

DEATH INVESTIGATION AND FORENSIC PATHOLOGY CENTER STUDY - BACKGROUND MEMORANDUM

The Legislative Assembly approved 2015 House Concurrent Resolution No. 3004 ([Appendix A](#)) which provides the Legislative Management continue to study medicolegal death investigation in the state and how current best practices, including authorization, reporting, training, certification, and the use of information technology and toxicology, can improve death investigation systems in the state.

The 2015 Legislative Assembly also approved House Bill No. 1004, the appropriation bill for the State Department of Health. Section 7 of the bill ([Appendix B](#)) provides that during the 2015-16 interim, the Legislative Management consider studying the feasibility and desirability of the University of North Dakota acquiring the building that houses the University of North Dakota Forensic Pathology Center.

BACKGROUND INFORMATION

The 1995 Legislative Assembly created a new section to North Dakota Century Code Chapter 23-01 allowing the State Department of Health to perform autopsies and to employ a State Forensic Examiner to conduct investigations into cause of death. Chapter 11-19.1 requires, under most circumstances, each organized county to have a county coroner. The coroner, the coroner's medical deputy, the sheriff, or the state's attorney may direct an autopsy be performed. Section 11-19.1-11 provides the State Forensic Examiner or the State Forensic Examiner's authorized pathologist must perform the autopsy at a facility approved by the State Forensic Examiner. The state pays all of the costs to conduct the autopsy, which consists of staff, medical supplies, and laboratory testing. Except for the cost of an autopsy, investigation, or inquiry that results from the death of a patient or resident of the State Hospital or any other state residential facility or an inmate of a state penal institution and for the cost of an autopsy performed by the State Forensic Examiner, all costs with respect to the autopsy, the transporting of the body, and the costs of the investigation or inquiry are the responsibility of the county.

The number of forensic autopsies performed in North Dakota has been steadily increasing. The number of autopsies performed by the State Forensic Examiner increased 64.8 percent--from 196 autopsies in 2004 to 323 autopsies in 2011. In addition, the number of consultations increased 48 percent--from 83 consultations in 2010 to 123 consultations in 2011. The number of forensic autopsies performed by the department exceeded the number of autopsies recommended by the National Association of Medical Examiners in 2011. Accreditation standards indicate one forensic examiner should perform 225 to 250 autopsies per year. During the 2011-13 biennium, 764 autopsies were performed by the State Department of Health. Actual expenditures for the 2011-13 biennium were \$1,395,243, and the cost per autopsy for the biennium was \$1,826.

To accommodate the increased caseload, the department's 2013-15 budget request to the Governor proposed two options for addressing the increase in the number of autopsies performed by the State Forensic Examiner. One option was to contract with the University of North Dakota School of Medicine and Health Sciences to conduct medical examiner services for counties in the eastern part of North Dakota at an estimated cost of \$640,000, and the other option was to add a pathologist and support services to the State Forensic Examiner's office at the department, including two autopsy assistants and laboratory testing at an estimated cost of \$624,145. The 2013-15 biennium executive budget recommendation for the State Department of Health provided \$640,000 from the general fund for professional services to contract with the School of Medicine and Health Sciences to perform autopsies in the eastern part of the state. The Legislative Assembly reduced the funding to provide a total of \$480,000 of one-time funding from the general fund and provided for a study of autopsy funding and state and county responsibilities for the cost of autopsies. In addition, the Legislative Assembly provided \$1,360,585 to continue funding for existing forensic examiner staff (3 full-time equivalent (FTE) positions) for a total of \$1,840,585 from the general fund for autopsy services during the 2013-15 biennium.

