

Testimony
Health Services Interim Committee
July 30, 2014
North Dakota Department of Health

Greetings Chairman Lee and members of the Interim Health Services Committee:

I am honored to provide some information to your committee regarding models and systems for medicolegal death investigation in North Dakota as well as potential funding and resources needed for the delivery and establishment of statewide standards and expectations for achieving national standards for death investigation. Due to a previously scheduled trip to Scotland, I am unable to testify in person but have prepared some draft materials for your review. Dr. Sarah Meyers, an Assistant Professor in Pathology at UNDSMHS and a Board Certified Forensic Pathologist, is available for questions and clarification. I will of course answer any additional points when I return August 1, 2014.

First, I want to thank you and all involved for the tremendous progress North Dakota has made in progress to this goal. The strides we as a State have made are significant. You should be proud of the service and accomplishments you and others made possible. A mere 20 years ago, North Dakota had NO facilities for forensic autopsies, NO forensic pathologists in the state, NO medicolegal death investigators and a loosely organized county system of part-time Coroners, none of which had formal training or the resources they needed. Today, we have two centers, positioned to serve the state needs, four board certified forensic pathologists, and five medicolegal death investigators certified by the American Board of Medicolegal death investigators. There is an awareness of the importance of this work for all citizens and contributions to many state agencies and services, such as the Court systems, Child Fatality Review, Domestic Violence review, Work-related and public safety are serving the citizens of the State.

There is more to do, but we have turned the corner and now are poised to achieve the national standards in medicolegal death investigation for all our citizens.

I have prepared some draft assessments of the system and assets we have, as well as areas that may need more immediate attention and a long range plan for achieving full national standards within the next decade. Due to time considerations, these are not fully vetted with all parties and should be considered working drafts for consideration.

I believe it is important to see where we want to be, then consider the possible routes to achieve that goal.

The ultimate goal should be to have a medicolegal death investigation system in the state that fully meets all national standards.

1. All facilities conducting medicolegal death investigation should be accredited by NAME, the standard for forensic pathology autopsy facilities.
2. All autopsies should be done by pathologists who are board certified (or eligible) in Forensic Pathology by the American Board of Pathology.
3. All death investigations should be done by responders who are trained in death investigation, but who have access to medical legal death investigators certified by the American Board of Medicolegal Death Investigation.
4. All decision making within the MLDI process is made by Forensic Pathologists, guided by standards of NAME for MLDI.
5. All deaths occurring and certified in North Dakota are investigated with dignity and respect for the individual and families. All investigations are timely, complete and meet national standards for death

investigations. All citizens of North Dakota are equally and compassionately served regardless of county, resources or circumstances of death.

6. A comprehensive system of quality review, assurance and compliance assures that information from death investigations within the state is reported and incorporated into improvements in health, safety, injury / hazard prevention and if appropriate, judicial systems, for the State.
7. A continuous process for quality review, continuing education and advancement of death investigation is present and robustly integrated into appropriate State entities.
8. Transparency and accountability of process and finances are present and robust within the MLDI system of the State.
9. Strong linkages and collaborations with other State agencies and resources, such as UND, other Universities and Colleges for training, State agencies for system reviews and collaborations, State government for the many overlapping functions of death investigation (i.e. Highway Patrol, Attorney General, Child Protective Services, Injury Prevention, Suicide prevention, etc.).

These are my goals. I hope they become State goals and directions.

As I stated, much has been accomplished. There are now the facilities needed to accomplish this. A strong base of professionals are present and working toward system improvement. Many of the important linkages between the State, Counties, Universities and a variety of State agencies are present, strong and growing. There is a groundswell of support from Counties, Coroners, law enforcement, families and citizens. These goals are achievable.

I will highlight steps I believe are important against the background of resources and systems choices I was asked to provide to this Subcommittee.

First, some general funding models are given (Funding Models, appendix 1). Currently, the Bismarck office operates on a "cost" model; UND office operates on a "contract or per capita" model. Either are fine, although I believe there are advantages to a carefully structured "per capita" model. Going forward, I believe a natural selection will occur or both offices can exist within the models they currently operate under. I would personally caution AGAINST a "fee for service" or "Autopsy only" model. This does not account for the totality of death investigation and ultimately is more costly with lower service delivery.

Second, I have provided an overview of State vs. County Systems (Appendix 2) and an overview of the complexity of total costs in a medicolegal death investigation system (Appendix 3, 4) and our existing resources and potential short and long term goals (Appendix 5).

Proximate goals and objectives are provided for consideration. These include:

- 1) Control / ownership of forensic facility in Grand Forks
- 2) Education and training of investigators and first responders
- 3) Developing a strategy to meet imaging (radiology) needs within the forensic system, recognizing the size of the total system and need for meeting developing national expectations and standards.
- 4) Aggressively planning for national accreditation of all forensic facilities in North Dakota and making future funding contingent on maintenance of accreditation.
- 5) Designing and implementing plan for training and distribution of qualified and certified medicolegal death investigators for all regions of North Dakota.

