

Medical Examiner's District

Serving Tarrant, Denton, Johnson, & Parker Counties



2018 ANNUAL REPORT

Accredited by:



Accreditation Council for
Graduate Medical Education (ACGME)



American Society of Crime Laboratory Directors/
Laboratory Accreditation Board (ASCLD/LAB) -
certificate numbers *ALI-348-T* and *ALI-012-C*



National Association of Medical Examiners
(NAME)

Tarrant County Medical Examiner and Forensic Science Laboratories

200 Feliks Gwozdz Pl., Fort Worth, TX 76104-4919

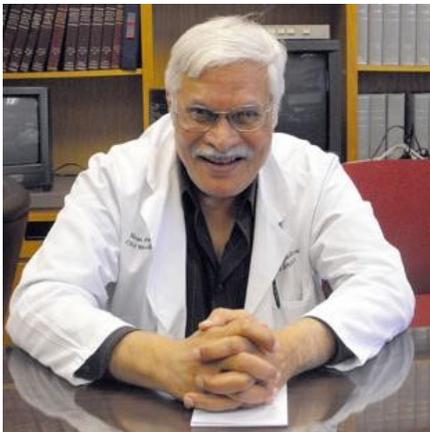
Tel.: (817) 920-5700 | Fax: (817) 920-5713

<http://access.tarrantcounty.com/en/medical-examiner.html>

From the Office of the
Tarrant County Chief Medical Examiner

Whenever we are called upon to assist, even if it is outside our defined jurisdiction, beyond the scope of our duties, or otherwise removed from our responsibilities under the law, it is our general policy to help people reach the appropriate person or agency who can assist them. This is not only our philosophy, but our commitment to those we serve.

The primary purpose of the Tarrant County Medical Examiner's Office is to assist the public and law enforcement in determining the cause and manner of death whenever death occurs without medical attention, from unnatural causes, or in the wake of violence. We are proud and grateful to be able to carry out our mission using state of the art laboratory and forensic science facilities.



Sincerely,

Dr. Nizam Peerwani

Chief Medical Examiner



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About Us

Originally established in 1965, the Tarrant County Medical Examiner's Office today serves four counties—Denton, Johnson, Parker, and Tarrant—with a total district population exceeding 2.8 million. As the district continues to grow, the Tarrant County Medical Examiner's Office remains committed as ever to providing the highest quality of service to the loved ones of each decedent and to the legal system.

As the district's population has boomed, so too have advances in the field of forensic science and its companion subjects of anatomy, physiology, chemistry, and biology. The staff at the Tarrant County Medical Examiner's Office understand the need to keep up with these exciting developments and they routinely apply their knowledge in these areas to the science of determining the cause of death.

In this endeavor, the staff of seven highly trained, board certified forensic pathologists are aided both by an investigative team staffed round-the-clock and a full complement of support services, including human identification, toxicology, criminalistics, and forensic anthropology.





Tarrant County Medical Examiner's District

- What we do: pursuant to Art. 49.25 of the Texas Code of Criminal Procedure, we must attempt to identify all remains presented to our office as "unidentified".
- In 2004 we had 206 cases, in 2005 we had 264 cases, in 2006 there were 306, and we project over 320 cases for 2007.

The wealth of information available at the office and our staff's passion to educate combine regularly to create knowledge-sharing opportunities like the Tuesday Morning Forensic Rounds, Current Trends in Forensic Science conference, and periodic training sessions with Physicians for Human Rights. We also provide advanced forensic training at the International Forensic Science Center to scholars from abroad. Members of the staff are frequently invited to provide services, give lectures, and perform consultations both nationally and internationally.

Our staff's outstanding qualifications, our state-of-the-art equipment, our strict compliance with statutes and regulations, and our accreditation by both the National Association of Medical Examiners and the American Society of Crime Laboratory Directors/Laboratory Accreditation Board all help make the Tarrant County Medical Examiner's Office one of the premier medical examiner offices in the nation.

With this report, we aim to impart an appreciation for the depth of our commitment to deliver excellent quality and service. Every day presents new challenges for us, but we are always seeking to develop and implement new services and procedures in order to better serve you and the community.

Frequently Asked Questions

What is a Medical Examiner case?

[Article 49.25 of the Code of Criminal Procedure, State of Texas](#) clearly defines which cases fall under the jurisdiction of medical examiners. Medical examiner cases include sudden, unexpected, violent, unnatural, unattended and other deaths “affecting the public interest.”

What are your business hours?

The Tarrant County Medical Examiner District Office serves the public from 8:00 am to 4:30 pm Monday through Friday, excluding County and Federal holidays. Our contact information is:

Tarrant County Medical Examiner's Office
200 Feliks Gwozdz Pl., Fort Worth, TX 76104-4919
(817) 920-5700

<http://access.tarrantcounty.com/en/medical-examiner.html>

The District includes three other counties with satellite offices:

Denton County

535 South Loop 288, Suite 1132, Denton, TX 76205-4502
(940) 349-2870; (972) 434-8833

<http://dentoncounty.com/Departments/Health-Services/Health-Department/Medical-Examiner.aspx>

Johnson County

103 S Walnut Street, Cleburne, Texas 76033
(817) 558-2245

<http://www.johnsoncountytexas.org/departments/medical-examiner>

Parker County

129 Hogle Street, Weatherford, Texas 76086
(817) 594-3213; (800) 233-3732

<https://parkercountysheriff.net/contact-us/>

Do I make complaints to your office about a doctor I am having trouble with?

No. The Texas Medical Board is responsible for complaints regarding physicians. Please visit their website at <http://www.tmb.state.tx.us/page/place-a-complaint>. If you have a complaint about our staff please feel free to call us at (817) 920-5700, extension 8330, to speak with our Administrative Director.

What is an autopsy?

An autopsy is a dignified surgical procedure that provides a systematic examination of the body of a deceased person by a qualified physician. All the physicians performing autopsies at Tarrant County Medical Examiner's District are certified by the American Board of Pathology in anatomic pathology and forensic pathology. During the procedure, a body is inspected for the presence of disease or injury, and minimal specimens of the vital organs and/or body fluids may be taken for further analysis. The internal organs and the brain are examined, then replaced in the body for burial.

Does the law require the medical examiner to perform an autopsy on every reported death?

No. The law only stipulates that the medical examiner shall perform an "inquest", or inquiry into death. It is left up to the discretion and learned judgment of the medical examiner to perform an autopsy in cases affecting the public interest. In only about one-fifth of the cases investigated by the medical examiner is an autopsy deemed necessary. In some cases, the medical examiner may perform a limited or partial autopsy; this is allowed by the statute.

Does the family pay for any medical examiner services?

No. These are statutory examinations and families pay nothing for the medical examiner services or for the transportation of remains to the Central Morgue for examination. Families may be billed by the funeral home for transportation to the funeral home they select after completion of the examination.

How long does an autopsy take?

A standard forensic autopsy will take two to three hours. Complicated medical cases or cases of traumatic deaths with multiple injuries can take longer in order to fully document all observations.

What if objections to an autopsy are raised?

When family members object to an autopsy based on religious beliefs, cultural traditions, or other deeply-held convictions, every effort to honor the objection will be made. However, if the public responsibility cannot be fulfilled without performing an autopsy, or at least a limited autopsy, the family will be provided an opportunity to be represented by legal counsel and to have their objection presented to a judge before the autopsy is performed, whenever possible.

Are tests for drugs and alcohol performed?

In all cases investigated by the medical examiner, including those in which autopsies are not conducted, fluids may be taken for toxicological tests and DNA profile. The results of these tests are often important factors in being able to determine the cause and manner of death. Not all cases will receive toxicological testing, especially if such testing will not influence the cause or manner of death.

Can a medical examiner case still be an organ or tissue donor?

Yes. Once family members have expressed interest, the medical examiner will review the request with the organ bank. Organs are generally harvested from a heart-beating donor only in a hospital setting. Tissues, including skin, bones, and corneas may be harvested at the medical examiner's office. In the vast majority of cases, the medical examiner will impose no restrictions on organs and tissues harvested with the written consent of next of kin.

What if no one claims the body on a Medical Examiner's case?

The law provides for burial or cremation when no relative claims the body. These matters are handled through the county's social services department:

Tarrant County Human Services

1200 Circle Dr., Suite 200, Fort Worth, TX 76119

Open Monday-Friday 8:00 a.m.-3:30 p.m.

(817) 531-5620

<http://access.tarrantcounty.com/en/human-services.html>

When is the body released?

A body is released to a mortuary or crematory once the examination is complete and the family has designated an arrangement for burial or cremation. Family members may contact the Tarrant County Medical Examiner's Office at **(817) 920-5700** to inform us of their selection of a funeral home. The family must then instruct the funeral home to call us for release of the body.

Bodies brought to the Tarrant County Medical Examiner's Office are generally ready for release to a funeral home within 24 hours. Only in rare cases are bodies held for legal purposes. Upon request, the release of remains may be expedited in order to honor the religious, cultural, or other beliefs of the family.

Can we view the body?

No. Our office does not have facilities for the viewing of bodies. Please contact the funeral home if you wish to view the body.

Do I have to identify my loved one's body?

If identification is required, the family will be contacted by a representative of the Tarrant County Medical Examiner's Office. If your loved one is missing and you have reason to suspect that their body may be among our cases, please contact us at **(817) 920-5700**.

What happens to clothing and personal items?

Unless it is identified as evidence, all clothing and personal items held by the medical examiner are released with the body to the funeral home or crematory. Any item identified as evidence is either retained for further testing and examination or turned over to the investigating law enforcement agency. For questions concerning these items, please contact the office at **(817) 920-5700**.

Does the Medical Examiner's Office ever keep parts of the body?

In all cases in which an autopsy is performed, the medical examiner will biopsy and retain a small piece of tissue in order to study the organ histologically. Occasionally, a whole organ (such as the brain or the eyes) may be retained for neuropathological examination. If the next of kin desires to have these tissues returned to the funeral home after such testing is complete, please contact us **(817) 920-5700** to make this request.

What kinds of reports are produced?

The Tarrant County Medical Examiner produces at least two, and generally three, reports for each case:

1. The physician's examination report (with or without body diagrams)
2. The report of death investigation
3. The toxicology report (if toxicological testing was performed)

Depending on the complexity of the case there may be other reports, including bacterial/viral culture, special chemistry, heavy metal and other poisons, anthropology, human identification, criminalistics, etc.

Are my loved one's reports and test results protected under the Health Insurance Portability and Accountability Act (HIPAA)?

No. Records generated by the Medical Examiner in the performance of his duties are subject to the [Texas Public Information Act](#), which requires that citizens have access to information on governmental action. This transparency provides Texans with a better understanding of how their government works and, when necessary, enables them to hold their public officials accountable.

Specifically, [Section §552.021 of the act](#) allows public access to information that is written, produced, collected, assembled, or maintained under a law or ordinance, or in connection with the transaction of official business. Under this statute, all written records generated by the Tarrant County Medical Examiner's Office are public records and may be released upon request to any citizen. Note that death scene photographs and postmortem examination photographs are *not* subject to release under this statute.