In September 2013, the State Department of Health contracted with the School of Medicine and Health Sciences to perform autopsies in the eastern part of the state. Three forensic pathologists at the School of Medicine and Health Sciences performed autopsies at a morgue facility in Grand Forks during the 2013-15 biennium. The contract provided the School of Medicine and Health Sciences serve 13 counties in eastern North Dakota starting September 1, 2013, through June 30, 2015. Beginning July 1, 2014, eight additional counties began receiving services through the School of Medicine and Health Sciences through June 30, 2015, for a total of 21 counties. The contract provided the School of Medicine and Health Sciences bill the State Department of Health \$83,454 for the period September 1, 2013 through December 31, 2013. Thereafter, the School of Medicine and Health Sciences billed the department in equal quarterly installments of \$62,591 through June 30, 2015, for a total of \$459,000 during the 2013-15 biennium, regardless of the number of autopsies performed.

Remaining funding of \$21,000 was used to purchase an autopsy table for the State Forensic Examiner. The State Department of Health also contracts with the School of Medicine and Health Sciences to provide services, when necessary due to department workload or vacation, at a rate of \$2,000 per case. During the 2013-15 biennium, the State Forensic Examiner performed 552 autopsies, including 17 autopsies performed by the School of Medicine and Health Sciences under the contract that provides services while the State Forensic Examiner is away. Expenditures for the State Forensic Examiner are estimated to total \$1,432,081 during the 2013-15 biennium, not including expenditures for the School of Medicine and Health Sciences eastern counties contract, or approximately \$2,594 per case. The School of Medicine and Health Sciences began performing autopsies for counties in the eastern part of the state in September 2013 and performed 448 autopsies during the 2013-15 biennium at a contract cost of \$459,000, or \$1,025 per case.

A combined total of 1,000 autopsies were done by the State Forensic Examiner and the School of Medicine and Health Sciences during the 2013-15 biennium. Counties requesting the most autopsies include Cass (174), Grand Forks (124), Burleigh (86), Williams (72), and Ward (63). Of the 53 counties in the state, 25 requested five or fewer autopsies.

The executive recommendation for the 2015-17 biennium included \$640,000 from the general fund to continue contracting with the School of Medicine and Health Sciences to perform autopsies in the eastern part of the state, \$44,000 of one-time funding from the general fund for digital x-ray equipment for the forensic examiner, and \$20,000 of one-time funding from the general fund to modify the vital records system to allow electronic review. The Legislative Assembly provided, in House Bill No. 1004, \$480,000 from the general fund to the State Department of Health to contract with the School of Medicine and Health Sciences for autopsy services in the eastern part of the state and, in House Bill No. 1003, \$160,000 from the general fund to the University of North Dakota School of Medicine and Health Sciences for Department of Pathology services to provide a total of \$640,000 from the general fund, \$160,000 more than the 2013-15 biennium. The Legislative Assembly also provided \$44,000 of one-time funding from the general fund for digital x-ray equipment for the State Forensic Examiner, but did not include funding to modify the vital records system to allow electronic review. In addition, the Legislative Assembly provided \$1,502,924 to continue funding for existing forensic examiner staff (3 FTE positions) for a total of \$2,026,924 from the general fund for autopsy services during the 2015-17 biennium. The department anticipates the School of Medicine and Health Sciences will continue to serve the same 21 counties during the 2015-17 biennium. Counties to be served by the School of Medicine and Health Sciences during the 2015-17 biennium are expected to include Barnes, Benson, Cass, Cavalier, Eddy, Foster, Grand Forks, Griggs, Nelson, Pembina, Pierce, Ramsey, Ransom, Richland, Rolette, Sargent, Steele, Towner, Traill, Walsh, and Wells.