Thank you for your time. Dr. Meyers is available for immediate questions and clarifications. I will continue to be available and work with this and other committees to achieve excellence in forensic services and medicolegal death investigations for North Dakota.

Funding Models:

- 1) Cost model: Entity responsible covers all cost as part of larger budget. If cost savings or cost overage occurs, funding is handled by entity. If new positions / capital needed, entity either provides or denies.
 - a. No incentive to contain costs or expand workload
 - b. Budgeting part of larger system
 - c. Can create challenges to meet family requests, defense requests and other professional obligations.
 - d. Reduced incentive to collaborate with entities outside of funding division, i.e. other state or governmental agencies, research and professional improvement efforts, etc.
- 2) Per capita or contract model. Government or contracting entity provides a fixed fee for provision of services. Fee may be historically based or based on population (“per capita”) or death rate of entity (useful when counties have large referral base hospital system and more deaths than expected in a county based on population). Optimal when death investigation is included in service delivery model, i.e. local death investigators / Coroners are integral part of system.
 - a. Budgeting for both entity and service provider known
 - b. Decision process involves case considerations, not financial incentives / disincentives
 - c. Allows for cost reduction by providing opportunities for expanded workload, thus reducing high fixed overhead costs
 - d. Minimizes budgetary increases / decreases annually if funding mechanisms can carry-over between fiscal years (often needed when multiple entities are on different financial calendars)
 - e. Some systems provide “cost-sharing,” so any excess funding is distributed between contracting entities at conclusion of fiscal reporting time. Must have “carry-over” funding.
 - f. High incentive to work with entities, service provider and others to maximize service and reduce costs, i.e. use of community EMS providers / investigators, multi-year contracts for services such as transport, histology, toxicology, other experts.
 - g. Potential abuse / lack of accountability if service entity is not part of transparent reporting system, e.g. books should be open or accounted for by public entity.
- 3) Service provided model: Entity provides “fee for service” for a specific need, i.e. autopsy, court testimony, response to scene, investigation, etc.
 - a. Minimal budgeting ability for both entity and service provider
 - b. TENDS TO LIMIT DECISION PROCESS – costs may become deciding factor and subtle homicides, some drug-related, occupational/environmental hazards and other deaths are missed. IT IS THE LEAST RESPONSIVE SYSTEM TO FAMILIES.
 - c. Most expensive model in complex cases, such as child abuse where evaluation requires extensive testing, multiple consultations with investigators, courts, etc.
 - d. May produce real or perceived conflict of interest when advice is needed for case resolution
 - e. Tends to increase costs with financial incentives for increasing workload and increased testing
 - f. No incentive to report or participate in larger surveillance and monitoring for public health and safety issues

Overview: State vs. County Death Investigation Systems

There are many different medicolegal death investigation systems within the US and around the world. All have advantages and disadvantages, but there are extreme variations in level of service and meeting of expectations of modern, excellent and equitable medicolegal death investigation.

This is an overview of two common themes of medicolegal death investigations – a pure State based system and a pure County based system. In practice, hybrids of these often occur due to the wide variation in local needs, geography and resources. There are however, essential elements of any medicolegal death investigation system and these will be considered in turn, with notations on how some state, regional and county based systems address these fundamental needs. Ultimately, the governmental body must select elements and solutions which best serve their constituency to meet national expectations and standards for medicolegal death investigation.

| | State | County-Based |
|-------------------------|---|--|
| Responsibilities | Assumes ALL responsibilities <ul style="list-style-type: none"> • Facilities and Capitol • Transportation • All Personnel • IT and support May be less responsive to individual citizens and local county concerns | County assumes ALL responsibilities <ul style="list-style-type: none"> • Large autonomy of county • Often non-Forensic Pathologist or physician run in many jurisdictions (CA, TX, NV, OH, others) Often with large discrepancy in services and investigations between counties |
| Oversight | <ul style="list-style-type: none"> • May be single department / person • May be Board of elected or appointed (usually by Governor) or delegated (i.e. Commission of individuals defined by responsibility, i.e. Head of Health Department, Law Enforcement Agency, Medical Board, University etc.) • Balance between independence, public safety (law enforcement), public health and medical practice standards must be met. Critically important to remove reporting / influence from judicial and law enforcement arm. | <ul style="list-style-type: none"> • Usually single person or County Commission, often without expertise on functions and operations of forensic death investigation offices • Some heads of systems elected, some appointed, some with mandatory qualifications • Some systems (FL) with oversight by State Board • Some systems (MN) with statutory standards, but no ruling body. |
| Office Structure | <ul style="list-style-type: none"> • Single office (best with smaller states and/or centralized population) RI, CT, MD, NM • Multiple, regionalized offices (VA, GA) Variable level of state control and input. | <ul style="list-style-type: none"> • Single office (rare exceptions, NYC) • Very economical for large population base, small geography. • Minimum population base ~ 1M; best with higher populations (LA, NYC) |
| Advantages | <ul style="list-style-type: none"> • Improves equality of services across state | <ul style="list-style-type: none"> • Most responsive to local constituents |