How soon can I have the death certificate?

Effective 2007, the Texas Health and Safety Code, Section §193.005 requires medical certifiers on a death certificate to submit the medical certification and attest to its validity using an electronic process approved by the State Registrar. Additionally, the Health and Safety Code Section §193.003 requires that the medical examiner complete this medical certification not later than five days after receiving the death record.

In the majority of medical examiner cases, the exact cause of death will be pending further testing or investigation. In these cases, the medical examiner files a “pending” death certificate. This pending death certificate is then amended once the case is complete and a cause and manner of death have been determined.

Once the death record has been filed by the funeral home, certified copies of the death certificate can be obtained from the funeral home or the County Clerk. County Clerk contact information for all counties participating in the Tarrant County Medical Examiner's District is provided below:

Denton County

1450 E. McKinney St., Denton, TX 76202-2187
(940) 349-2018

<http://dentoncounty.com/Departments/County-Clerk.aspx>

Johnson County

P.O. Box 1986, Cleburne, Texas 76033
(817) 202-4000

<http://www.johnsoncountytexas.org/government/county-clerk>

Parker County

P.O. Box 819, Weatherford, Texas 76086
(817) 594-7461

<http://www.parkercountytexas.com/index.aspx?NID=105>

Tarrant County Vital Statistics

200 Taylor St., Rm. 301, Fort Worth, TX 76196-2000
(817) 884-1550

<http://access.tarrantcounty.com/en/county-clerk.html>

How long does it take to complete a report?

The [Texas Health and Safety Code, Section §671.012](#), requires that a designated physician who performs an autopsy provided for by state law shall file the autopsy report not later than the 30th day after the date of autopsy, provided that required testing can be completed within that time. Depending on the complexity of the case and the number of postmortem tests ordered, a report may take up to 12 weeks or more before being completed.

Will the next of kin automatically receive copies of the reports?

No. As we recognize that some families will not want to receive copies of the reports, it is necessary for the legal next of kin desiring this information to contact our office, request the report in writing, and confirm their mailing address. The reports will then be sent upon completion of the case. Only one copy of the report will be sent free of charge.

Families interested in obtaining a copy of the report should submit a written request to the Records Custodian. For fastest processing, requests should be emailed to TCMErecords@tarrantcounty.com. If submitting a records request by mail, please use the following address:

Tarrant County Medical Examiner's Office

Attn: Records Custodian
200 Feliks Gwozdz Pl.
Fort Worth, TX 76104-4919

Who can get copies of the reports?

Documents are routinely provided to law enforcement, the district attorney, special government agencies, and the hospital providing treatment at the time of death. One copy of the examination report, investigative findings, and toxicology report will be provided at no cost to the immediate next of kin upon written request.

As discussed in the earlier question, “*Are my loved one’s reports and test results protected under the Health Insurance Portability and Accountability Act (HIPAA)?*,” [Section §552.021 of the Texas Public Information Act](#) also mandates that our records be made available to any citizen upon request.

Can I get copies of the photos of my deceased relative?

Yes. Scene photographs and/or postmortem examination photographs may be released upon presentation of a properly executed medical release or 'next of kin' letter, which must contain all of the following elements to be considered valid:

1. The requestor's full name, address, and contact information
2. A statement indicating the requestor is the nearest legal next of kin and providing his/her relationship to the decedent
3. The specific information the requestor is seeking (e.g., all autopsy and/or scene photographs)
4. The requestor's notarized signature affixed to the letter
5. A copy of the requestor's driver license

Non-family members can make a request for the scene and autopsy photographs upon presentation of a properly executed and notarized medical release from the legal next-of-kin. All requests received from either family or non-family members will be reviewed on a case-by-case basis.

What if the next of kin cannot afford the costs of the funeral?

An application for indigent cremation may be made with the **Tarrant County Human Services Department** (see page 9 for contact information). Proof of indigent status may be required. Tarrant County Human Services is only able to provide assistance to families whose loved one(s) have died within Tarrant County. A funeral home may assist the family with the application process for the county cremation program.

What is required for cremation?

The [Texas Health and Safety Code, Section §716.004](#) prohibits a crematory establishment from cremating human remains within 48 hours of the time of death indicated on the death certificate, unless the waiting period is waived in writing by (1) the medical examiner of the county in which the death occurred or (2) a court order. In compliance with this statute, the medical examiner has established a policy outlining the process of requesting a waiver under Subsection (a) during regular business hours and outside of regular business hours, including weekends and holidays.

In all other cases, after the mandatory waiting period the crematory is required to obtain a permit from the county medical examiner. If the death is not a medical examiner's case, the Medical Examiner requires the funeral home to provide a death certificate before the Medical Examiner can issue a cremation permit.

Accreditations

Accreditation Council for
Graduate Medical
Education

515 North State Street
Suite 2000
Chicago, IL 60654

Phone 312.755.5000
Fax 312.755.7498
www.acgme.org

3/10/2016

Nizam Peerwani, MD
Director, Forensic Pathology Residency Program
Tarrant County Medical Examiner
200 Feliks Gwozdz Place
Fort Worth, TX 76104



Dear Dr. Peerwani,

The Residency Review Committee for Pathology, functioning in accordance with the policies and procedures of the Accreditation Council for Graduate Medical Education (ACGME), has reviewed the information submitted regarding the following program:

Forensic pathology

Tarrant County Medical Examiner Program
Tarrant County Medical Examiner's Office
Fort Worth, TX

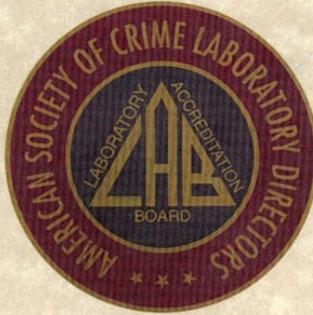
Program 3104822087

Based on the information available to it at its recent meeting, the Review Committee accredited the program as follows:

Status: Continued Accreditation
Maximum Number of Residents: 1
Effective Date: 02/04/2016

The Review Committee commended the program for its demonstrated substantial compliance with the ACGME's Program Requirements and/or Institutional Requirements without any new citations.

The ACGME must be notified of any major changes in the organization of the program. When corresponding with the ACGME, please identify the program by name and number as indicated above. Changes in participating sites and changes in leadership must be reported to the Review Committee using the ACGME Accreditation Data System (ADS).



**American Society of Crime Laboratory Directors
Laboratory Accreditation Board**

*declares to all Advocates of Truth, Justice and the Law that the
management and technical operations of the*

**Tarrant County Medical Examiner's Office
Forensic Laboratory Services
Breath Alcohol Calibration Program**

200 Feliks Gwozdz Place
Fort Worth, Texas 76104

*have been found through assessment to meet the requirements of
ISO/IEC 17025:2005
"General Requirements for the Competence of Testing and Calibration Laboratories"
the ASCLD/LAB-International Supplemental Requirements for
Breath Alcohol Calibration Laboratories: 2007
and all other requirements of the*

ASCLD/LAB-International

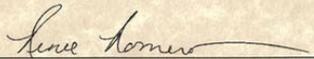
program, and is granted this

Certificate of Accreditation

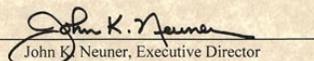
in the field of

Forensic Science Calibration

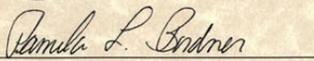
*for the categories of calibration listed on the corresponding
Scope of Accreditation*



Renee Romero, ASCLD/LAB Chair



John K. Neuner, Executive Director



Pamela L. Bordner, Accreditation Program Manager



Troy Hamlin, Accreditation Program Manager

Certificate Number

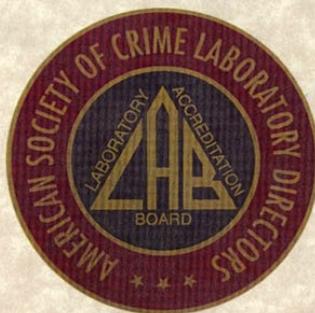
ALI-012-C

granted this

17th day of June, 2014

which expires on the

16th day of June, 2019



**American Society of Crime Laboratory Directors
Laboratory Accreditation Board**

*declares to all Advocates of Truth, Justice and the Law that the
management and technical operations of the*

**Tarrant County Medical Examiner's Office
Forensic Laboratory Services**

200 Feliks Gwozdz Place
Fort Worth, Texas 76104

*have been found through assessment to meet the requirements of
ISO/IEC 17025:2005*

*"General Requirements for the Competence of Testing and Calibration Laboratories"
the ASCLD/LAB-International Supplemental Requirements for Testing Laboratories: 2011
and all other requirements of the*

ASCLD/LAB-International

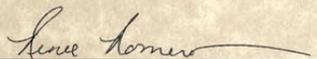
program, and is granted this

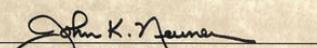
Certificate of Accreditation

in the field of

Forensic Science Testing

*for the categories of testing listed on the corresponding
Scope of Accreditation*


Renee Romero, ASCLD/LAB Chair


John K. Neuner, Executive Director


Pamela L. Bordner, Accreditation Program Manager


Troy Hamlin, Accreditation Program Manager

Certificate Number

ALI-348-T

granted this

17th day of June, 2014

which expires on the

16th day of June, 2019



NATIONAL ASSOCIATION OF MEDICAL EXAMINERS

Grants Full Accreditation

of

Tarrant County Medical Examiner Office - Fort Worth, Texas

Inspected by and meets the Standards, Inspection, and Accreditation Criteria established by the National Association of Medical Examiners for providing and operating an effective Medicolegal Death Investigative System

Accreditation is granted for the period January 8, 2015 to January 8, 2020

GIVEN THIS 1st day of June, 2015



Mary Nashelsky

President

J. Scott Deaton, MD

Secretary-Treasurer

Bakeway M.D.

Inspector

[Signature]

Chairman of Inspections Committee

History



The Tarrant County Commissioners' Court establishes the Tarrant County Medical Examiner's Office. T.C. Terrell, M.D. is named Chief Medical Examiner.



Feliks Gwozdz, M.D. is named Chief Medical Examiner.



After Dr. Gwozdz's unexpected death, Nizam Peerwani, M.D. is appointed Chief Medical Examiner.



The first countywide central morgue is established on the campus of the Texas College of Osteopathic Medicine (now University of North Texas Health Science Center).



Toxicology and histology laboratories are added; shortly afterwards, forensic dentistry is added to the office to assist in human identification.



Parker County officially joins the Medical Examiner's Office, creating the Tarrant County Medical Examiner's District.



Denton County joins the Tarrant County Medical Examiner's District; the Medical Examiner's Office moves into a new, state-of-the-art facility at 200 Feliks Gwozdz Place, renamed in honor of the late Dr. Gwozdz.



The TCME District provides the health scene investigation and medical examiner services for McLennan County in the aftermath of the Branch Davidian incident at Mt. Carmel, Texas.



A full-time, dedicated Forensic Anthropologist position is filled, making the TCME District the only such office in Texas with a full-time Forensic Anthropologist on staff.