UNIVERSITY OF NORTH DAKOTA FORENSIC PATHOLOGY CENTER

The University of North Dakota School of Medicine and Health Sciences provides autopsy services in the University of North Dakota Forensic Pathology Center facility in Grand Forks. In August 2009, the University of North Dakota entered into a lease agreement with Aurora Medical Park, LLC, Fargo, for a 7,167 square foot building located within the Aurora Medical Center in Grand Forks. The lease agreement, for 120 months, was contingent upon the approval of a change of scope request for a federal Health Resources and Services Administration (HRSA) grant which would provide funding for a portion of the total cost of construction. Construction costs totaled \$1,944,000, of which \$998,645 was paid through the HRSA grant. The remaining cost of \$945,355 was the basis for the lease (\$94,535 per year or \$7,878 per month). A summary of annual lease payments for the Forensic Pathology Center since lease inception is attached as [Appendix C](#). As noted on the attachment, lease costs do not include property taxes or condo fees. Subsequent lease amending agreements changed the lease term to 300 months and transferred the landlord's interest to 52nd Avenue Investments, LLC. A copy of the lease agreement is attached as [Appendix D](#) and additional lease documents, including lease amending agreements are attached as [Appendix E](#). In addition to the cost of construction, HRSA funds totaling \$652,356 were used to purchase major equipment and local funds, available from the Forensic Pathology Center forensic services, totaling \$150,000 were used for furnishings, signage, and small office equipment. The Forensic Pathology Center, constructed in 2010, began accepting cases in 2011. Information provided by the School of Medicine and Health Sciences indicates, based on an insurance estimate, the current value of the building is \$1.5 million.

Actual expenditures for the Forensic Pathology Center during the 2013-15 biennium totaled \$1,105,138, including 4.85 funded FTE positions, of which \$459,432 was provided through the State Department of Health contract. In addition, there were 3.15 in-kind FTE positions required during the 2013-15 biennium. The Forensic Pathology Center budget for the 2015-17 biennium totals \$1,836,370, of which \$160,000 is provided by the Legislative Assembly from the general fund directly to the School of Medicine and Health Sciences and \$480,000 is provided through the State Department of Health contract for autopsy services. The 2015-17 biennium budget includes funding for 4.40 FTE positions and an additional 4.10 in-kind FTE positions are also identified. The

2013-15 and 2015-17 biennium financial summaries for the Forensic Pathology Center are attached as [Appendix F](#).

PREVIOUS STUDIES

The 2013-14 Health Services Committee, pursuant to Section 9 of Senate Bill No. 2004, studied funding provided by the state for autopsies and state and county responsibilities for the cost of autopsies, including the feasibility and desirability of counties sharing in the cost of autopsies performed by the State Department of Health and the School of Medicine and Health Sciences. The committee received information regarding the current system of death investigation, autopsy costs, medicolegal death investigation system funding models, and recommendations for improvements to the medicolegal death investigation system in the state. The committee recommended House Bill No. 1042 to provide appropriations to the State Department of Health for information technology costs related to the electronic review of death records (\$15,000) and for the reimbursement of travel costs related to county coroner training and the planning of future coroner services in the state (\$39,375). House Bill No. 1042 was not approved by the Legislative Assembly. The 2013-14 Health Services Committee determined additional information was necessary and also recommended House Concurrent Resolution No. 3004 directing the Legislative Management to continue to study medicolegal death investigation in the state and how current best practices, including authorization, reporting, training, certification, and the use of information technology and toxicology, can improve death investigation systems in the state.

CURRENT SYSTEM OF DEATH INVESTIGATION

In North Dakota coroners are appointed by each county commission and the State Forensic Examiner provides expert consultation. A 2014 survey of counties found the duties of county coroners are performed by medical doctors (23 counties), sheriffs (13 counties), funeral directors (11 counties), registered nurses (3 counties), the medical school (1 county), a 911 coordinator/emergency manager, and a police chief.

A coroner investigates deaths that are the result of criminal or violent means, such as homicide, suicide, and accident; deaths of individuals who die suddenly when in apparent good health; or deaths of a suspicious or unusual manner. A coroner works closely with law enforcement to determine if a crime may have been committed and provides a particular medical perspective on the investigation. Issues of public health and safety, such as unusual contagious infections or deaths from environmental hazards, may be raised by a coroner or medical examiner. A coroner signs death certificates for those deaths investigated indicating the cause of death and manner of death, whether that be homicide, suicide, accident, natural causes, or undetermined. The State Forensic Examiner assumes jurisdiction over a dead body when requested to do so by a coroner or state's attorney. Because not all counties have a trained death investigator, not all deaths that warrant review may be investigated. If a coroner decides an autopsy is not necessary, the family may make arrangements for an autopsy and is responsible for the cost.

