



Iowa Office of the State Medical Examiner

Annual Report 2024



Health and
Human Services

**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, which as of 2023 is now known as the Iowa Department of Health and Human Services (Iowa HHS).

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 Iowa 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.

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 because 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 1, 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 Iowa 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.

There was a marked year over year acceleration in demand for autopsy services beginning in 2018. In 2022, the number of autopsies performed at the IOSME was over twice the design capacity of the facility. A needs assessment was completed by OPN Architects in September 2023, which identified important factors based on current and projected demands for autopsy services. Recommendations were outlined in a needs assessment report that included updates and expansion to the existing IOSME facility. The needs assessment recommendations and report were completed in September 2024. The 2024 legislators passed an infrastructure funding request for \$36.2 million for the design and construction of an expansion to the current IOSME facility.

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 requirements include the ability to:

- Perform complex autopsies efficiently within 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.
- Maintain and operate cooler space for deceased individuals awaiting identification and/or autopsy.
- Meet building accreditation requirements with the National Association of Medical Examiners.
- Complete autopsies in a timely manner to serve families and law enforcement investigation needs

Reportable Deaths

As per Iowa 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 at the University of Iowa Carver College of Medicine. If the medical examiner is a full-time salaried faculty member of the Department of Pathology at the University of Iowa Carver College of Medicine, the Iowa Department Health and Human Services 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.

ORGAN AND TISSUE DONATION

<u>Medical Examiner Tissue Donations</u>	
Referrals Statewide	2,716
Referrals by IOSME	603
Donors Statewide	1,118
Donors by IOSME	62
Total Tissues Recovered Statewide	2,451

<u>Statewide Organ Referrals</u>	
Organ Donors	130
Organs Transplanted	387

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. On November 12, 2024 the IOSME received notice of continuation of full NAME accreditation after annual submission for formal review of continued compliance with checklist of standards.

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
FY2023	1,196,150	3,593,150	495,090
FY2024	1,196,150	3,464,100	484,728

The IOSME had 23.5 FTEs in 2024:

1 Chief State Medical Examiner

4 Associate State Medical Examiners

0.5 Vital Statistics liaison

3 Secretaries

1 Radiological Technologist

1 Morgue attendant

1 Deputy State Medical Examiner

6 Medical Examiner Investigators

1 Office Manager

1 Pathologist Assistant

4 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 28 in 2024. In 2023, the IOSME secured a contract with a locum tenens company that was able to provide board certified forensic pathologists as needed to assist with the surge in demand for autopsy services.

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 disaster 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