| | State | County-Based |
|----------------------|---|--|
| | <ul style="list-style-type: none"> • Centralization with greater opportunity for specialization of services (more physicians, more staff, advanced facilities and services) • Greater opportunity for state information on deaths, public safety and public health issues, trends and developments • Usually more economical • Ease of capital, bonds, purchasing agreements, etc. • Ready access for small counties, more equalizations of services • Ease of state-directed registry, funding opportunities, i.e. NVDRS | <p>(families, law enforcement, hospitals, trauma and county commissions)</p> <ul style="list-style-type: none"> • Most economical for large population bases with small geography • Flexible structure with alternate business models (privatization, University affiliations/ownership, referral counties or referrals from adjacent states, others) • Follows natural medical referral lines |
| Disadvantages | <ul style="list-style-type: none"> • Geographic and border issues; often natural medical referral lines broken • Reduced county and local accountability • Transportation and access issues, particularly across larger and rural states • May have less flexibility with practice plans, referrals, and service expansion to geographically and medically logical sites (i.e. incidents at state boundaries). | <ul style="list-style-type: none"> • Impossible without large population base <ul style="list-style-type: none"> ○ Grouping of counties to single office (FL) may be done in smaller counties, however start to lose local control • Fragmentation possible between adjacent counties • May be difficult to assure quality and review • More sensitive to local economic issues • More susceptible to influence / perception of influence from judicial and law enforcement. • May be difficult for most county systems for imaging, specialized consultants and advances in MLDI needs. • Less facile access to emerging regional and state trends, data sharing and emerging patterns of violence, drugs, infections and other practice parameters. • Fewer opportunities for scientific advancement, practice development and research advancement of field. • Oversight issues (cited in State) are more difficult in county systems, i.e. more single agency / person control. |

Single Office vs. Regionalized Offices:

Regional offices may be independent (Pure County based system), integrated totally into a larger system (state or multi-county system) or may be independent, contracting with individual counties, even across state lines. There are models of University, hospital based, multiple county consortiums or entirely independent offices.

The complexities inherent to a modern medicolegal death investigation office are substantial. Most systems evolved in large population cities, simply because this provided the critical mass of infrastructure needed for sustaining the system. This also explains how advancement of medicolegal death investigation system stalled outside of large population bases.

Modern medicolegal death investigation systems require a broad range of professionals, support staff and significant infrastructure in buildings, equipment, imaging and broad consultative ability from many experts, both within and outside of the forensic science community. The need for a timely response 24/7, requires significant staffing investments, regardless of population served. The infrastructure cost in building, major equipment and imaging also has a high initial investment. Larger populations have an economy of scale by providing effective utilization of high building and equipment costs, maximizing work responsibility of professionals and para-professionals and national accreditation, certification and continuing education costs. The maximum efficiency comes from small geographic areas with large populations (over 2 million).

Regionalized offices generally provide more responsive service to citizens with decrease in travel time and more local delivery of medical and forensic services. Transportation delays are minimized and transportation costs decrease. A balance is critical for establishment of regional offices, since the minimum population base for an office is considered 500,000 people and optimal population base is over one million people. Smaller (less than 1 Million) population bases result in higher costs since the high infrastructure of buildings and personnel costs cannot be maximally utilized. The minimum population base for an office is generally accepted as ~ 400,000 population base.

In general, transportation times of 2 hours or less are within national expectations of provision of forensic services. With transport times of ~ 2 hours or less, the expense of additional regional facilities are generally not acceptable. States that have invested in multiple smaller facilities (i.e. GA, KY) with only one or two pathologists in an office have been forced to close one or more of these facilities, either from recruitment issues or from a purely financial perspective of operating and staffing multiple facilities that can never operate at full capacity. GA at one time had 6 facilities; one serving Fulton (Atlanta) county, one in the Atlanta area serving the state (main office), then initiated four additional facilities regionally (Macon, Decatur, Savannah, Moultrie); a single regional facility (Savannah) survives today.

In frontier and rural areas, the transportation issues are increasingly significant and a balance is needed between travel times and population base locations.