The Human Identity Section is established at the TCME District, comprising a Forensic Odontologist, a Forensic Anthropologist, and a Latent Print Fingerprint Examiner.



Johnson County joins the Tarrant County Medical Examiner's District.



Construction is completed on new building expansion.



Renovation of the old building is completed, expanding administrative areas and classroom facilities.

TCME Staff



Maryann Abbott



Jamie M Ables



Reza Alaeddini



Dana Austin



Jamie Becker



Becky Beshay



Jonathan Bishop



John Briggs



Robert E. Cain



Robert Corley



Susan Daniel



Glynn Dill



Joe D. English



Cynthia Esparza



Kyle Finney



Michael Floyd



Richard Fries



Jaso M. Gaines



Christina Coucke-Garza



Dayna George



Tasha Greenberg



Vicki Hall



Kristen Hammonds



John Harris



Leanne Hazard

TCME Staff



Chris Heartsill



Raquel Hernandez



Leticia Hidalgo



Burshauna Hill



Susan Howe



Christy Humphries



Ayman Itani



Robert Johnson



ShaVonda K. Jones



Deatra Keele



Anne Koettel



Heather Kramer



Marc Krouse



Beryl Landry



Peggy Le



Connie Lewis



Jun Lumadilla



Brandon Mailand



Aria McCall



Roger Metcalf



Barrie Miller



Stacey Murthy



Michelle O'Neal



Tamikka Nelson

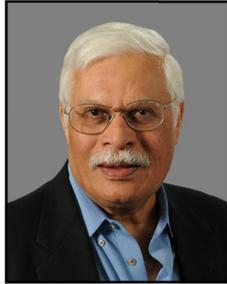


Lisa Garcia Nunez

TCME Staff



Constance Patton



Nizam Peerwani



Tracye Poirier



Michael Pollard



Amy Renfro



Larry Reynolds



Susan Roe



Kathryn Scott



Madison B Sedlak



Ron Singer



Sarah Skiles



Marc A Smiley



Christie Smith



Don Smith



Kira Tillman



Tracy Vancil



Loandra Vazquez



Bill Walker



Carol A Walker



LeRon Warren



Cheryl Wheeler



Christopher White



Steve White



Traci Wilson



Adriana Wood

Departments

Medical Examiners

Nizam Peerwani, M.D.

Chief Medical Examiner

Marc A. Krouse, M.D.

Deputy Chief Medical Examiner

Susan J. Roe, M.D.

Deputy Medical Examiner

Tasha Z. Greenberg, M.D.

Deputy Medical Examiner

Richard C. Fries, D.O.

Deputy Medical Examiner

Stacey L. Murthy, M.D.

Deputy Medical Examiner

Barrie Miller, M.D.

Assistant Medical Examiner

Administration

Nizam Peerwani, M.D.

Chief Medical Examiner

Ronald L. Singer, M.S.

Technical & Administrative Director

D. Chris Heartsill, B.S.

Quality Control Manager

Tracye Poirier, M.B.A.

Business Manager

Carol A. Lawson

Exec. Asst./Public Information Officer

Dayna L. George

Administrative Assistant IV

Human Identification Laboratory

Roger Metcalf, D.D.S.

Chief of Identification Services

Dana Austin, Ph.D.

Senior Forensic Anthropologist

ShaVonda Jones

Latent Fingerprint Examiner

Histology

Joe English, Jr.

Forensic Histotechnician

Christy Humphries

Forensic Histotechnician

Forensic Death Investigation

Tarrant County Investigations

Michael Floyd, B.S.	<i>Chief Forensic Death Investigator</i>
John Briggs	<i>Supervisory Investigator</i>
Stephen White	<i>Forensic Death Investigator II</i>
Amy Renfro, B.S.	<i>Forensic Death Investigator II</i>
Kyle Finney, B.A.	<i>Forensic Death Investigator II</i>
Robert Corley	<i>Forensic Death Investigator I</i>
Michael Pollard, B.A.S.	<i>Forensic Death Investigator I</i>
Donald Smith	<i>Forensic Death Investigator I</i>
Robert Cain	<i>Forensic Death Investigator I</i>
Brandon Mailand	<i>Forensic Death Investigator I</i>
Adriana Wood	<i>Forensic Death Investigator I</i>
Tracy Vancil, B.S.	<i>Investigative Clerk</i>
Jamie Ables	<i>Investigative Clerk</i>
Madison Sedlak	<i>Investigative Clerk</i>
Dewain Stroebel	<i>Investigative Clerk</i>

Denton County Investigations

Troy Taylor, B.S.	<i>Senior Forensic Death Investigator</i>
Bill Mills, Jr., B.S.	<i>Forensic Death Investigator</i>
Robert Murphy	<i>Forensic Death Investigator</i>
Julie Carriker, R.N.	<i>Forensic Death Investigator</i>
Tim Dial	<i>Forensic Death Investigator</i>
Jennifer Hernandez, B.S.	<i>Forensic Death Investigator</i>
Lindsay Hendrix	<i>PT Forensic Death investigator</i>
Andrea Crocker	<i>Executive Assistant</i>

Forensic Death Investigation *continued*

Johnson County Investigations

Gary Morris	<i>Senior Forensic Death Investigator</i>
Jamie Smith	<i>Forensic Death Investigator</i>
Paul Brown	<i>Forensic Death Investigator</i>
Logan Littlejohn	<i>Investigative Clerk</i>

Parker County Investigations

Bryan Wright	<i>Senior Forensic Death Investigator</i>
Kevin Lanham	<i>Forensic Death Investigator</i>
Brittany Smith	<i>Forensic Death Investigator</i>
Bob Presney	<i>Forensic Death Investigator</i>
Heather Casey	<i>Forensic Death Investigator</i>
Danielle Huffman	<i>Forensic Death Investigator</i>

Drug Chemistry and Toxicology

Robert Johnson, Ph.D.	<i>Chief Toxicologist</i>
Aria McCall, B.S.	<i>Senior Toxicologist/Technical Lead</i>
Beryl Landry, B.S.	<i>Senior Forensic Toxicologist</i>
Connie Lewis, B.S.	<i>Senior Forensic Toxicologist</i>
Cheryl Wheeler, B.S.	<i>Senior Forensic Toxicologist</i>
Leanne Hazard, M.S.	<i>Senior Forensic Toxicologist</i>
Katie Scott, B.S.	<i>Forensic Toxicologist</i>
John Harris, M.S.	<i>Sr. Forensic Chemist/Technical Lead</i>
Jonathan Bishop, B.S.	<i>Senior Forensic Chemist</i>
Christina Coucke-Garza, M.S.	<i>Senior Forensic Chemist</i>
Michelle O'Neal, B.S.	<i>Senior Forensic Chemist</i>
Sarah Skiles, B.S.	<i>Sr. Forensic Chemist/Technical Lead</i>

Morgue and Evidence Services

Traci Wilson	<i>Director of Morgue/Evidence Services</i>
Ronnie Redic	<i>Senior Autopsy Technician</i>
Glynn Dill	<i>Autopsy Technician</i>
Cynthia Esparza	<i>Autopsy Technician</i>
Jaso Gaines	<i>Autopsy Technician</i>
Leticia Hidalgo	<i>Autopsy Technician</i>
Burshauna Hill	<i>Autopsy Technician</i>
LeRon Warren	<i>Autopsy Technician</i>
Christopher White	<i>Autopsy Technician</i>

Criminalistics

Susan Howe, Ph.D.	<i>Crime Laboratory Director</i>
Constance Patton, B.S.	<i>DNA Technical Lead, CODIS Admin.</i>
Heather Kramer, M.S.	<i>Sr. Forensic Biologist/CODIS Alternate</i>
Peggy Le, B.S.	<i>Senior Forensic Biologist</i>
Kristen Hammonds, B.S.	<i>Senior Forensic Biologist</i>
Rebecca Klein, M.S.	<i>Forensic Biologist</i>
Kira Tillman, B.S.	<i>Forensic Biologist Specialist</i>
Reza Alaeddini, Ph.D.	<i>Senior Criminalist</i>
Vicki Hall, M.S.	<i>Sr. Trace Analyst/Technical Lead</i>
Anne Koettel, M.S.	<i>Senior Trace Analyst</i>
Jamie Becker, B.S.	<i>Sr. Firearm & Toolmark Examiner, Technical Lead</i>
Loandra Pellot Vazquez, M.A.	<i>Sr. Firearm & Toolmark Examiner</i>
William Walker	<i>Latent Fingerprint Examiner / Technical Lead</i>
Larry Reynolds	<i>Forensic Photographer</i>