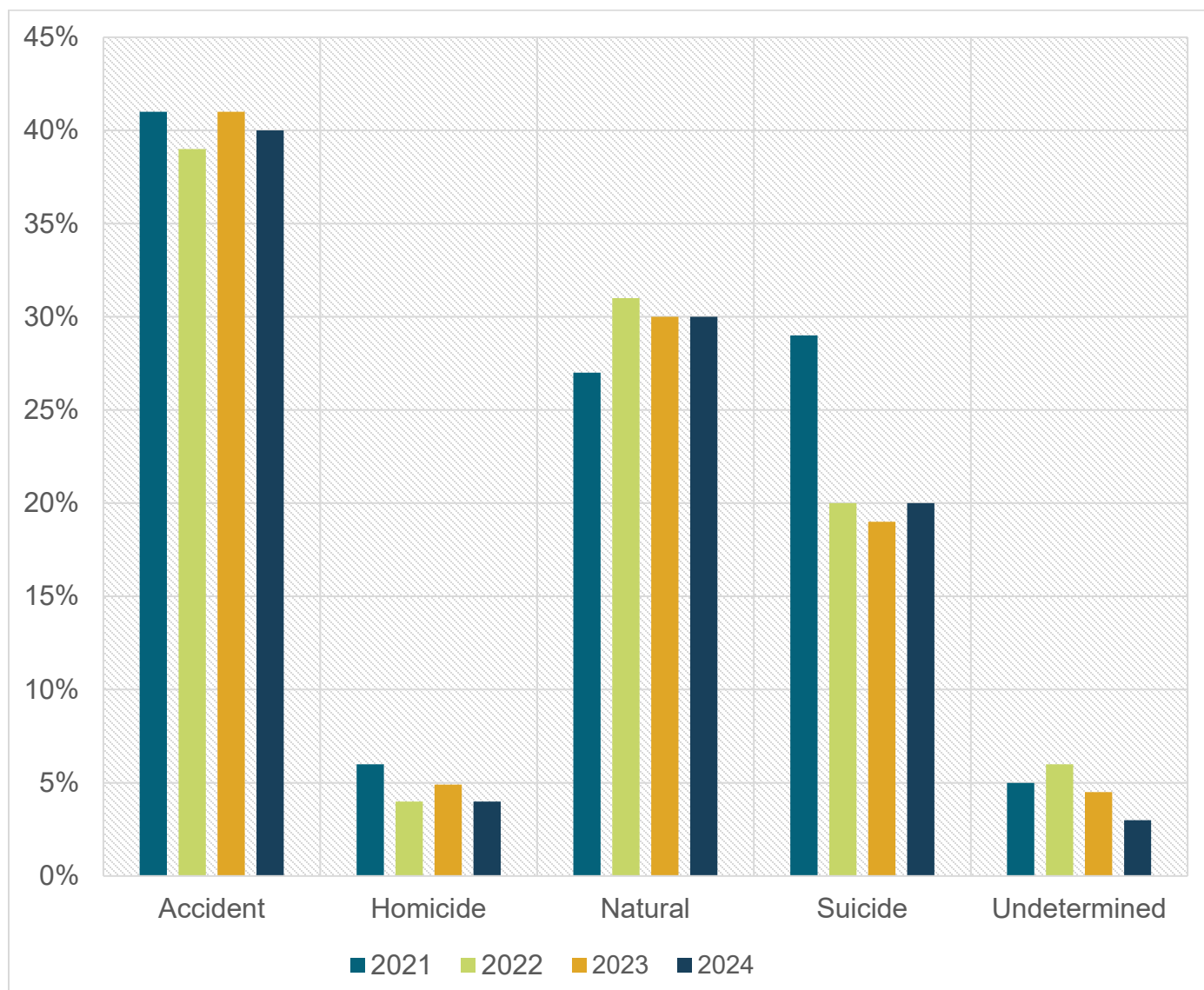
The Iowa Office of the State Medical Examiner oversees 99 county medical examiner offices. The following information has been gathered from all 99 counties and reflects the state as a whole. However, there is statistical information provided that also reflects how the Iowa Office of the State Medical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

Central Office Numbers for the Year 2024

Total medical examiner cases reported in Iowa: 10,700

Total cases accepted by IOSME for autopsy	1,657
Total scenes attended by IOSME.....	2
Total bodies transported by office	1
External examinations.....	3
Complete autopsies.....	1,645
Partial autopsies	4
Cases where toxicology is performed.....	1,618
Bodies unidentified after examination	1
Unclaimed bodies	0
Exhumations	0
Bodies transported to the office	1,657
Hospital autopsies retained under ME jurisdiction	0
(Central office does not accept hospital autopsies)	