General Cost Centers:

- 1) Building and capital
 - a. Construction of buildings (land, taxes if not governmental)
 - b. Equipment and other capital expenses (building and physician related)
 - c. Insurance and liability
 - d. Repairs needed in building
 - e. Grounds-keeping, snow removal, exterior and site costs
- 2) Personnel
 - a. Death investigation and scenes (local individuals and distant consultants)
 - b. Autopsy performance
 - c. Professional Consultants (Neuropathology, cardiac and other consultations, anthropology, dental, forensic specialists)
 - d. Court preparation and time
 - e. Consult / meetings / questions from family
 - f. Interaction / reporting with health systems, work inquiries, others
 - g. Public health review and surveillance (work related injury / death; suicide, mental health issues, medical services and review, etc.)
 - h. Public safety review and surveillance (i.e. child fatality, domestic violence, drug-related deaths, motor vehicle, firearms, etc.)
- 3) Transportation
 - a. Scene investigation, body bags, local transport, local storage
 - b. Transport involving autopsy / investigative facilities
 - c. Additional personnel (i.e. police investigators, others) to autopsy facility for case and evidence integrity
- 4) Operating
 - a. Local death investigation costs (protective equipment, body bags, scene investigation materials)
 - b. Standard Autopsy costs (PPE, supplies, formalin, containers, tubes, etc.)
 - c. Biohazard / hazardous waste disposal
 - d. Cleaning, trash disposal
 - e. Exceptional testing costs (advanced toxicology “designer drugs”, molecular testing for sudden death or pharmacogenomics in drug deaths, etc.)
 - f. Building and clerical costs (heating, cooling, electricity, cleaning, office supplies, reports, mailing, copy costs, etc.)
 - g. Small equipment costs (printers, cameras, computers, small medical equipment, etc.)
 - h. Minor repair, routine maintenance and cleaning
 - i. Off-hours controlled building access
- 5) Special operating costs
 - a. Information technology costs (initial larger investment with secure, single system). Also minor IT for office functions, updates, court and education/training materials
 - b. Imaging
 - i. In house: Basic radiologic studies (required); LoDox becoming standard. With facilities serving > 5 million, in-house CT and MRI. (Very high operating expense for CT/MRI)
 - ii. Contract: Ability to obtain CT and MRI in selected cases (child abuse, homicides for court demonstration, facial or complex fractures, ethnic/religious groups objecting to autopsy)

- c. Toxicology:
 - i. Routine on nearly every autopsy; must be quantitated (exact levels, not just potential presence of drugs). Accreditation standards for forensic autopsy accreditation include a PhD level toxicologist at laboratory and accreditation of the toxicology laboratory by CAP (College of American Pathologists, deemed entity for hospital and clinical laboratories) or American Society for Forensic Toxicology.
 - ii. Specialized: Designer drugs, gas screens (Hydrogen sulfide, anesthetic gases, “huffing” gases, etc.). Most assays very customized and expensive. Includes rare need for unusual studies, such as heavy metal determination, insulin, other substances not analyzed on standard or expanded toxicology screens.
- d. Other laboratory testing (microbiology, chemistry, as indicated): Needed in selected cases, such as suspected infectious disease outbreaks, sudden deaths in infants / child; public health surveillance events. Many performed by routine hospital clinical laboratories.
- e. Histology services (may be on-site or contracted; GF at UND Pathology; Contracted at Bismarck). Histology needed in many cases routinely; gold standard is histology on all non-skeletonized cases. Slides and blocks resulting from histologic examination must be maintained for a minimum of 10 years (blocks) and indefinitely (slides). Excellent mechanism for case and peer review; often required for legal review.
- f. Specialized testing and expert consultations
 - i. Routine (DNA (for identification and occasional paternity), DNA for evidence / legal reasons, dental ID/analysis, anthropology, some cardiac, neuropathology or other consult)
 - ii. Molecular testing for disease (i.e. sudden cardiac deaths, other genetic diseases) and metabolism (pharmacogenomics of drugs – if an individual’s metabolism produces unusual products or different rates of metabolism, i.e. high levels of drug on low dosage).
- g. Cremation or disposition of unclaimed bodies (may be in Social Services or other agency)
- 6) Education, professional development and fees: Required for physicians and investigators to maintain professional competencies or practice.
 - a. Continuing Education
 - b. Professional meeting travel
 - c. Education (Books, journals, library charges)
 - d. Physician license and malpractice / liability insurance
- 7) System investment and improvement (minor direct expenses; most personnel related. Often cost off-set by improvements in services / delivery or by Federal or other grants.)
 - a. Quality assurance programs
 - b. State, local, regional review
 - c. System improvement / research / funding and registries
 - d. Participation in quality improvements to state systems relating to death and death investigation, trauma and injury
 - e. Collaboration and initiation of public health and safety reporting and surveillance programs, especially those with unique implications for health and well-being of North Dakotans and/or participation in funded Federal registries and studies.