Professional medicolegal death investigation requires adequate resources and well-trained personnel. In addition to qualified personnel, adequate equipment and facilities are also a necessity. Counties often rely on local funeral homes for assistance in the handling and storage of deceased bodies. If a body requires examination in more detail or toxicology specimens, these procedures must be done in the funeral home's preparation rooms, raising concerns regarding the chain of custody of decedents. Because autopsies are not done in the county, arranging appropriate transportation to Bismarck or Grand Forks can also be an issue. Coroners work closely with local funeral homes and the ambulance services to coordinate care of the deceased individuals and transportation as needed.

In 2012 the most autopsies were performed in the west central region (83 autopsies), including 55 autopsies in Burleigh County. Among counties, Cass County performed the most with 58 autopsies. The fewest autopsies were performed in the southwest region (20 autopsies). While more forensic autopsies are performed on older adults ages 30 to 59, the number of autopsies among adults ages 20 to 29 has been increasing.

COUNTY AUTOPSY COSTS

Prior to the creation of the State Forensic Examiner's office in 1995, counties were responsible for death investigations. Increasing costs to counties and desire to remove the perceived disincentive to requesting necessary autopsies and to increase consistency and professionalism led to legislation to shift part of the cost of conducting autopsies to the state. The shared responsibility acts as both an incentive and a disincentive to refer cases. County costs include the cost of local coroners and transportation of the bodies for autopsy. Counties expressed concern that if they were required to pay for autopsies, there would be more of a disincentive to refer cases. The State Department of Health contract with the School of Medicine and Health Sciences for conducting autopsies has resulted in transportation cost-savings for counties.

Counties spent \$622,399 of property tax revenue in calendar year 2013 for coroner and autopsy services and budgeted \$722,759 for calendar year 2014. Statewide in 2013, approximately 78 percent of those costs were related to coroner fees, 18 percent were for body transport, 2 percent were for autopsy fees (Grand Forks County \$10,609 and Cass County \$2,000), and 2 percent were for supplies and other costs. Prior to the 2013-15 biennium, Grand Forks County paid for the cost of autopsies from Grand Forks County performed at the School of Medicine and Health Sciences, rather than sending bodies to the State Forensic Examiner. Grand Forks County budgeted \$11,000 for autopsy fees during calendar year 2014.

Some counties pay the coroner by case, while others budget for annual contracts for services and salaries. Other costs include transportation, toxicology, supplies, and other expenses of the office. The University of North Dakota School of Medicine and Health Sciences Department of Pathology sends qualitative and quantitative testing to out-of-state laboratories and the cost of the testing is included in the autopsy fee. The State Department of Health receives qualitative testing services from the State Crime Laboratory and sends positive qualitative tests to an out-of-state laboratory for quantitative analysis. In some cases law enforcement may pay laboratories for quantitative toxicology services.

MEDICOLEGAL DEATH INVESTIGATION SYSTEM FUNDING MODELS

Medicolegal death investigation systems may be funded by a per capita model or a fee-for-service model. The per capita model may be more appropriate for smaller counties because costs may influence autopsy decisions in the fee-for-service model.

Medicolegal death investigation and forensic pathology may be a pure state model, a pure county model, or a hybrid. North Dakota is currently a hybrid model.

In a pure state model, the state is responsible for the entire system. This model is generally used in geographically small states. There is generally a single, centrally located office, and all personnel involved in death investigations are from the state office. Advantages and disadvantages of the pure state model include:

Advantages:

- Specialization of services, more physicians, more staff, more specialized equipment possible such as CT scanners, MRIs, neuropathologists, pediatric pathologists, etc.
- Counties do not provide services or financial support.
- Generally most economical for small geographic states.
- Clear delineation and required independence from judicial and law enforcement branches.