Secretarial Services

Carol Walker

Exec. Asst./Public Information Officer

Maryann Abbott

Medical Secretary/Transcriptionist

Becky Beshay

Medical Secretary/Transcriptionist

Susan Daniel

Medical Secretary/Transcriptionist

Deatra Keele

Medical Secretary/Transcriptionist

Tamikka Nelson

Medical Secretary/Transcriptionist

Lisa Garcia Nunez

Records Manager

Raquel Hernandez

Records Secretary

Ayman Itani

Toxicology Secretary

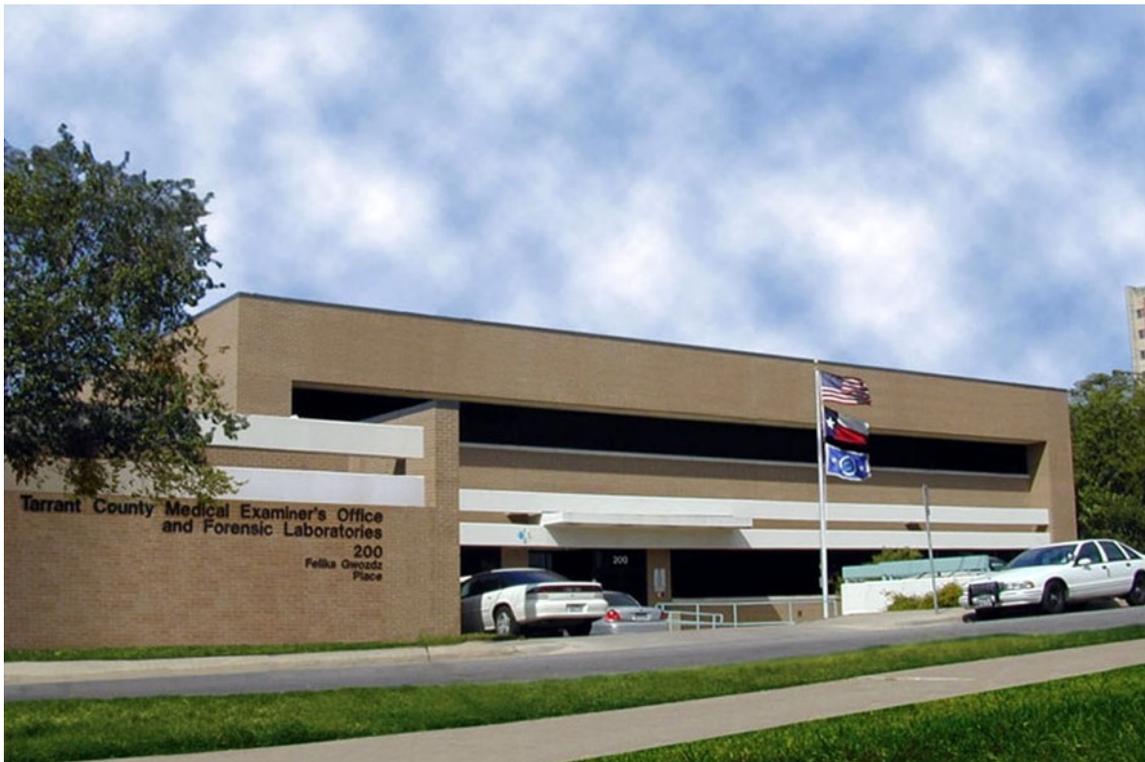
Christie Smith

Vital Statistics Coordinator

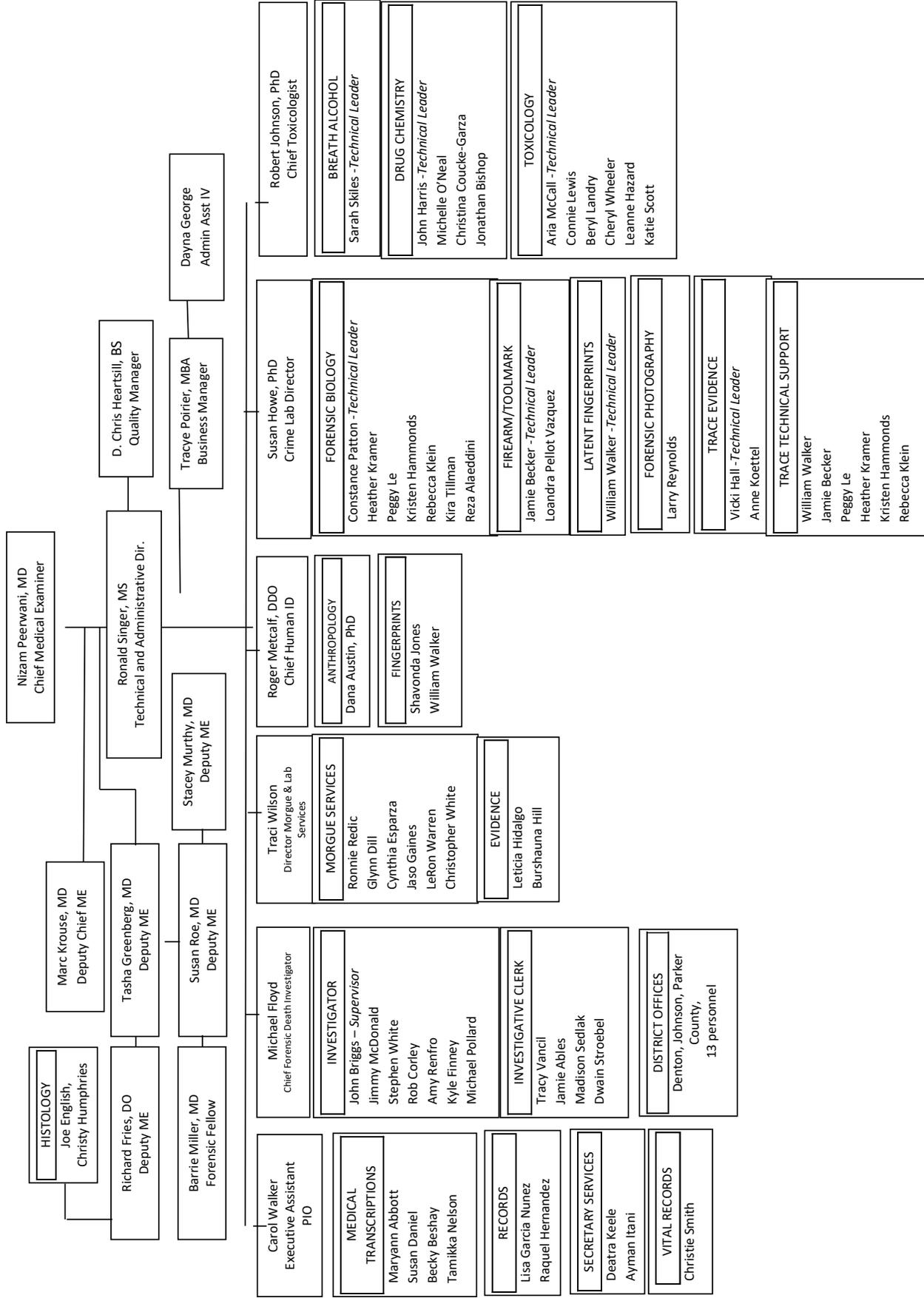
Facility Maintenance

Jun Lumadilla

Building Superintendent



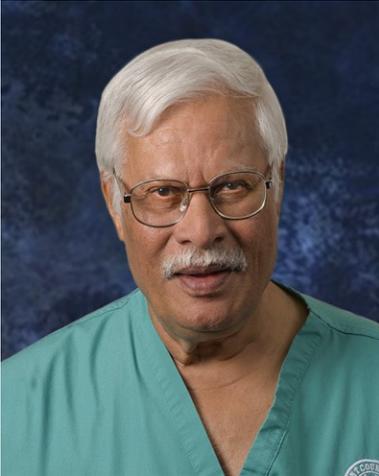
Tarrant County Medical Examiner's Office and Forensic Laboratories



Medical Examiners



Nizam Peerwani, M.D., Chief Medical Examiner



Dr. Peerwani is a graduate of the American University of Beirut (M.D. in 1976). He completed his residency in pathology at Baylor University Medical Center in Dallas, Texas, and is board certified in Anatomic, Clinical, and Forensic Pathology.

Currently, Dr. Peerwani is the Chief Medical Examiner for Tarrant, Denton, Johnson, and Parker counties in the state of Texas, and has held this position since July 1979. He is actively involved in forensic death investigation for his jurisdiction and routinely testifies in both civil and criminal trials. He has also served as an Associate Professor of Pathology at UNT Health Science Center in Fort Worth from 1979 to 2004 and on the editorial board of the *American Journal of Forensic Medicine and Pathology* from 1992 to 2009, as well as on the National Association of Medical

Examiner's Accreditation Committee from 1990 to 1995. He is an advocate of child safety and served on the first Texas Child Fatality Review Committee as an expert in forensic medicine from 1995 to 2000. His major investigations include the Delta Airline Flight 1141 crash at the Dallas-Fort Worth International Airport in 1988, the mass killings and fire deaths in McLennan County in 1993, and the Wedgewood Baptist Church mass shooting incident in September 1995 in Fort Worth, Texas.

In 1993, he led his team to investigate the mass killing and fire deaths at Mt Carmel, in the outskirts of Waco in McLennan County, after a long siege of David Koresh's religious cult compound by the Federal Bureau of Investigation, and later testified at the federal trial in San Antonio, Texas.

As an advocate for human rights, he serves as an expert consultant for Physicians for Human Rights. He has completed assignments for this organization in Rwanda, Indonesia, Iraq, Afghanistan, Israel, and Libya, investigating genocide and human rights violations under the auspices of the United Nations Tribunal. He testified in the genocide trial of George Rutaganda at the International Criminal Tribunal for Rwanda (United Nations) in Arusha, Tanzania. Additionally, he was the advance team member in the war crimes investigation in the Srebrenica killings in Bosnia in 1995 and set up a temporary morgue facility in Tuzla, Bosnia-Herzegovina. He also investigated the killings of 34 inmates at the Miquel Castro-Castro Prison by the National Peruvian Police in March 2001 and later testified at Inter-American Court of Human Rights in 2006 in San Salvador. In 2015, he and his colleagues led the investigation at the Tarrant County Medical Examiner's Office on behalf of Physicians for Human Rights and Human Rights Watch, and filed a report on the investigation of torture and killings in the Syrian Detention Camps by the current regime of President Bashar Assad.

Appointed by Governor Rick Perry in 2009, Dr. Peerwani currently serves on the Texas Forensic Science Commission. He also serves on the expert panel of Texas State Fire Marshal's Office.



Marc A. Krouse, M.D., Deputy Chief Medical Examiner



Dr. Krouse graduated in 1977 from the University of Texas Southwestern Medical School, then and now a major center of medical research and patient care, in Dallas, Texas. Dr. Krouse entered a four-year residency in Anatomic and Clinical Pathology at Baylor University Medical Center in Dallas. During residency, in 1978, he began working part time at the Tarrant County Medical Examiner. After Dr. Gwozdz's sudden death in 1979, he was sworn in as Medical Examiner along with Dr. Nizam Peerwani. He completed residency in 1981. Dr. Krouse was certified by the American

Board of Pathology in Anatomic and Clinical Pathology in 1981 and earned Special Competency in Forensic Pathology in 1984.

Dr. Krouse is a Fellow of the American Academy of Forensic Sciences and a Member and past Board of Directors member of the National Association of Medical Examiners. He has served on a number of committees in both organizations. He was Program Director of the 1993 annual meeting of NAME. He has made many peer-reviewed platform and poster presentations in annual meetings of both organizations. Dr. Krouse has taught medical and graduate students of the University of North Texas Health Sciences Center in Fort Worth, pathology and other residents from numerous hospital programs, attorneys, police, fire and paramedic workers, nurses and nursing students and the public. A program teaching recovery of buried bodies and evidence has been a part of this teaching effort. Dr. Krouse worked with US Forest Service and other archaeologists and anthropologists to analyze skeletal pre-Columbian human remains at the Museum of Northern Arizona in Flagstaff, Arizona. A continuing education program has presented in annual forensic sciences updates for more than a decade.

Dr. Krouse has been a supporter and member of a number of community programs. He worked with the Boy Scouts as an adult leader in the local troop and district. He has served on the Board of the Boys and Girls Clubs of Fort Worth and volunteered for many fundraisers for community organizations and foundations.



Susan J. Roe, M.D., Deputy Medical Examiner



Dr. Roe graduated from the University of Texas at Arlington with a Bachelors of Science in Nursing (1977) and from the University of Texas Health Science Center at Houston Medical School with an M.D. (1983). In 1988, she completed her post graduate training in Anatomic Pathology, Clinical Pathology, and Forensic Pathology at Indiana University, Hennepin County Medical Center, and the Hennepin County Medical Examiner's Office.

Dr. Roe is board certified in anatomic, clinical, and forensic pathology. She worked as a Forensic Pathologist at the Hennepin County Medical Examiner's Office, the Ramsey County Medical Examiner's Office, and the Minnesota Regional Medical Examiner's Office from 1988 through 2011. Additionally, she was a Bush Foundation Medical Fellow, Class of 2003, and worked at the Jesse E. Edwards Registry of Cardiovascular Disease from 2005 through 2011. Dr. Roe joined the Tarrant County Medical Examiner's Office in December 2011 as a Deputy Medical Examiner.

