. The duties of the state medical examiner are:

- 1. To provide assistance, consultation and training to county medical examiners and law enforcement officials.
- 2. To keep complete records of all relevant information concerning deaths or crimes requiring investigation by the state medical examiner.
- 3. To adopt rules pursuant to chapter 17A, and subject to the approval of the Director of Public Health, with the advice and approval of the State Medical Examiner Advisory Council.
- 4. To collect and retain autopsy fees as established by rule. Autopsy fees collected and retained under this subsection are appropriated for purposes of the state medical examiner's office. Notwithstanding section 8.33, any fees collected by the state medical examiner that remain unexpended at the end of the fiscal year shall not revert to the general fund of the state or any other fund but shall be available for use for the following fiscal year for the same purpose.
- 5. To conduct an inquiry, investigation or hearing and administer oaths and receive testimony under oath relative to the matter of inquiry, investigation, or hearing, and to subpoena witnesses and require the production of records, papers, and documents pertinent to the death investigation. However, the medical examiner shall not conduct any activity pursuant to this subsection, relating to a homicide or other criminally suspicious death, without coordinating such activity with the county medical examiner, and without obtaining approval of the investigating law enforcement agency, the county attorney, or any other prosecutorial or law enforcement agency of the jurisdiction to conduct such activity.
- 6. To adopt rules pursuant to chapter 17A relating to the duties, responsibilities and operations of the Office of the State Medical Examiner and to specify the duties, responsibilities and operations of the county medical examiner in relationship to the Office of the State Medical Examiner.
- 7. To perform an autopsy or order that an autopsy be performed if required or authorized by section 331.802 or by rule. If the state medical examiner assumes jurisdiction over a body for purposes of performing an autopsy required or authorized by section 331.802 or by rule under this section, the body or its effects shall not be disturbed, withheld from the custody of the state medical examiner, or removed from the custody of the state medical examiner without authorization from the state medical examiner.
- 8. To retain tissues, organs, and bodily fluids as necessary to determine the cause and manner of death or as deemed advisable by the state medical examiner for medical or public health investigation, teaching, or research. Tissues, organs, and bodily fluids shall be properly disposed of by following

procedures and precautions for handling biologic material and bloodborne pathogens as established by rule.

9. To collect and retain fees for medical examiner facility expenses and services related to tissue recovery. Fees collected and retained under this subsection are appropriated to the state medical examiner for purposes of supporting the state medical examiner's office and shall not be transferred, used, obligated, or otherwise encumbered. Notwithstanding section 8.33, any fees collected by the state medical examiner shall not revert to the general fund of the state or any other fund.

STATUTORY DUTY DEPUTY STATE MEDICAL EXAMINER

Iowa Code 691.6A governs the Deputy State Medical Examiner creation and duties.

The position of deputy state medical examiner is created within the Office of the State Medical Examiner. The deputy state medical examiner shall report to and be responsible to the state medical examiner. The deputy state medical examiner shall meet the qualification criteria established in section 691.5 for the state medical examiner and shall be subject to rules adopted by the state medical examiner as provided in section 691.6, subsection 3.

The state medical examiner and the deputy state medical examiner shall function as a team, providing peer review as necessary, fulfilling each other's job responsibilities during times of absence, and working jointly to provide services and education to county medical examiners, law enforcement officials, hospital pathologists, and other individuals and entities.

The deputy medical examiner may be, but is not required to be, a full-time salaried faculty member of the Department of Pathology of the University Of Iowa College Of Medicine. If the medical examiner is a full-time salaried faculty member of the Department of Pathology of the University of Iowa College of Medicine, the Iowa Department of Public Health and the State Board of Regents shall enter into a chapter 28E agreement to define the activities and functions of the deputy medical examiner, and to allocate deputy medical examiner costs, consistent with the requirements of this section.

ORGAN AND TISSUE DONATION ACTIVITIES

Organ and tissue transplantation can have tremendous lifesaving and life altering benefits to patients who are in need. The IOSME supports and encourages organ and tissue donation whenever it is possible. Due to the wide geographical area covered by the IOSME, coordinating body transportation, acquiring case information, timing of autopsy, and timing of organ and tissue recovery can be a very challenging task.

Many cases requiring medicolegal autopsies are also cases that would be eligible for organ and tissue donation. However, timing, logistics, and access to medical and investigative information are the major factors that may limit the number of medical examiner cases that can also undergo donation. Both the IOSME and the Iowa Donor Network (IDN) recognized there was a large overlap and duplication in information that needs to be acquired by both agencies. In November 2013, IDN partnered with the IOSME and appointed a fulltime liaison, who resides permanently at the IOSME, to streamline and facilitate the process of gathering information for both death investigation and potential donation. The liaison attended the St. Louis course on medicolegal death investigation, received many hours of training and mentorship in death investigation, and is now in the state medical examiner investigator rotation. In 2015, a second IDN liaison was added to the IOSME team. In addition to coordinating tissue donation, thus increasing efficiency and likelihood of successful donation in suitable candidate cases, the liaisons also assist IOSME pathologists with medicolegal death investigation.