Existing Resources and Potential Needs

| | Bismarck | Grand Forks | Comments and/or National Recommendations |
|-------------------------------------|--|--|--|
| Building | | | |
| Square Ft | ~ 5,000 | 7,100 | National recommendations for service areas: (serving population of 500,000) Square footage: 10,000 Autopsy area: 1,350 Body storage: 20 |
| Opened | 2006 | 2011 | |
| Ownership | State – Build with appropriations and Bonds | Private Ownership; leased to UND 25 years. | GF Facility built with private funding, federal grants and income from forensic practice. |
| Grounds | State complex | Building is part of private condo complex with condo fees for snow removal, ground maintenance, etc. | |
| Maintenance | | Contracts with UND and private vendors | |
| Capacity – Autopsy | 3 tables; 2 rooms | 4 tables 3 rooms | <ul style="list-style-type: none"> • Minimum 2 rooms by national standards (regular and “decomposed” / “infectious”) • GF 3rd room also used for tissue donation / coordination; 2nd room at Bismarck doubles for this |
| Capacity – Mortuary (Body capacity) | 8 Single cooler Increase in cooler capacity would be beneficial as well as provision of second cooler for NAME standards | 15 (with additional rack storage of 10) Second cooler present in line with NAME accreditation standards | National Recommendations: 0.042/1,000 population served (May be adjusted for local averages of unidentified / unclaimed bodies; local customs for time of pick-up) Storage in Grand Forks satisfactory for normal and “expected” increase. Would need additional for some mass disaster events |

Existing Resources and Potential Needs

| | Bismarck | Grand Forks | Comments and/or National Recommendations |
|--|---|--|--|
| Capacity – Enclosed Garage for private off-loading | Limited (full off-loading within garage not possible with all vehicles) | Present Limited to one off-loading site No capacity for 3 vehicles provided by Grand Forks County after building completed | GF facility also has waiting room off garage for funeral homes waiting for body (often travel and wait for body due to distances) |
| Imaging | No area for LoDox or advanced imaging | Area for LoDox – need to provide capital expense | Both offices with basic digital radiography (needed for operations and accreditation) Lodox technology allows rapid (13 second) total body scans and is becoming standard nationally. Space needed but minimal operating and training for operators; minimal annual costs (contrast to CT/MRI) |
| Imaging – Advanced (CT and MRI) Also requires expensive maintenance agreements, high operating cost and dedicated technical personnel | Not present | Not present | Best option for ND is contract / partnering with area hospitals to provide on specific cases (protocol in discussion; informal requests for imaging met) State population not supportive of advanced imaging at either site. Most advanced imaging needs met with Lodox |
| Mass disaster expansion | Limited with site but secure | Moderate expansion capable Security needed | Required for accreditation |
| Locker rooms | Single room | Male and Female locker rooms | Required for accreditation |
| Conference / Library | Present | Present | Required for accreditation |

Existing Resources and Potential Needs

| | Bismarck | Grand Forks | Comments and/or National Recommendations |
|---------------------------|---|--|--|
| Physician Offices | 1 | 1 (shared by all physicians; each as University office) | Required for accreditation Expected office areas for staff at UND and/or original building complex owners. <u>Both offices potentially short if staffing increases.</u> |
| Staff Offices | 2 | 2 (each double carrel) | Required for accreditation Both offices potentially short if staffing increases. Both offices will have lower than national recommendation since death investigators are both on site and in distant counties, thus most county investigators are not housed in autopsy facility |
| Receptionist area | Present | Present | Required for accreditation |
| Storage - General | Present | Present: Additional off-site storage needed | Required for accreditation |
| Storage – Tissue, samples | One year samples Indefinite slides, blocks Proximity of crime lab advantageous for sample storage | One year samples Indefinite slides, blocks | Required for accreditation |
| Secure (evidence) Storage | | Present – High security control | Required for accreditation |
| Public area | Present | Present | Required for accreditation |
| Employee break room | Informal area | Small, present | Required for accreditation |
| High risk autopsy ability | Minimum met; isolation room with same airflow, single door. | Higher risk room with different air-flow and pressure; not capable of full BS3 containment | If expansion / new facility is considered in Bismarck, ability to have BS3 (Biosafety level 3, high risk autopsy) containment desirable for ONE room (total BS3 facility would have extraordinarily high maintenance; most new construction has single BS3 autopsy room and storage) |
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Existing Resources and Potential Needs