Tasha Z. Greenberg, M.D., Deputy Medical Examiner



Dr. Greenberg earned her Bachelors of Science in Kinesiology from the University of California—Los Angeles in 1989, after which she attended graduate school at Northwestern University in Chicago, Illinois, where she majored in neuroscience prior to her matriculation to medical school. Upon graduating from the Baylor College of Medicine in 1996, Dr. Greenberg completed her residency in Pathology. Her first year of study was at St. Joseph's Hospital and Medical Center in Phoenix, Arizona, after which she returned to Baylor for the remaining four years, with her final year concentrated on Pediatric Pathology under the tutelage of Edmund Donoghue, M.D., at the Cook County Medical Examiner's Office.

During her six-year tenure at the Baltimore Medical Examiner's Office in Maryland, Dr. Greenberg was active in child fatality review at the local and state levels. She also conducted lectures and training for local universities as well as the medical examiner's homicide course, speaking primarily on pediatric forensics. In April 2008, Dr. Greenberg accepted the position of Medical Director of the Autopsy Service for the University of Texas Southwestern Medical School at Parkland Medical Center, and in September 2012 she was appointed a deputy medical examiner for the Tarrant County Medical Examiner's Office.



Richard C. Fries, D.O., Deputy Medical Examiner



After graduating with honors from the University of Texas at Dallas with a Bachelors of Science in Biology (2004), Dr. Fries went on to earn his D.O. from the University of North Texas Health Science Center—Texas College of Pathology at the Virginia Commonwealth University Health System, Medical College of Virginia Hospitals.

In July 2012, Dr. Fries accepted a fellowship in Forensic Pathology at the Tarrant County Medical Examiner’s Office. After successfully completing this one-year program, he took and passed the board exam in Forensic Pathology.

Dr. Fries joined the staff of the Tarrant County Medical Examiner’s Office in July 2013. He is a member of the American Academy of Forensic Sciences (AAFS) and the National Association of Medical Examiners (NAME).

Stacey Murthy M.D., Deputy Medical Examiner



Dr. Murthy graduated from Texas Woman’s University with a Bachelors of Science in Chemistry (2008) and from the University of Texas Southwestern Medical School with a M.D. (2013). She completed her residency in Anatomic and Clinical Pathology at Baylor University Medical Center in Dallas, and accepted a fellowship in Forensic Pathology at Southwestern Institute of Forensic Science , completed in June 2018. Dr. Murthy is board certified in Anatomic and Forensic Pathology and fully licensed to practice medicine in the state of Texas.

In July 2018, Dr. Murthy accepted the position of Deputy Medical Examiner at the Tarrant County Medical Examiner’s Office.

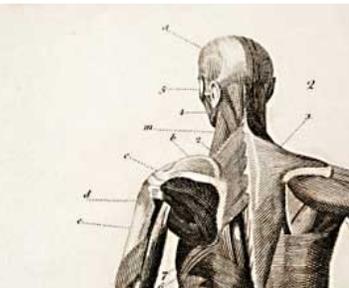
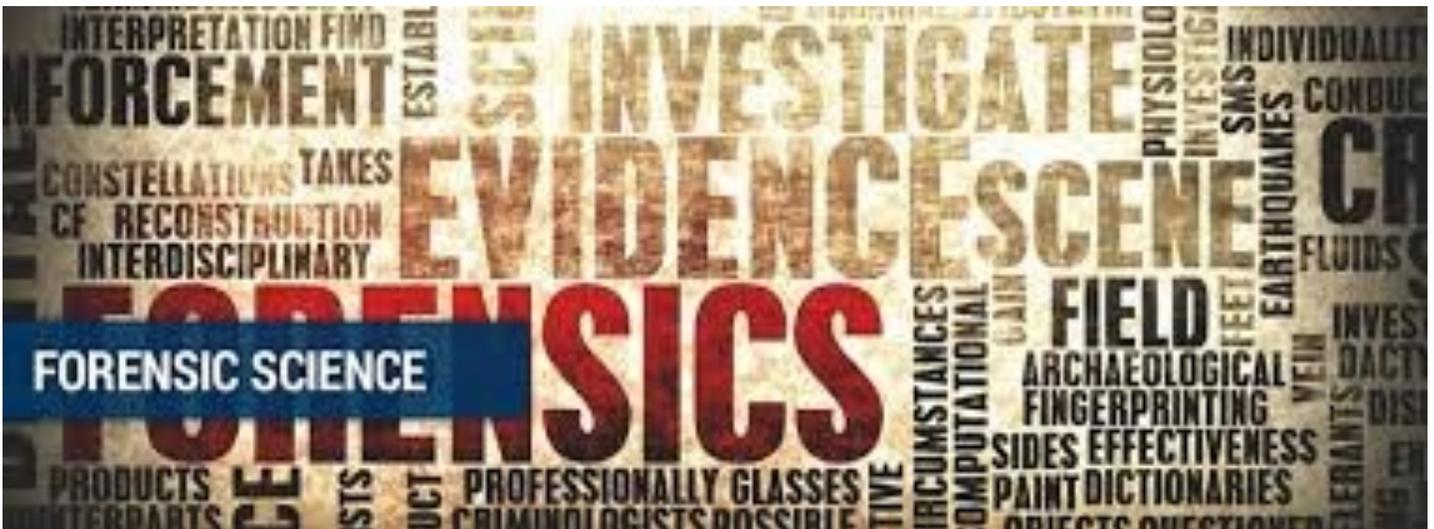
She is a member of the National Association of Medical Examiners (NAME), College of American Pathologists (CAP), and American Society of Clinical Pathology (ASCP).



Barrie Miller, M.D., Forensic Fellow



Dr. Miller graduated from St. Catherine University in St. Paul, Minnesota with a B.A. in Psychology and Biology, after which she earned a Master of Public Health in Epidemiology from the University of Minnesota School of Public Health. She went on to earn her M.D. from the University of Minnesota Medical School, and subsequently completed her residency in Anatomic and Clinical Pathology at The Ohio State University Wexner Medical Center. She completed a Cytopathology fellowship at the University of Minnesota and was accepted as a fellow at the Tarrant County Medical Examiner's Office.



Administration

Ronald Singer, M.S., Technical & Administrative Director



Ronald Singer received his Bachelors of Science from Tulane University and his Masters of Science from Loyola University of New Orleans. A forensic scientist since 1972, he has served as President of the International Association of Forensic Sciences. He is also a Distinguished Fellow and Past President of the American Academy of Forensic Sciences, a Distinguished Member and Past President of the Association of Firearm and Toolmark Examiners, an Emeritus Member and Past Secretary of the American Society of Crime Laboratory Directors, and a member of numerous other forensic associations and committees. He has been an invited speaker on forensic issues throughout the U.S., Hungary, Bosnia, England, Portugal, Turkey, the Maldives, Sri Lanka, the Czech Republic, Lebanon, and the United Arab Emirates.

Mr. Singer is a recipient of the American Academy of Forensic Sciences Criminalistics Section Outstanding Service award, the Association of Firearm and Toolmark Examiners Member of the Year award, the Gold Medal award of the Mediterranean Academy of Forensic Sciences, and the Distinguished Fellow award from the American Academy of Forensic Sciences.

Chris Heartsill, B.S., Quality Control Manager



Chris Heartsill received his Bachelors of Science in Chemistry from East Central University in 1991. He has been working in analytical chemistry for over twenty years with more than 19 years of forensic toxicology experience, including the areas of human performance forensic toxicology and postmortem forensic toxicology. Prior to coming to Tarrant County in 2013, he served as an analytical chemist, toxicologist, quality manager, and breath-testing technical supervisor.

Chris is currently certified by the American Board of Forensic Toxicology as a Forensic Toxicology Specialist. He is an active member of the Society of Forensic Toxicologists, the Scientific Working Group for Toxicology, and the Association of Forensic Quality Assurance Managers. Chris is also actively involved in the accreditation of forensic laboratories through volunteer activities with the American Society of Laboratory Directors/Laboratory Accreditation Board.

Tracye Poirier, M.B.A., Business Manager



Tracye Poirier received her Bachelors of Science degree in Chemistry from the University of Texas at Arlington. She came to work here in 2000 as a Senior Forensic Toxicologist. She also served as a Senior Forensic Chemist before assuming her current role as the Business Manager. Her background in the sciences provides her with unique insight into managing a Medical Examiner's office.

Ms. Poirier earned her M.B.A. degree with an emphasis in Strategic Leadership in April 2010 from the University of Dallas. She is a member of the American Academy of Forensic Sciences and the Southwestern Association of Toxicologists.

Carol Walker, Executive Assistant/Public Information Officer



Accepting employment with the Tarrant County Medical Examiner in 2005, Carol currently serves as the Executive Assistant to the Chief Medical Examiner. In this role she schedules pathologists for morgue duty, arranges court appearances and professional engagements for the Chief Medical Examiner and his staff, supervises Secretarial Services, and assists families, law enforcement agents, and attorneys with their concerns and inquiries. In addition to these responsibilities, she also serves as the Public Information Officer of the Tarrant County Medical

Examiner's District, fielding questions from the media and releasing information to the public as necessary. Ms. Lawson has reaffirmed her dedication through continued professional development in Public Information Officer awareness, leadership, and influence, as well as training with the FBI-Law Enforcement Executive Leadership Association (FBI-LEEDA).

Laboratories

Susan R. Howe, D.V.M., Ph.D., Crime Laboratory Director



Dr. Howe received a B.S. and a Doctor of Veterinary Medicine degree from the University of Illinois and a Ph.D. in Toxicology from Texas A & M University. A forensic scientist since 1996, she is an active member of the American Academy of Forensic Sciences, the Society of Forensic Toxicologists, and the Southwestern Association of Forensic Toxicologists.

Dr. Howe is board certified in Forensic Toxicology by the American Board of Forensic Toxicology and has published a number of scientific articles in peer-reviewed journals in the field of molecular toxicology.

Roger Metcalf, D.D.S., J.D., Chief of Human Identification Services



Roger Metcalf is a graduate of Baylor University and Baylor College of Dentistry. He completed a fellowship in Forensic Odontology at the Center for Education and Research in Forensics at the University of Texas Health Science Center at San Antonio Dental School under Dr. David Sinn. He received his J.D. degree from Texas Wesleyan University School of Law in 2009.

Dr. Metcalf has been a member of the Tarrant County Medical Examiner's Mass Fatality Dental Identification Team since it was established in 1980, and has participated in the identification of victims from the Delta 191 and 1141 crashes at D/FW Airport and from the Mt. Carmel incident in Waco, Texas. Since joining the Tarrant County Medical Examiner's Office in 2004, Dr. Metcalf has supervised the forensic identification of more than 300 unidentified bodies per year.

Robert Johnson, Ph.D., Chief Forensic Toxicologist



Dr. Johnson graduated from the University of Oklahoma with a Ph.D. in Analytical Chemistry in 2004. Certified as a forensic toxicologist by the American Board of Forensic Toxicology, he joined the Tarrant County Medical Examiner's Office in 2011. He is active in several professional societies, including the Society of Forensic Toxicologists, the American Academy of Forensic Sciences, and the Southwestern Association of Toxicologists.