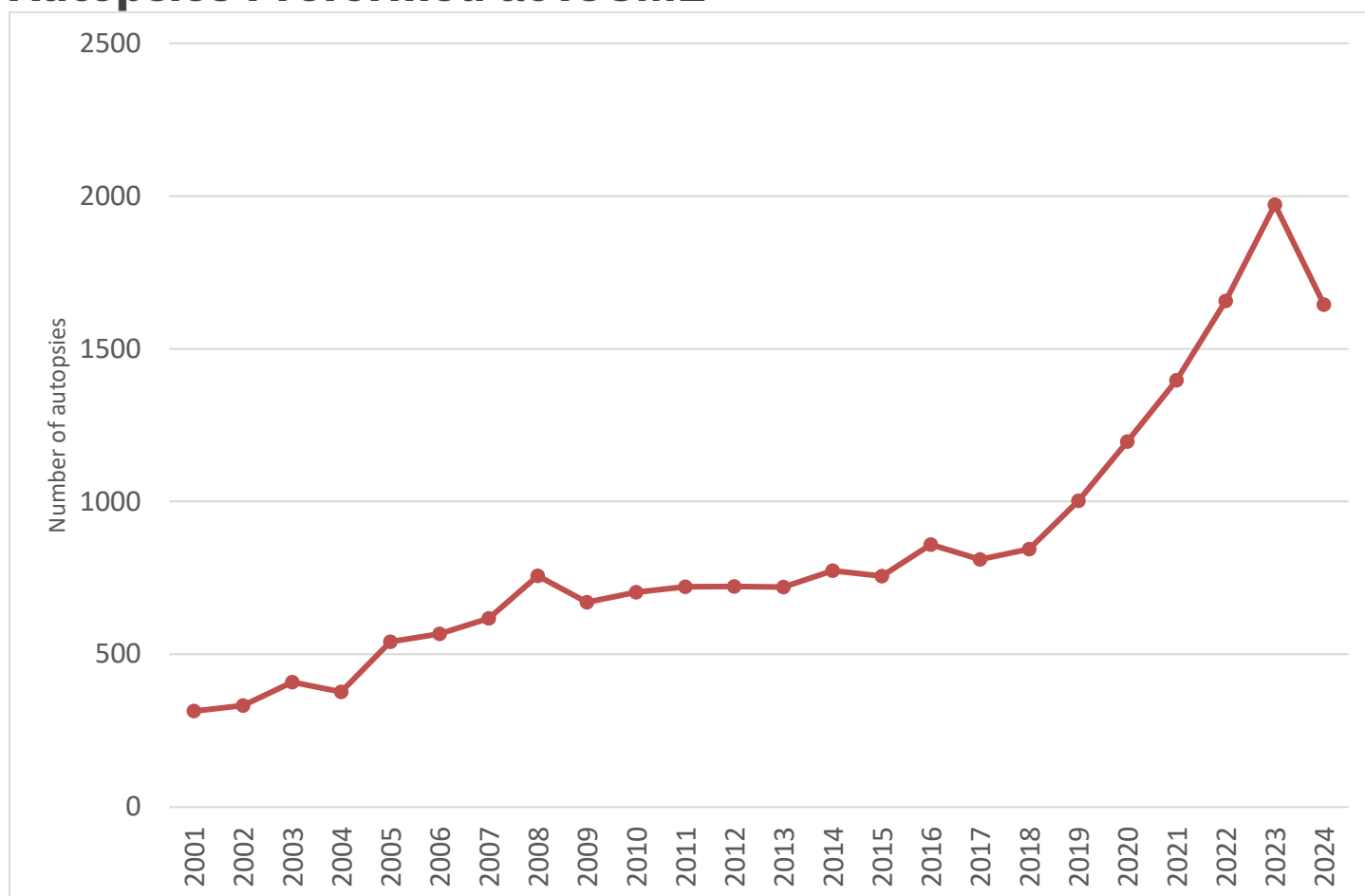
Manners of Deaths Percentages for Cases Performed at the Iowa Office of the State Medical Examiner



Iowa Deaths

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Deaths in Iowa	28,548	29,512	30,527	30,369	30,399	35,669	33,996	33,772	32,335	32,460
CME Investigated	5,285	5,524	5,789	5,515	6,686	10,893	10,615	11,033	10,318	10,700
% of Total Deaths	18%	19%	19%	18%	22%	30%	31%	33%	31%	32%
Autopsies Requested	1,533	1,565	1,543	1,499	1,472	1,868	2,135	2,209	2,247	2,477
% of ME Cases	29%	28%	28%	26%	22%	17%	20%	20%	21%	23%

Autopsies Preformed at IOSME



Categories of Death by Manner

NATURAL

Cardiac > Coronary Artery Disease	133
Cardiac > Non-atherogenic	82
Cerebrovascular	14
Chronic Alcohol-Related	57
Congenital Defect	3
Diabetes	22
Gastrointestinal	13
Hypertension	30
Infectious Disease	13
Natural Disease > NOS	22
Neoplasm	11
Pulmonary Embolism	30
Seizure	8

ACCIDENT

Asphyxia	46
Blunt Force Injury	55
Blunt Force Injury > Transportation	194
Chronic Alcohol-Related	2
Drowning	32
Electrical	2
Exposure	27
Fall	34
Fire > Motor Vehicle	4
Fire > Structure	22
Firearm > Handgun	0
Intoxication > Alcohol	8
Intoxication > Drug	173
Intoxication > Mixed Drug & Alcohol	14
Poisoning > Non-drug	0
Pulmonary Embolism	4
Seizure	2
Sepsis	0
Weather related	5

UNDETERMINED

Blunt Force Injury	3
Blunt Force Injury > Transportation	3
Cardiac > Coronary Artery Disease	2
Drowning	1
Firearm	1
Intoxication > Alcohol	1
Intoxication > Drug	6
SIDS/SUID	19
Undetermined	10