| | Bismarck | Grand Forks | Comments and/or National Recommendations |
|------------------------------------|--|---|--|
| Personnel | | | |
| Physicians (Forensic Pathologists) | One, full time (assistance with central administration with assistance from NDDH) | 1 FTE, split with 2 forensic pathologists holding teaching appointments at UND Additional FP (minor casework ~ 20% FTE) by Chair of Pathology; administrative role; grants for forensic support and review | Both offices nearing or at recommended caseload per physician. This is particularly true when educational and academic duties of the UND pathologists are accounted for and the administrative role of Chief at Bismarck. National recommendation is 6 Forensic Pathologists FTE (including Chief) for 1000 cases. On this metric, ND is short 1 – 2 FTE. |
| Staff: Investigators | 2 full time, also serves to manage office and other duties | 1 full time (also Office manager); 6 part time positions (3 currently filled) Current ~ 1.5 FTE; 2 FTE when filled. | National recommendation of 9 / 1000 cases, each office ~ 2-3 FTE. National recommendation is difficult to apply, since 1) staffing requires 24/7/365 response and 2) actual death investigation is done in counties. GF office does conduct local investigations, Bismarck does not at this time. |
| DEATH INVESTIGATORS – STATE WIDE | <p>There is a shortage and poor geographic distribution of medicolegal death investigators across the State. The shortcomings include basic training of 1) first responders 2) investigator training and 3) ultimate certification of investigators by the American Board of Medicolegal Death Investigation.</p> <p>An effort into training of first responders, individuals interested in full or part time careers in medicolegal death investigation and existing Coroners is needed and currently in progress by both Bismarck and Grand Forks offices. This training is coordinated between offices to reach many individuals across state. In addition to the existing on-site seminars offered by Bismarck, Grand Forks is initiating an on-line training course in medical legal death investigation.</p> <p>These training efforts should be supported as evolution and progress toward national standards are made in North Dakota.</p> | | |
| Staff: Assistants | Part-time personnel | Part-time personnel | National recommendation of 7 / 1000 autopsies. This would be ~ 2 - 3 full time people in each office. Both offices currently below this. |

Existing Resources and Potential Needs

| | Bismarck | Grand Forks | Comments and/or National Recommendations |
|----------------------------|---|---|---|
| Staff: Clerical, reception | 1 (? Part time) Some admin support through NDDH | 1, full time Additional through GFC and UND staff | National: 11 / 1000 autopsies At or below for both offices. Direct comparison difficult with support provided from NDDH (Bismarck) and UND (Grand Forks) |
| Histology services | Contracted | 0.75 FTE | National 1 / 1,000 autopsies. Histology laboratory at UND Pathology is used for Grand Forks |
| Toxicology services | Contracted (primary ND State Crime Lab) | Contracted (Primary Hennepin County Medical Center) | Laboratory must be CAP or ASFT Accredited for NAME Accreditation standards – not met by ND State Crime Lab which is accredited as a Crime Laboratory. (ASCLD) |
| Security / Maintenance | Provided by NDDH, other State agencies Emergency response by Bismarck PD | Contracts with UND facilities, private companies Emergency response by Grand Forks PD, UND police secondary. | National recommendation 6 / 1,000 autopsies. Both offices small and security, maintenance needs served by contractual arrangements. |
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| Location of Offices | <p>Current locations serve North Dakota, with all except the far NE area within the accepted 2 hour travel time. There is synergy of the central, main office at Bismarck with crime lab and governmental offices and the additional advantage of faculty at medical school in Grand Forks providing clinical service opportunity. The Federal grants (CDC, National Institute of Justice), public health monitoring / surveillance, health systems outcomes could be optimized with increased UND role in partnership with NDDH and other state agencies.</p> <p>Any additional offices would increase cost structure to entire system by increasing infrastructure costs. The sole area which is suboptimal in travel may have difficulty in permanent staffing based on experience in other states. Alternative models may be considered for service as needs and stable population evolve.</p> |
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Existing Resources and Potential Needs

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| Capacity of Offices | Both offices have sufficient capacity and both could handle additional caseload. Grand Forks expands workload to hospitals, private autopsy requests and MN, SD counties to offset fixed expenses with additional income streams. This also allows a greater variety and breadth of cases for professional development, skill and teaching opportunities in addition to service to ND families and hospitals. |
| Personnel | |
| Forensic Pathologists | <p>1 Full time Forensic Pathologist in Bismarck</p> <p>3 Forensic Pathologists in Grand Forks, each with significant University, research, service (Cancer registry) and teaching responsibilities.</p> <p style="padding-left: 40px;">Additional pathologists needed in Grand Forks with University responsibilities</p> <p style="padding-left: 40px;">Additional pathologist in Bismarck if case load increases and/or service hour expansion (6 or 7 day a week operation) occurs</p> |
| ABMDI Investigators | <p>2 Bismarck (State office, not at County level investigation); 2 Cass County; 1 Grand Forks County (3 in training).</p> <p>Additional ABMDI investigators needed in all regions of state and mechanism to assist rural counties with regional ABMDI investigators as needed.</p> <p>Education and training support for more death investigator training and certification expenses</p> <p style="padding-left: 40px;">Partially implemented with education from both NDDH and UND. Major focus for both entities in coming years</p> <p>A goal would be to have ABMDI investigators within 45 minute response throughout 90% of state, with telephone access to ABMDI investigators and/or Forensic Pathologists for all unattended or suspicious deaths in North Dakota</p> |
| Specialists and Consultants | <p>Additional forensic and pathology consultants, such as neuropathology and pediatric pathology may benefit the state in both the medical examiner role as well as a larger role in the neurological and maternal/child health needs of the health care system in North Dakota. There are NO pediatric pathologists or neuropathologists in the state currently and no hospital system is large enough to totally support these needed professionals.</p> <p>It may be a consideration for these professionals at UND, collaboratively with all the health care systems in the state and the State Forensic Examiner for utilization and recruitment of these individuals to the State and to meet teaching mission of UND.</p> |