Dr. Johnson has published over 50 scientific articles in his career, all of which deal specifically with forensic toxicology.

Traci Wilson, Chief of Morgue & Laboratory Services



Traci Wilson began her employment with the Tarrant County Medical Examiner's Office as a Forensic Autopsy Technician in 1995. Prior to moving to Fort Worth, she had worked in Bossier City, Louisiana as a Forensic Pathologist Assistant. Ms. Wilson attended Northeast Louisiana University Monroe (ULM), where she majored in Business Administration/Business Law.

In 2009, Ms. Wilson assumed the duties of Chief of Morgue/Laboratory Services, in which role she continually develops and implements new policies to streamline recordkeeping and safeguard

Forensic Death Investigation

Michael Floyd, B.S., Chief Forensic Death Investigator - Tarrant County

Michael Floyd began working for the Tarrant County Medical Examiner's District in 1990 as a Medical Investigator assigned to Parker County. He transferred to Tarrant County in 1993. In 1997, he was promoted to Senior Forensic Investigator, became the Supervisory Investigator in 2009, and was appointed Chief Forensic Investigator in 2010.



Prior to his employment at TCME, Michael was a Texas-certified EMT-Paramedic for 16 years and spent 35 years as a Texas Peace Officer.

Troy Taylor, B.S., Senior Forensic Death Investigator - Denton County

Mr. Taylor started his career in 1990 at the Denton County Medical Examiner's Office. After multi-year tenures in Denton and Tarrant County, he transferred back to the Denton office in 2003.



Troy teaches medical examiner law, wound patterning, and decomposition changes for intermediate crime scene classes, as well as for basic peace officer certification classes. He has attended medico-legal death investigation training and psychological profiling schools.

In 2007, Mr. Taylor was promoted to Chief Forensic Death Investigator of Denton County.

Gary Morris

Senior Forensic Death Investigator - Johnson County

Gary Morris began his service with the Johnson County Medical Examiner's Office as a Reserve Investigator in 2006. He served in several positions with the Johnson County Medical Examiner's Office before advancing to his current position as Chief Forensic Death Investigator, a position he has held since 2011.



Mr. Morris has attended forensic death investigation training in Fort Worth, St. Louis, Arizona, and New York.

Bryan Wright

Senior Forensic Death Investigator - Parker County

Bryan Wright began his employment with the Tarrant County Medical Examiner's District shortly after Parker County became the first member of the district system in 1986. Mr. Wright worked as a medical investigator for 13 years and was also a peace officer with the Weatherford Police Department during that time, retiring honorably as a Lieutenant in 2009, having earned a Master Peace Officer certification, among other awards and honors, and having completed 60 college hours. He also worked with and administered the Cross Timbers Narcotics Task Force, comprised of 18 member law enforcement agencies, during his time as a medical investigator.



Upon his retirement, Bryan was sought out and hired by the Parker County Sheriff's Office due to his extensive experience and background. He has a cumulative thirty years of peace officer experience.

Professional Involvement

Ronald Singer, M.S., Technical & Administrative Director

Chair, Exhibitor Liaison Committee, American Academy of Forensic Sciences
Member, Editorial Board, Journal of Forensic Sciences
Member, Ethics Committee, American Academy of Forensic Sciences
President (2004-2005), American Academy of Forensic Sciences
Secretary (1983-1986), American Society of Crime Laboratory Directors
President (1995-1996), Association of Firearm and Toolmark Examiners
Chair (2009-2012), Forensic Sciences Foundation
President (2005-2008), International Association of Forensic Sciences
Member, North Carolina Forensic Science Advisory Board
Award of Merit, American Academy of Forensic Sciences
Distinguished Fellow, American Academy of Forensic Sciences
Distinguished Service, Criminalistics Section, American Academy of Forensic Sciences
Emeritus Member, American Society of Crime Laboratory Directors
Distinguished Member, Association of Firearm and Toolmark Examiners
Member of the Year, Association of Firearm and Toolmark Examiners
Gold Medal, Mediterranean Academy of Forensic Sciences

Roger Metcalf, D.D.S., J.D., Chief of Identification Services

Diplomate, American Board of Forensic Odontology
Diploma in Forensic Human Identification, Faculty of Forensic and Legal Medicine, RCP
President (2015), American Society of Forensic Odontology
Treasurer (2017), American Society of Forensic Odontology
Executive Secretary (2015–present), Forensic Odontology Subcommittee, Organization of Scientific Area Committees, National Institute of Standards and Technology
Chair (2015), Amicus Brief Committee, American Academy of Forensic Sciences
Chair (2017), Odontology Section, American Academy of Forensic Sciences
Chair (past), Certification and Examination Committee, American Board of Forensic Odontology
Member (past), Board of Directors, Southwestern Association of Forensic Scientists

Chris Heartsill, B.S., Quality Control Manager

Former Member, Alcohol Testing Alliance

President Elect (2002-2003), President (2003-2004), and Immediate Past President (2004-2005), Alcohol Testing Alliance

Lead Assessor (2015-present), ANSI-ASQ National Accreditation Board (ANAB)

Technical Assessor (2003-2015), American Society of Crime Laboratory Directors—Laboratory Accreditation Board

Member (2005-2015), Toxicology Discipline Technical Advisory Committee, American Society of Crime Laboratory Directors—Laboratory Accreditation Board

Member, Association of Forensic Quality Assurance Managers in Toxicology

Chair (2012-2015), Quality Control Workgroup; Subcommittee Standards, Practices, and Protocols; Forensic Toxicology Council

Member (2010-2015), Scientific Working Group in Toxicology, Forensic Toxicology Council

Advisor, Quality Control Task Group, Toxicology Subcommittee, Organization of Scientific Area Committees, National Institute of Standards and Technology

Chair (2016-present), Administrative Committee; Alcohol, Drugs, Impairment Division of the National Safety Council

Member (2015-2016), Administrative Committee; Alcohol, Drugs, Impairment Division of the National Safety Council

Member (2014-present), Executive Board; Alcohol, Drugs, Impairment Division of the National Safety Council

Member (2015-2016), Meeting Host Committee, Society of Forensic Toxicologists

Counselor (2000-2002), Southwestern Association of Toxicologists

President (2016-2017; 2003-2004), Southwestern Association of Toxicologists

Immediate Past President (2017-2018; 2004-2005), Southwestern Association of Toxicologists

President Elect (2015-2016; 2002-2003), Southwestern Association of Toxicologists

Historian, Southwestern Association of Toxicologists

Chair (2006-2017), Grant Approval Committee, Southwestern Association of Toxicologists

Member, Texas Association of Crime Laboratory Directors

Regional Award, American Academy of Forensic Sciences

Susan R. Howe, Ph.D., Crime Laboratory Director

Member (2013-present), Exhibitor Liaison Committee, American Academy of Forensic Sciences

Member (2016), Meeting Planning Committee, Society of Forensic Toxicologists

Co-Chair (2016), Workshop, Society of Forensic Toxicologists

President (2011-2012), Southwestern Association of Toxicologists

Chair (2014-2015), Certification Committee, Texas Association of Crime Laboratory Directors

Member (2015-present), Education Committee, Texas Association of Crime Laboratory Directors

Secretary (2016-present), Texas Association of Crime Laboratory Directors

Jamie Becker, Senior Criminalist, Firearm & Tool Mark

Member, Ethics Enforcement Procedures Ad-Hoc Committee, Association of Firearm and Toolmark Examiners

Chairperson (1997-1999), Sickness and Distress, Association of Firearm and Toolmark Examiners

Member (1999-2002), Board of Admissions, Association of Firearm and Toolmark Examiners

Member (1999-2002), Research and Development Ad-Hoc Committee, Association of Firearm and Toolmark Examiners

Member (2002), Training Seminar Host Committee, Association of Firearm and Toolmark Examiners

Treasurer (2002-2005), Association of Firearm and Toolmark Examiners

Member (2007-2009), Nominating Committee, Association of Firearm and Toolmark Examiners

Member (1999-2001), Scientific Working Group on Firearms and Toolmarks

Anne Koettel, Senior Trace Analyst

Member, Publications Committee, American Society of Trace Evidence Examiners

Robert Johnson, Ph.D., Chief Forensic Toxicologist

Member (2004-2011), Life Sciences and Biomedical Engineering Branch, Aerospace Medical Association

Fellow (2011-present), American Board of Forensic Toxicology

Member (2014-present), Toxicology Subcommittee, Organization of Scientific Area Committees, National Institute of Standards and Technology

Member (2008-present), Alcohol, Drugs, and Impairment Division, National Safety Council

Member (2013-present), Executive Board; Alcohol, Drugs, and Impairment Division, National Safety Council

Secretary (2014-present), Alcohol, Drugs, and Impairment Division, National Safety Council

Guest Editor (2016), Journal of Analytical Toxicology, Society of Forensic Toxicologists Special Edition

Member (2005-present), Society of Forensic Toxicologists

Member (2011-2014), Membership Committee, Society of Forensic Toxicologists

Member (2009-present), Southwestern Association of Toxicologists

Immediate Past President (2016-2017), Southwestern Association of Toxicologists

President (2015-2016), Southwestern Association of Toxicologists

President Elect (2014-2015), Southwestern Association of Toxicologists

Superior Accomplishment Award (2010), Office of Aviation Medicine

William E. Collins Publications Award (2006), Office of Aviation Medicine

Charles Tripp Award (2014), Southwestern Association of Toxicologists

James Garriott Award (2013), Southwestern Association of Toxicologists

Excellence in SPE Award (2014), United Chemical

Lloyd Swearingen Outstanding Graduate Student Research Award (2003), University of Oklahoma

Aria McCall, Technical Lead & Senior Toxicologist

Board Certification (2014-present), American Board of Forensic Toxicology

Member (2015-present), Society of Forensic Toxicologists

Workshop Co-Chair (2016), Society of Forensic Toxicologists

Member (2002-present), Southwestern Association of Toxicologists

Member (2013-present), Membership Committee, Southwestern Association of Toxicologists

Sarah Skiles, Senior Forensic Chemist

Member, Board of Directors, Alcohol Testing Alliance
Member, International Association of Chemical Testing
Member, Past Board of Directors, Southwestern Association of Forensic Scientists
Member, Southwestern Association of Toxicologists

Christina Coucke-Garza, Senior Forensic Chemist

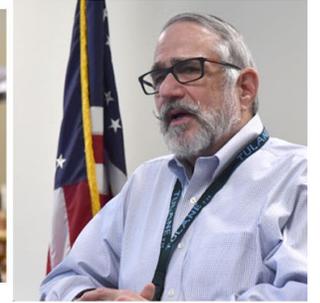
Member, Southwestern Association of Forensic Scientists
Chair (past), Scholarship Committee, Southwestern Association of Forensic Scientists
Chair (present), Nominations Committee, Southwestern Association of Forensic Scientists
Member, Southwestern Association of Toxicologists
Treasurer (past), Southwestern Association of Toxicologists

Michelle O'Neal, Senior Forensic Chemist

Certified Technical Assessor, American Society of Crime Laboratory Directors/Laboratory Accreditation Board—International
Associate Editor (1995-1997), Southwestern Association of Forensic Scientists
Chairman of the Board (2009-2010), Southwestern Association of Forensic Scientists
Chairperson (2008-2011, 2015), Floyd E. McDonald Scholarship, Southwestern Association of Forensic Scientists
Member (1999-2000), Board of Directors, Southwestern Association of Forensic Scientists
Member (2004-2006), Board of Directors, Southwestern Association of Forensic Scientists
Member (2013-2015), Board of Directors, Southwestern Association of Forensic Scientists
President Elect (2007-2008) and President (2008-2009), Southwestern Association of Forensic Scientists

Connie Lewis, Senior Forensic Toxicologist

Board Certification (2014-present), American Board of Forensic Toxicology
Member (2012-present), Society of Forensic Toxicologists
Member (2007-present), Southwestern Association of Toxicologists
Secretary (2016), Southwestern Association of Toxicologists
James Garriott Award (2014), Southwestern Association of Toxicologists
Excellence in SPE Award (2014), United Chemical



Annual Development

Growth in the responsibilities of the Tarrant County Medical Examiner's District continued throughout 2018; however, no new positions were approved for the fiscal year.