Disadvantages:

- Border and geographic issues.
- Reduced county and local accountability.
- Tends not to follow medical referral lines, difficulties with records, trauma reporting, etc.
- May have significant transportation expenses and access issues.
- May not be responsive to local issues and needs.

In the pure county model, each county is responsible for its own system. This model is most effective in counties with a population in excess of one million people. Advantages and disadvantages of the pure county model include:

Advantages:

- Most responsive to local constituents (family, law enforcement, hospitals, trauma committees, etc.).
- Flexible model with staffing and cases.
- Follows natural medical referral lines already in existence.

Disadvantages:

- Fragmentation within an area and a state possible. Significant differences in services and quality within a state.

- Often large discrepancies in services and investigations across county lines.
- Limited coordination of public health and other data to the state.
- Generally more difficult to ensure quality assurance and control initiatives.
- May not have independence from law enforcement or judicial systems.
- Not possible for small and rural counties.

CONSIDERATIONS FOR IMPROVEMENTS TO THE MEDICOLEGAL DEATH INVESTIGATION SYSTEM IN THE STATE

Medicolegal death investigation provides a service to families and benefits law enforcement and public health. Although the role of forensic death investigation is often associated with criminal justice, a greater role is played in public and population health. The sharing of knowledge and education benefits practitioners, clients, regulators, and future generations. Certification and accreditation are fundamental to the public health system. Accreditation through the National Association of Medical Examiners assures the public that the office of the medical examiner has the proper facilities, policies, and procedures to perform modern scientific death investigations. There are currently no accredited facilities for forensic autopsies in the state, however the School of Medicine and Health Sciences is endeavoring to become accredited.

If judicial and public health missions of the medicolegal death investigation system are met in a manner which accomplishes full accreditation of the system, the standard metric of number of autopsies needed per population base is constant at one autopsy per 1,000 of population. The appropriate goal for travel times to autopsy facilities is generally less than 120 minutes. The concept of regional medical examiners could expand services in North Dakota but would require adding an examiner's office in the western part of the state.

At the request of the 2013-14 Health Services Committee, the State Forensic Examiner's office collaborated with counties and other stakeholders to develop recommendations for a system approach to death investigation, recommendations for the framework of a regional death investigation system, and for the establishment and implementation of statewide standards for death investigation. Recommendations of the stakeholder group for improvement to the medicolegal death investigation system in the state were as follows:

- Maintain a manageable workload at the State Forensic Examiner's office in Bismarck. The group recommended the State Department of Health receive continued funding to maintain the contractual agreement between the department and the School of Medicine and Health Sciences for forensic autopsy services. The Legislative Assembly provided \$480,000 from the general fund for the State Department of Health to contract with the School of Medicine and Health Sciences to perform autopsies in the eastern part of the state during the 2015-17 biennium, the same as the 2013-15 biennium appropriation. In addition, \$160,000 from the general fund was added to the budget of the University of North Dakota School of Medicine and Health Sciences for Department of Pathology services to provide a total of \$640,000 from the general fund, \$160,000 more than the 2013-15 biennium.
- Provide authority to the State Forensic Examiner to review non-natural deaths and amend the cause and manner of death if necessary. The State Department of Health indicated this could be accomplished through a change to the North Dakota Administrative Code.
- Develop a system to prompt health care providers to consult with the local coroner in all deaths that are not natural deaths. The State Department of Health indicated a component is being developed in its electronic death certificate system.
- Allow copies of toxicology reports generated by the State Crime Laboratory to be sent to the State Forensic Examiner. The State Department of Health indicated this could be implemented by the State Crime Laboratory.
- Increase the number of people in the state trained in death scene investigation. Increase and improve the knowledge and skills of coroners, death investigators, and others who may conduct death investigations or assist in death investigations, including a mechanism to offset travel costs for the training of coroners. The department estimated this initiative would require an appropriation of \$29,375. In addition, scholarships to assist in travel costs for five county coroners per year to attend training provided by the Hennepin County Coroner in Minnesota on death investigations would require an additional appropriation of \$10,000. The 2013-14 Health Services Committee recommended House Bill No. 1042 to provide appropriations to the State Department of Health for information technology costs related to the electronic review of death records (\$15,000) and for the reimbursement of travel costs related to county coroner training and the

planning of future coroner services in the state (\$39,375). House Bill No. 1042 was not approved by the Legislative Assembly.