Existing Resources and Potential Needs

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| <p>Reporting Structure</p> | <p>Current placement within NDDH meets Public Safety and Public Health needs. Nationally there is concern with Medical Examiners / Forensic Pathology / Death Investigation systems are placed in law enforcement or judicial branches of government.</p> <p>Some systems have governing board for Forensic Office, independent but administratively within a Health Department.</p> |
| <p>Education</p> | <p>There is a critical need for investigator training in North Dakota as the system matures and evolves toward national standards</p> <p>Strong support should be given increasing training opportunities and encouraging certification of investigators by the American Board of Medicolegal Death Investigators.</p> |
| | |
| <p>Improvements and Considerations for Planning</p> | <p>Improvements for consideration include:</p> <ol style="list-style-type: none"> 1) Ownership / control of building for Grand Forks, ideally preserving opportunity for office / garage expansions. (current expenses ~ \$215,000 annually) 2) Education and training of investigators and first responders throughout state. (In progress with initiatives of subcommittee work groups and UND on-line training.) 3) Strategies to address basic and advanced imaging needs; <ol style="list-style-type: none"> a. Partnering with hospitals / radiology groups for select ability for CT, MRI scanning (child abuse, homicides, select others). Would include Bismarck access to PACS system (present in Grand Forks through partnering). b. LoDox ready in Grand Forks, assessment of Bismarck. Each unit ~ 300,000 (refurbished) – 450,000 (new). 4) Accreditation of Forensic Facilities: Implement plan to achieve Accreditation by NAME for all forensic facilities by 2016 or 2018 and mandate continued accreditation for forensic facilities. (Note – considerable preparation time is required for NAME inspection) ~ 10,000 in fees and preparation 5) Design and implement plan to increase ABMDI Certification of death investigators throughout state and to provide death investigation training for first responders, Coroners, others involved in death investigation (In progress both with initiatives of subcommittee work groups and UND on-line training). Both 2 and 5 may require modest educational and examination budget, but large expense of on line training is free under NIJ grant until Sept, 2015. |