Our office experienced a change of personnel due to retirement of **Larry Steffler**, Death Investigator II, and **Mike Smith**, Forensic Histotechnician, as well as the relocations of **Mark Fondren**, **Jeff Honeycutt**, **Christina Danforth**, and **Rachel Beck**. Our office hired five new employees as replacements and include **Phillip Adams** and **Donald Smith**, both of who are Forensic Death Investigators; **Madison Brannon**, Investigative Clerk; **Christy Humphries**, Forensic Histotechnician; and **Jonathan Bishop**, Senior Forensic Chemist.

The part-time Family Advocate positions continued at the Tarrant County Medical Examiner's Office in partnership with Trauma Support Services of North Texas (TSSNT). These positions are grant-funded through TSSNT and are presently staffed at the TCMEO by **Teshia Kyser**. The Family Advocate identifies deaths related to trauma (accidents, homicides, and suicides), and refers the families of these decedents to resources and benefits that may assist them in their grief.

The following pages present statistics, beginning with an overview and progressing to more detailed case data, that demonstrate the increasing needs of the communities we serve and the myriad ways in which these needs were met by the Tarrant County Medical Examiner's District in 2018.

2018 Statistics



2018 Statistical Summary

Reported deaths				12,614
Jurisdiction terminated			8,804	70%
Jurisdiction accepted		3,099		25%
within the TCME District				
scenes investigated	1,483	48%		
outside the TCME District		711	6%	
Bodies brought to facility	3,910			
Medical procedures			3,788	30%
External examination		1,832	48%	
Partial autopsy		419	11%	
Complete autopsy		1,537	41%	
Deaths certified			3,099	
Natural		1,552	50%	
Accident		885	28.6%	
vehicular			34%	
non-vehicular			66%	
Suicide		420	13.6%	
Undetermined		100	3.2%	
Homicide		134	4.3%	
No Autopsy		8	0.3%	
Human identification			778	
Successfully identified		769	97.6%	
by observation (visual)	13	1.7%		
by fingerprints	681	87.5%		
by combination	10			
by odontology	22	2.8%		
by dna	8	1.0%		
by anthropology	9	1.2%		
by other means	11	1.4%		
Non-Human	15	1.9%		
Pending identification		9	0.7%	

Manner of Death by County



2018 Tarrant County Deaths		
Manner of Death	Cases	%
Natural	1221	14.6%
Accidental	668	8.0%
Suicide	284	3.4%
Homicide	107	1.3%
Undetermined	77	0.9%
Non-human remains	7	0.1%
Jurisdiction terminated	6016	71.8%
Total	8380	100%

2018 Denton County Deaths		
Manner of Death	Cases	%
Natural	174	7.3%
Accidental	147	6.2%
Suicide	87	3.7%
Homicide	22	0.9%
Undetermined	12	0.5%
Non-human remains	1	0.0%
Jurisdiction terminated	1932	81.3%
Total	2375	100.0%



2018 Parker County Deaths		
Manner of Death	Cases	%
Natural	76	14.9%
Accidental	27	5.3%
Suicide	24	4.7%
Homicide	1	0.2%
Undetermined	3	0.6%
Non-human remains	0	0.0%
Jurisdiction terminated	379	74.3%
Total	510	100.0%

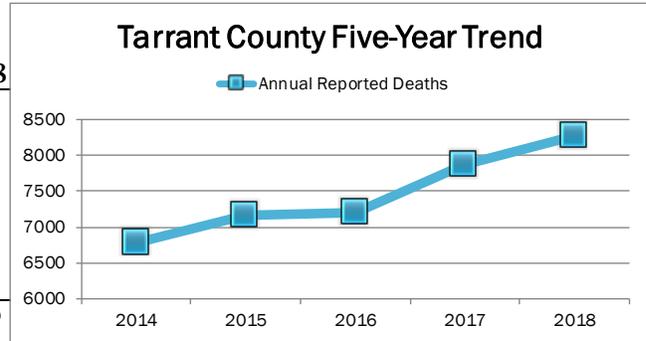
2018 Johnson County Deaths		
Manner of Death	Cases	%
Natural	81	12.7%
Accidental	43	6.7%
Suicide	25	3.9%
Homicide	4	0.6%
Undetermined	8	1.3%
Non-human remains	0	0.0%
Jurisdiction terminated	477	74.8%
Total	638	100%



Five-Year Trends

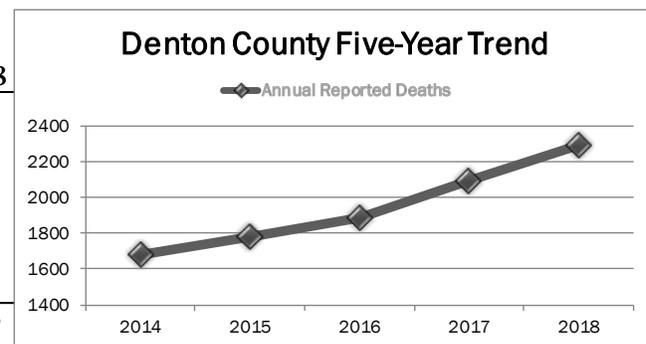
Tarrant County, 2014-2018

Manner of Death	2014	2015	2016	2017	2018
Natural	1006	1060	1200	1230	1221
Accidental	579	530	637	663	668
Suicide	214	235	245	267	284
Homicide	85	105	134	143	107
Undetermined	75	79	76	60	77
Non-human remains	6	2	4	4	7
Jurisdiction terminated	5201	5187	5572	5913	6016
Total	7166	7198	7868	8280	8380



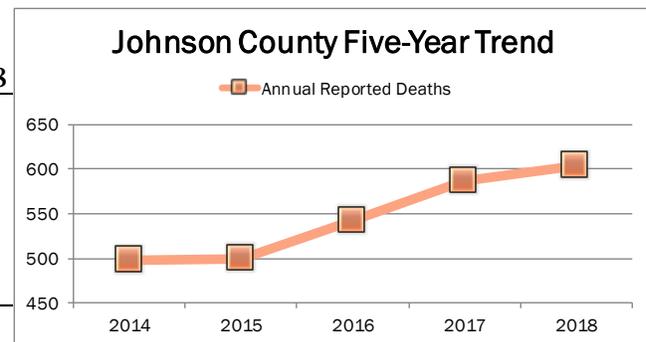
Denton County, 2014-2018

Manner of Death	2014	2015	2016	2017	2018
Natural	163	180	153	159	174
Accidental	103	112	142	166	147
Suicide	60	74	88	98	87
Homicide	7	10	15	13	22
Undetermined	16	11	12	11	12
Non-human remains	0	1	0	0	1
Jurisdiction terminated	1432	1502	1683	1844	1932
Total	1781	1890	2093	2291	2375



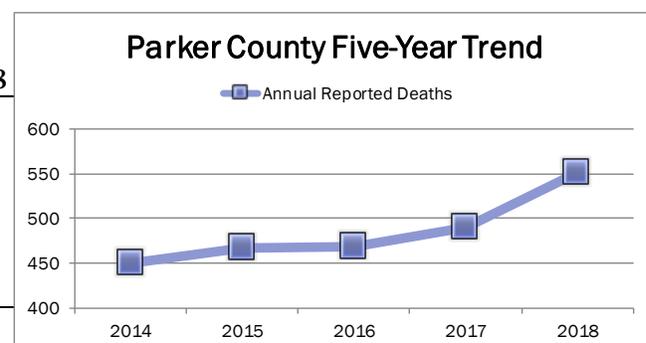
Johnson County, 2014-2018

Manner of Death	2014	2015	2016	2017	2018
Natural	59	72	67	57	81
Accidental	34	25	35	33	43
Suicide	19	13	16	21	25
Homicide	3	4	2	3	4
Undetermined	6	4	1	3	8
Non-human remains	0	0	0	0	0
Jurisdiction terminated	379	424	466	487	477
Total	500	542	587	604	638



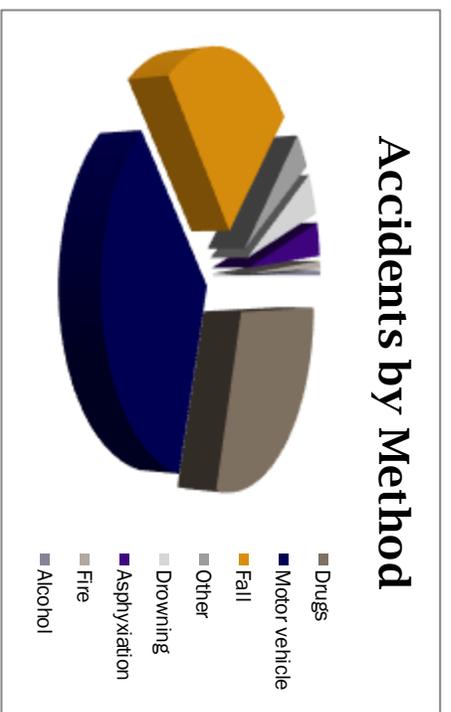
Parker County, 2014-2018

Manner of Death	2014	2015	2016	2017	2018
Natural	72	72	69	79	76
Accidental	31	40	38	43	27
Suicide	14	29	32	19	24
Homicide	3	2	2	4	1
Undetermined	6	4	3	2	3
Non-human remains	0	0	0	0	0
Jurisdiction terminated	341	322	345	404	379
Total	467	469	489	551	510