During the 2006 Legislative session, HF2768 was introduced and signed into law by Governor Vilsack. Subsection 8 in Iowa Code 691.6 allows the State Medical Examiner's Office to collect and retain fees for the expenses and services related to tissue recovery. These fees help offset the expense with the use of the tissue recovery suite.

Iowa Donor Network's basic criteria and procedures for potential donors are included in the County Medical Examiner's Handbook. The IOSME and IDN continue to improve communications to ensure a successful relationship that provides an essential service to the public.

TISSUE REFERRALS – EMS AND ME

207	Tissue Donors	
121	Approached Not Authorized (Family Decline)	
87	Consented Not Recovered	
1646	Not Medically Suitable	
59	No Next-of-Kin Found/Available	
27	Embalmed	
21	Timed Out, Restricted to Post Autopsy	
27	ME Declines	
10	Weather Deferral	
0	Time Constraints	
1	Staffing Constraints	
137	Processor Scale Back	
2	Deeded Body Donor	
20	Suitable – Not Approached	

SUMMARY

In 2022, the IOSME referred 746 deaths to IDN, 61 of which became tissue donors.

In addition, IOSME was involved in autopsy and release for 200 tissue donors, 112 of which were referred by non-hospital agencies (MEs, EMS, Fire/Rescue) and 88 referred by hospitals.

Of the 200 tissue donors, 93% were recovered pre-autopsy (186/200).

IDN recovered 178 tissue donors at the IOSME Recovery Suite.

The 200 tissue recoveries in which IOSME was involved (hospital, ME, and EMS deaths) resulted in:

149	Skin recoveries	
149	Bone and associated tissue recoveries (57 JR recoveries)	
61	Heart for valve recoveries	
97	Saphenous vein recoveries (47 Left/50 Right)	
52	Femoral vein recoveries (25 Left/27 Right)	
5	Juvenile Cartilage recoveries	
0	Adipose	

STATEWIDE ORGAN REFERRALS

115	Organ Donors		
115	Organ Donors with at least one organ transplanted		
71 120	Approached Not Authorized		
328	Not Medically Suitable		
I	First Person Decline		
22	Non-Converted Potential		
123	Cardiac Arrested on Vent		
54	Consented Not Recovered		
750	Patients Not Brain Dead/DCD		
2	Medical Examiner Decline		
288 4	Referred, Survived		

ACCREDITATION

The IOSME received accreditation from the National Association of Medical Examiners (NAME) in 2008 and continually works toward maintaining that status.

On January 11, 2022, the IOSME was inspected and achieved reaccreditation for the period November 6, 2021 to November 6, 2025.

BUDGET AND STAFFING

The IOSME receives its funding from the State of Iowa general fund appropriation, charges and fees for autopsies performed and a portion of the fees collected by Vital Records for copies of death certificates.

Fiscal Year	General Fund Appropriation	Autopsy Fees Collected	Death Certificate Fees Collected
FY2000	357,184 (transfer)	0	0
FY2001	514,029	213,500	0
FY2002	544,103	339,000	0
FY2003	497,220	406,100	0
FY2004	511,211	372,395	0
FY2005	526,268	512,100	185,238
FY2006	865,270	707,052	379,320
FY2007	984,981	690,590	383,187
FY2008	1,143,497	879,659	393,162
FY2009	1,262,566	725,943	393,015
FY2010	932,138	864,953	390,655
FY2011	903,782	800,410	402,606
FY2012	852,801	964,800	410,535
FY2013	822,084	1,020,062	420,013
FY2014	822,084	1,084,450	405,449
FY2015	822,084	1,059,100	403,825
FY2016	822,084	1,056,496	387,301
FY2017	822,084	1,134,550	405,828
FY2018	822,084	1,118,309	397,899
FY2019	822,084	1,492,000	394,704
FY2020	814,769	2,154,553	429,155
FY2021	814,769	2,248,277	521,883
FY2022	1,196,150	3,057,473	528,708

The IOSME had 18.5 FTEs in 2022

- I Chief State Medical Examiner
- 3 Associate State Medical Examiners
- 0.5 Vital Statistics liaison
- 2 Secretaries
- I Radiological Technologist
- I Morgue Attendant
- I Deputy State Medical Examiner
- 2 Medical Examiner Investigator liaisons
- I Office Manager
- 3 Medicolegal Death Investigator
- 3 Autopsy Technicians

The IOSME supplements the staffing shortfall with temporary part-time employees. These employees work in the capacity of forensic pathologists, forensic autopsy technicians, forensic morgue attendants, medicolegal death investigator assistants, and office clerical staff. The number of part-time temporary employees averaged 27 in 2022.