Change in Autopsy Rate Over Time

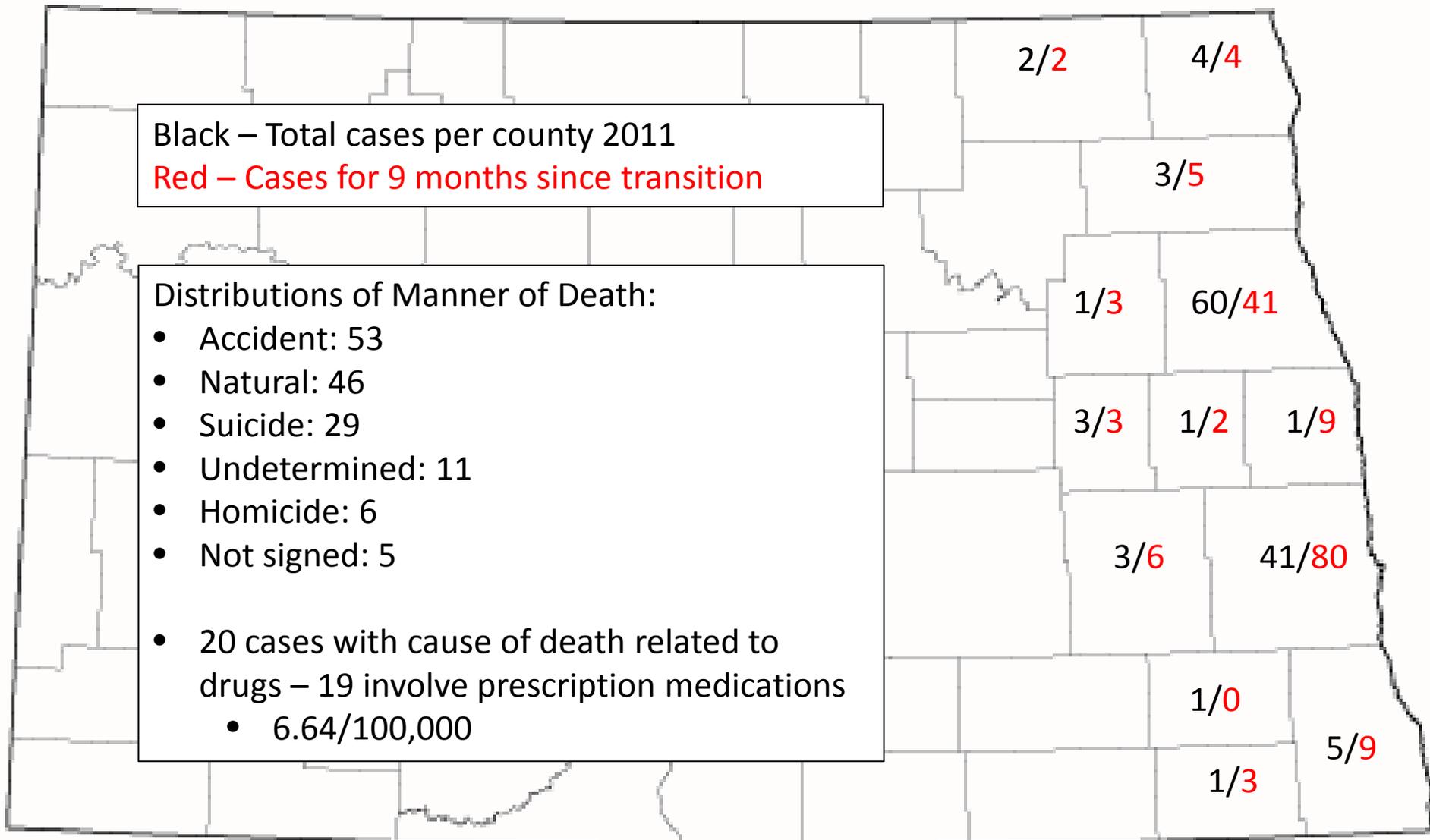
Black – Total cases per county 2011

Red – Cases for 9 months since transition

Distributions of Manner of Death:

- Accident: 53
- Natural: 46
- Suicide: 29
- Undetermined: 11
- Homicide: 6
- Not signed: 5

- 20 cases with cause of death related to drugs – 19 involve prescription medications
 - 6.64/100,000



Expected costs and potential cost allocations:

A major step forward is the acknowledgment that the entirety of the process involved – from death notification; investigation and resolution, including quality review of systems after autopsy and investigation performance; recommendations for improvements; identification of risks, trends and other outcome assessments for improvement of health, service and safety of the citizens of North Dakota. Autopsies, while a component of the system, are actually based on proper scene and death investigation as well as robust evaluation of data and findings. If we do not get initial death investigation right, every time, no autopsy facility or practice will prevent tragedies of mis-classified deaths, missed homicides, missed opportunities for improvement in work, public and family risks.

National Costs for a Medicolegal Death Investigation System averages ~ 2.00 - ~ 6.00 per capita annually for a basic, accredited system serving all citizens. Larger, more compact geographic systems tend to have lower costs from reduced transportation costs and economy of scale; smaller systems or geographically large systems tend have higher costs for the same reasons. **Nationally the minimum average cost for NAME accredited systems is 3.75 – 4.00 per capita per year.** There are models, as outlined in Appendix 2, for pure “state” and pure “county” financed systems. Of note, the minimum population considered for a functional system is ~ 500,000 people, so NO county in ND can likely finance an independent, fully functional county system.

System expense: Entire cost is assumed by system, either county, state or other entity. This is an option the State may elect to evolve toward. It has many advantages, but would require major legislative changes with Coroner statutes. Currently, there are not enough ABMDI investigators in the State to accomplish death investigation without current local Coroners and other first responders. A radical switch to a pure, centrally run State system would also not fully leverage the experience and dedication of many current Coroners, some of whom have served the State for over 40 years.

Shared expense: Counties, States or other entities share in costs and responsibilities. This is currently what is occurring in North Dakota, but often the lines and responsibilities are not clear.

May continue to consider funding of centralized functions of death investigation, i.e. autopsy performance from the State.

Advantages: Facilitates more uniform services to citizens, provides State with local input, control and responsibilities.

Disadvantages: Transportation and geographic disparities are present in the State.

May continue local responsibility for scene and initial death investigation as a County responsibility.

May consider assistance to counties for “regional” resources of death investigation personnel (shared investigators for difficult scenes), regional morgues for holding bodies and external examinations, ideally capable of local mass disaster assistance.

May consider a “per capita” fee for counties for centralized autopsy and investigation support; central contracts or assistance with transportation needs.