- Develop the capacity of the State Crime Laboratory to produce quantitative toxicology results. Currently, the laboratory can provide only qualitative results. The State Forensic Examiner sends samples for qualitative drug and toxicology testing to the State Crime Laboratory. Those samples in which drugs or toxins are detected are then sent to NMS Labs in Pennsylvania for quantified analysis. The cost for the State Forensic Examiner's office, the University of North Dakota School of Medicine and Health Sciences Department of Pathology, and all county coroners to contract for forensic quantitative toxicology testing by an out-of-state laboratory is estimated to total \$93,855 for the 2013-15 biennium. The estimated cost of implementing quantitative toxicology analysis at the State Crime Laboratory is \$437,028, including 2 FTE positions (\$178,514 each) and related operating costs (\$80,000). The Attorney General indicated quantitative toxicology analysis could be added in the future when it is determined the additional analysis will not cause delays in current screening services. The Attorney General indicated implementing quantitative toxicology analysis without additional resources would delay current screening results.
- Allow the State Forensic Examiner and University of North Dakota School of Medicine and Health Sciences Department of Pathology to review death records electronically and allow these entities to send the electronic record to other medical providers for further review or correction. The Division of Vital Records at the State Department of Health indicated they could work with the Information Technology Department to make the necessary modifications. The modifications were estimated to cost between \$10,000 and \$20,000. The authority for the State Forensic Examiner could be accomplished with a rule change.
- Develop a mass fatality response plan for the state.

The 2013-14 Health Services Committee determined future study of the long range plan for medicolegal death investigation should continue to formulate recommendations for improvements to the state's medicolegal death investigation system. Other issues to be addressed may include:

- Facilities in Bismarck and Grand Forks - Including control or ownership of the forensic facility in Grand Forks, imaging equipment, biosafety, and disaster planning. This study was prioritized by the Legislative Management and has been combined with the continued study of medicolegal death investigation in the state.
- Education and training of investigators and first responders.
- Financing and cost-sharing.
- Plan for national accreditation of all forensic facilities in the state.
- Design and implementation of a plan for training and distribution of qualified and certified medicolegal death investigators for all regions of North Dakota.
- Governance - In some models, governance of the death investigation system is independent of any state department and may be governed by a commission which includes various health department administrators, academics, and law enforcement professionals.

STUDY PLAN

The committee may wish to proceed with this study as follows:

1. Receive an update from the State Department of Health regarding the implementation of prior recommendations for a system approach to death investigation, the framework of a regional death investigation system, and statewide standards for death investigation, including the effect of implementation on autopsy services and cost.
2. Gather and review information regarding trends in the number of autopsies performed in the state and the regions in which autopsies are originating.
3. Gather and review information regarding the effects of the School of Medicine and Health Sciences contract on autopsy costs, gaps in autopsy services, autopsy services in the eastern part of the state, and autopsies performed by the State Forensic Examiner during the 2013-15 biennium.
4. Gather and review information regarding further recommendations for a system approach to death investigation, the framework of a regional death investigation system, and statewide standards for death investigation, including the effect of implementation on autopsy services, cost, legislation, and funding required for implementation.

5. Gather and review information regarding the impact of stakeholder recommendations and other issues to be considered by the committee on counties, including the feasibility and desirability of counties sharing in the cost of autopsies.
6. Gather and review information regarding the acquisition of the University of North Dakota Forensic Pathology Center facility by the University of North Dakota, including acquisition cost, possible funding sources, issues related to ownership, and ongoing operating costs related to acquisition.
7. Develop committee recommendations and prepare any legislation necessary to implement the committee recommendations.
8. Prepare a final report for submission to the Legislative Management.

ATTACH:6