GOALS FOR THE FUTURE

Many of the original goals set in 1999 have been met. Anticipating the needs of the future, goals are updated periodically.

The following are some of the current goals established for the office:

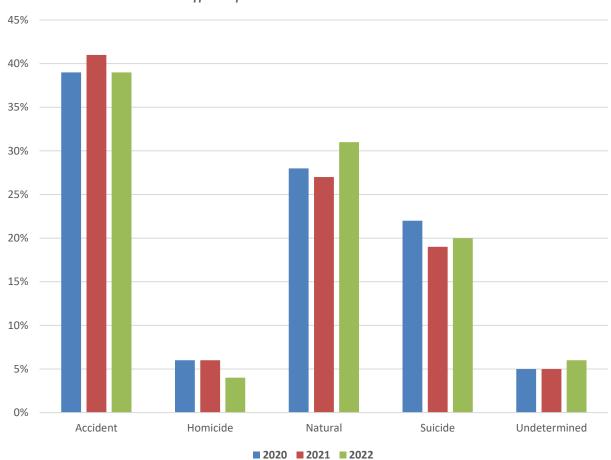
- Complete 90% of autopsies within 72 hours from time of receiving body.
- Finalize 90% of autopsy reports within 60 days.
- Recruit and retain quality staff.
- Provide a supportive work environment, and promote professional growth and quality.
- Continue accreditation with the National Association of Medical Examiners (NAME).
- Promote the work quality of the IOSME so that the citizens of Iowa understand that the IOSME is an objective investigative agency.
- Establish funding for the continuous operation of the IOSME and allow retention of funds to cover the costs for death investigation and autopsies.
- Improve case management system and web portal entry system for county medical examiner personnel to enter scene investigation information electronically.
- Maintain rotation for fourth-year medical students from Des Moines University and continue Community-based Primary Care Clerkship for medical students from the University of Iowa.
- Continue to improve mass disasters plans.
- Continue to develop the Iowa Mortuary Operations Response Team (IMORT) Team, and increase volunteer members and training.
- Establish staffing to accommodate increase in case volume.
- Establish appropriate facility modifications to accommodate increased case load.

STATISTICAL INFORMATION

The Iowa Office of the State Medical Examiner oversees 99 county medical examiner offices. The following information has been gathered from all 99 counties and reflects the state as a whole. However, there is statistical information provided that also reflects how the Iowa Office of the State Medical Examiner performs its duties as the central office.

CENTRAL OFFICE NUMBERS FOR THE YEAR 2022

Total medical examiner cases reported in Iowa	11,033
Total cases accepted by IOSME for autopsy	
Total scenes attended	0
Total bodies transported by office	0
External examinations	7
Complete autopsies	I,657
Partial autopsies	0
Cases where toxicology is performed	I,627
Bodies unidentified after examination	0
Unclaimed bodies	0
Exhumations	0
Bodies transported to the office	1,754
Hospital autopsies retained under ME jurisdiction	0

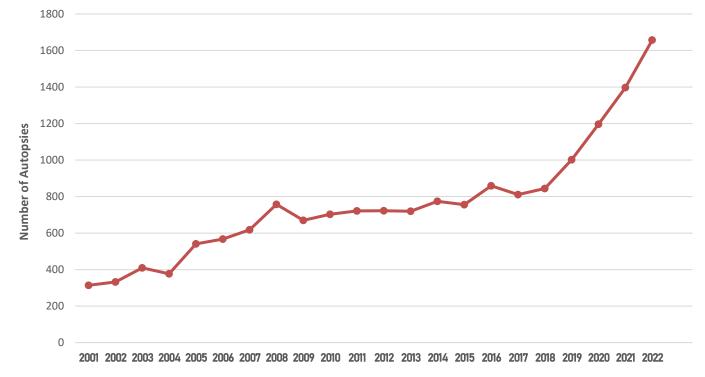


Manners of Deaths Percentages for Cases Performed at the Iowa Office of the State Medical Examiner

Iowa Deaths

	Total Deaths in Iowa	CME Investigated	% of Total Deaths	Autopsies Requested	% of ME Cases
2013	28,815	5,272	18%	1,541	29%
2014	28,088	5,121	18%	1,507	29%
2015	28,548	5,285	18%	1,533	29%
2016	29512	5,524	19%	1,565	28%
2017	30,527	5,789	19%	1,543	28%
2018	30,369	5,515	18%	1,499	26%
2019	30,399	6,686	22%	I,472	22%
2020	35,669	10,893	30%	I,868	17%
2021	33,996	10,615	31%	2,135	20%
2022	33,772	11,033	33%	2,209	20%