HOMICIDE

Asphyxia	5
Blunt Force Injury	10
Firearm > Handgun	28
Firearm > Rifle	1
Firearm > Shotgun	8
Firearm > NOS	12
Sharp Force Injury	6
Other	5

SUICIDE

Asphyxia > Carbon Monoxide	4
Asphyxia > Hanging	64
Asphyxia > Suffocation	2
Blunt Force Injury	3
Blunt Force Injury > Motor vehicle	4
Blunt Force Injury > Pedestrian	5
Drowning	1
Fire	0
Firearm > Handgun	154
Firearm > Rifle	17
Firearm > Shotgun	30
Intoxication > Drug	27
Intoxication > Mixed Drug & Alcohol	1
Sharp Force Injury	8

Summary

The IOSME has performed an increasing number of autopsies since 1999. The main reason for the increase has been due to the decrease in availability of pathologists throughout the state either willing or trained to perform forensic autopsies. The office has seen an increase in the number of yearly autopsies from under 200 in 2000, to a record high of 1972 autopsies in 2023. The increase in 2023 was due to the resignation of the Polk County Medical Examiner in November of 2022, who performed a majority of Polk County autopsies. The IOSME performed all Polk County forensic autopsies during 2023. In early 2024 a new Polk County Medical Examiner was appointed and performed Polk County forensic autopsies. During 2024 the IOSME provided autopsy services for 96 counties and intermittent back up autopsy service for the Polk County Medical Examiner Office.

Managing and securing medical examiner data is a major responsibility of the IOSME. The IOSME utilizes a computer case management system to perform this critical function. The computer case management application, Forensic Advantage System (FAS), went into production at the end of June 2014. FAS is a customizable off-the-shelf application developed by The Computer Solutions Company (TCSC) which was acquired by Think IT in 2018. Think IT sold the company to Caliber in 2020. The purchase of FAS was funded using Return on Investment (ROI) funds, IOSME general funds, and National Forensic Science Improvement grant funds. Some of the funds from the National Forensic Science Improvement Competitive Grant awarded to the IOSME in 2013 were used to cover expenses for necessary hardware to host FAS. Data entry into FAS began with entry of decedent's name, biographical information, and intake narrative information on cases accepted for autopsy at the IOSME. Over the course of several months, additional functions were implemented in FAS, including entry of and tracking of specimens acquired during autopsy and tracking of evidence.

In collaboration with the Bureau of Vital Statistics, a project was completed in 2019 that involved updating and revising the preliminary death investigation form (ME-1) into a web based electronic data entry system, EMER (Electronic Medical Examiner Record) that is integrated with the web interface of Iowa's electronic death registry system IVES (Iowa Vital Event System). County medical examiner personnel were trained in the use of the new system that went live in October 2019. Training materials and short how-to videos were available to all county medical examiners and county medical examiner investigators on the IOSME website. By the end of 2019 all, but with a few exceptions, of medical examiner cases were entered by county ME personnel into the ME section of the IVES system. A project was started in 2021 to import a majority of the data fields from IVES into FAS. In 2023, IVES data was imported in batches to the IOSME case management system. Work continues with the assistance of CDC funding to upgrade and improve medical examiner to vital records data interoperability to allow real-time import of IVES data to the IOSME case management system. This project also includes upgrading the systems to an HL7 FHIR (Fast Healthcare Interoperability Resources) standard.

The IOSME continued to support and participate in the annual Iowa Association of County Medical Examiners fall conference. In 2024, the conference was held in-person with an option for attending virtually. A primer on the basics of medical legal death investigation processes was held on the morning before the main conference. The IOSME provided nearly monthly one-day training opportunities for County Medical Examiners and County Medical Examiner Investigators. Participants received lecture and hands on training in entering preliminary death scene investigation information into IVES. The IOSME in partnership with the Criminal Justice Department at the Des Moines Area Community College in Ankeny, continued with a three-day course on medicolegal death investigation in June 2024. Reviews from the course were very favorable.

The Iowa Office of the State Medical Examiner looks forward to continuing in its commitment to quality improvement and in service to the citizens of Iowa.

Iowa Office of the State Medical Examiner
Annual Report 2024

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Iowa Department of Health and Human Services
Kelly Garcia, Director

State of Iowa
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