CATEGORIES OF DEATH BY MANNER

NATURAL

Cardiac > Coronary Artery Disease	177
Cardiac > Non-atherogenic	65
Cerebrovascular	П
Chronic Alcohol-Related	61
Congenital Defect	I
Diabetes	22
Gastrointestinal	10
Hypertension	20
Infectious Disease	29
Natural Disease > NOS	41
Pulmonary Disease	15
Pulmonary Embolism	27
Seizure	9
Sepsis	3
Other	П

UNDETERMINED

Asphyxia	I
Blunt Force Injury	4
Blunt Force Injury > Transportation	2
Cardiac > Coronary Artery Disease	2
Drowning	5
Firearm	4
Intoxication > Alcohol	2
Intoxication > Drug	I
SIDS/SUID	26
Undetermined	28

ACCIDENT

Asphyxia	47
Blunt Force Injury	27
Blunt Force Injury > Transportation	230
Chronic Alcohol-Related	4
Drowning	23
Electrical	0
Exposure	22
Fall	3
Fire > Motor Vehicle	I
Fire > Structure	26
Firearm > Handgun	2
Intoxication > Alcohol	5
Intoxication > Drug	174
Intoxication > Mixed Drug & Alcohol	14
Poisoning > Non-drug	0
Pulmonary Embolism	6
Seizure	0
Sepsis	0
Weather Related	3

HOMICIDE

Asphyxia	3
Blunt Force Injury	9
Firearm > Handgun	42
Firearm > Rifle	0
Firearm > Shotgun	2
Firearm > NOS	5
Sharp Force Injury	5
Other	Ι

SUICIDE

Asphyxia > Carbon Monoxide	4
Asphyxia > Hanging	19
Asphyxia > Suffocation	3
Blunt Fore Injury	11
Drowning	3
Fire	2
Firearm > Handgun	125
Firearm > Rifle	17
Firearm > Shotgun	26
Intoxication > Drug	23
Intoxication > Mixed Drug & Alcohol	
Sharp Force Injury	4

SUMMARY

The lowa Office of the State Medical Examiner (IOSME) has made tremendous progress in improving the oversight, guidance, and assistance to county medical examiners throughout the State of Iowa since its move to the Department of Public Health in 1999. With a dramatic increase in caseload while providing services to 97 of Iowa's 99 counties, the ISOME has prioritized building staff capacity, improving operations and providing technical support to County Medical Examiners as well as being a responsive partner to Iowa courts.

Under the leadership of Dr. Dennis Klein, the ISOME will continue to focus on process improvement, best practice implementation and providing leadership for Iowa's medical examiner community.

Increasing Caseload

The IOSME is performing an increasing number of autopsies for a variety of of reasons.

- A growing statewide and national shortage of pathologists to perform forensic autopsies.
- The the number of yearly autopsies has grown from under 200 in 2000 to a record high of 1,657 autopsies in 2022. a 22% increase in the number from cases performed in 2021, and nearly doubling (96% increase) from the number of cases performed in 2018.
- In November 2022, due to the resignation of their medical examiner, all Polk County Medical Examiner Office cases autopsy cases were referred to the IOSME, increasing the IOSME case load by 23% in the months of November and December.

System Improvements

- IOSME continues to work on enhancements and build efficiencies in their data entry processes and software applications.
- ISOME lead an effort to standardize data entry into Iowa's electronic death registry system IVES (Iowa Vital Event System).

Court Proceedings and Partnerships

- In 2022 the IOSME experienced in increase in subpoenas for our pathologists to provide expert testimonies in court. This increase was due partly to catch up from trials that were delayed due to COVID in 2020 and 2021 and also due to the increased number of autopsies performed since 2018.
- The IOSME continued to support and participate in the annual Iowa Association of County Medical Examiners fall conference. A primer on the basics of medical legal death investigation processes was held on the morning before the main conference.
- The IOSME partnered with the Criminal Justice Department at the Des Moines Area Community College in Ankeny to sponsor a 3-day course on medicolegal death investigation.
- The IOSME provided an updated version of the County Medical Examiner Handbook available to all county medical examiners on the IOSME website at www.iosme.iowa.gov.
- The Iowa Mortuary Operations Response Team (IMORT), worked alongside HHS and Johnson County Emergency Management to conduct a multi-agency mass fatality table top exercise.

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Dennis F. Klein, MD State Medical Examiner

Iowa Department of Health and Human Services Kelly Garcia, Director

> State of Iowa Kim Reynolds, Governor