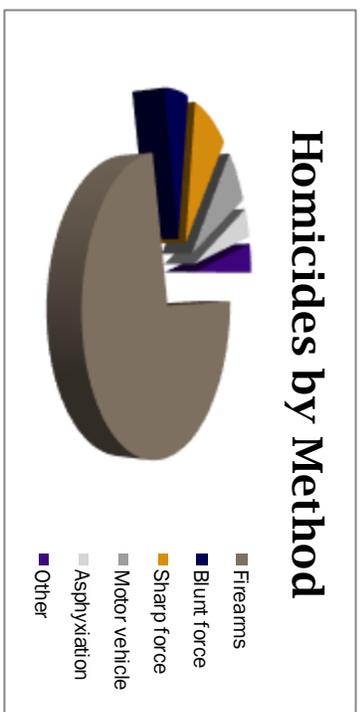


Accidents, Homicides, and Suicides

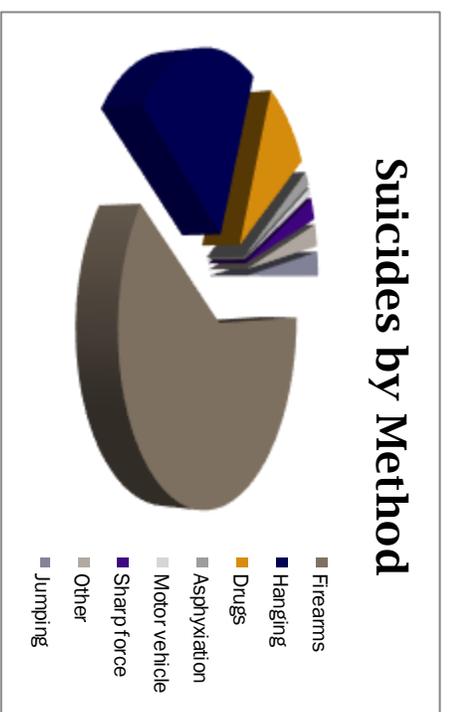
	Tarrant	Denton	Johnson	Parker	Total	%
Alcohol	8	0	0	0	8	1%
Asphyxiation	14	4	0	0	18	2%
Drowning	40	19	2	0	61	7%
Drugs	182	35	17	3	237	27%
Fall	168	34	3	0	205	23%
Fire	3	0	0	1	4	0%
Motor vehicle	225	43	21	20	309	35%
Other	25	7	0	3	35	4%
TOTAL	665	142	43	27	877	



	Tarrant	Denton	Johnson	Parker	Total	%
Asphyxiation	3	0	0	0	3	2%
Blunt force	10	5	0	0	15	11%
Firearms	72	13	2	0	87	65%
Motor vehicle	10	2	1	1	14	10%
Sharp force	8	2	0	0	10	7%
Other	4	0	1	0	5	4%
TOTAL	107	22	4	1	134	



	Tarrant	Denton	Johnson	Parker	Total	%
Asphyxiation	5	1	1	0	7	2%
Drugs	19	10	4	2	35	8%
Firearms	169	48	16	13	246	59%
Hanging	63	17	4	7	91	22%
Jumping	7	2	0	0	9	2%
Sharp force	9	1	0	1	11	3%
Motor vehicle	3	2	0	0	5	1%
Other	8	6	0	1	15	4%
TOTAL	283	87	25	24	419	



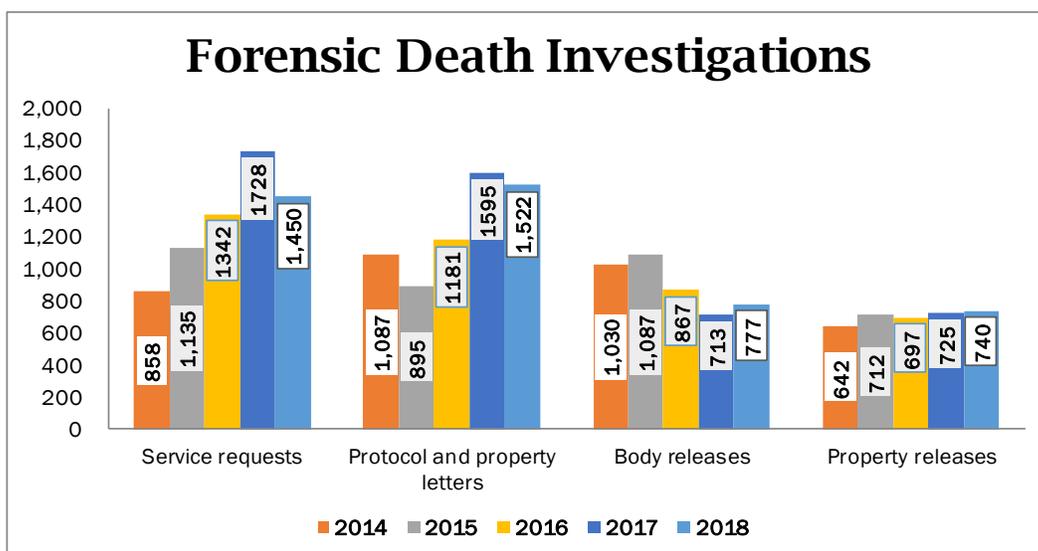
Departments in Depth

Forensic Death Investigation

Forensic Death Investigation conducts investigations into the cause and manner of deaths occurring within its jurisdiction of Tarrant, Denton, Johnson, and Parker counties. Staffed around-the-clock, the department is responsible for initiating a formal response to all reportable deaths, which totaled **12,614** in **2018**.

Trained across multiple disciplines, forensic investigators boast a distinctive array of knowledge, including criminal investigation techniques, relevant aspects of forensic medicine, crime scene processing skills, and methods of maintaining case integrity. Moreover, each investigator must be able to conduct effective interviews, locate and notify next of kin, and interact appropriately with law enforcement personnel.

Once the Tarrant County Medical Examiner's office assumes jurisdiction of a case, the investigator attends the scene or the hospital at which death occurred. After conducting the initial investigation, the investigator prepares a detailed case report containing biographical data on the decedent, a narrative of the events leading up to the time of death or discovery of the decedent, and a summary of all analyses and leads obtained. Investigators further coordinate with health care providers, members of law enforcement, employers, families, and other pertinent sources to gather information that may be of value in determining the cause and manner of death.



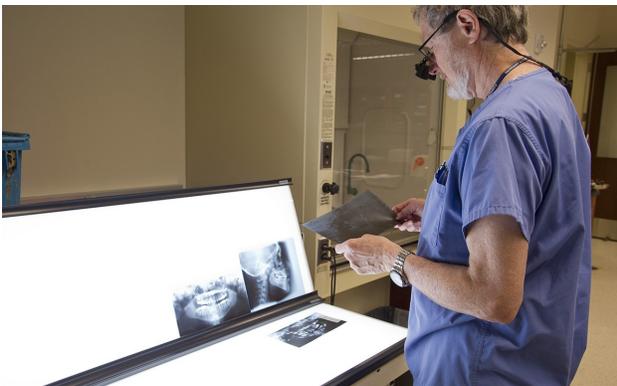
Human Identification Services



Identification of unidentified remains, a primary function of the Tarrant County Medical Examiner's Office, is a legal determination important for both legal and humanitarian reasons. The process requires a holistic approach that takes into consideration all available scientific and contextual evidence. For most people, having a loved one at a morgue for postmortem examination is stressful; hence, the Tarrant County Medical Examiner's Office strives to mitigate this by timely identification within the scope defined by [Statute 49.25, Section §9 of the Texas State Code of Criminal Procedure](#).



The Tarrant County Medical Examiner's Office established the Human Identification Laboratory in the mid-1990s as a standalone facility, a concept then unique among medical examiner's offices in the United States. This laboratory is charged with the responsibility of investigating and attempting to identify all decedents presented to the District as "unidentified." The Human Identification Laboratory additionally verifies the identity of all homicide



victims examined by the office.

Since 2014, the Human Identification Laboratory has identified more than **3,528** individuals in the morgue.

Identification Methods

There are a number of scientific methods employed to definitively establish an identity, including:

- Fingerprint analysis
- Comparison of dental radiographs and records
- Comparison of medical radiographs and records
- DNA analysis

Other methods, such as lip-print analysis (or cheiloscopy), ear-print analysis, and gait analysis are not generally accepted nor used in the U.S. at this time.

Staffing

The Human Identification Laboratory comprises a full-time forensic odontologist, a full-time forensic anthropologist, and two full-time fingerprint examiners. Note that the fingerprint section of the lab operates 24 hours a day, seven days a week.



Forensic Odontologist

- Roger D. Metcalf, D.D.S., J.D.



Forensic Anthropologist

- Dana Austin, Ph.D.



Latent Fingerprint Examiner

- ShaVonda Epps



Latent Fingerprint Examiner

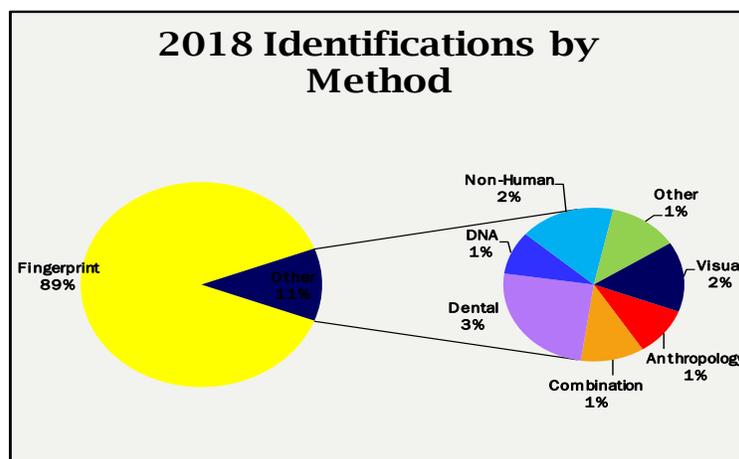
- Bill Walker

Roger D. Metcalf, D.D.S., J.D. is the director of the Human Identification Laboratory. He is [board-certified in forensic odontology](#) and holds a diploma in Forensic Human Identification from the [Faculty of Forensic and Legal Medicine of the Royal College of Physicians in London](#). He is the only person in the U.S. to hold this qualification at this time. Dr. Metcalf is the past president of the [American Society of Forensic Odontology](#) and past chair of the Certification and Examination Committee of the American Board of Forensic Odontology.

Dana Austin, Ph.D., is the District’s forensic anthropologist. She is board-certified by, and is the past president of, the [American Board of Forensic Anthropology](#). In addition to performing laboratory examinations, she supervises the Field Recovery Team, which is called out from time to time to recover skeletonized human remains or assist in exhumations. Dr. Austin also works with various state agencies to repatriate Native American remains that are discovered in the District’s jurisdiction.

Ms. ShaVonda Epps and **Mr. Bill Walker** are the lab’s fingerprint examiners. They are each members of the International Association for Identification and both certified by the Texas Department of Public Safety as terminal operators of the [Automated Fingerprint Identification System](#) (A.F.I.S.). Whenever known antemortem fingerprints are available from stored state or national data, A.F.I.S. allows for rapid identification of decedents via fingerprint analysis and comparison.

As shown in the chart at right, the majority (about 89%) of unidentified persons at the Tarrant County Medical Examiner's Office are identified via fingerprint analysis. Identifications made this way are generally complete within 24 hours of the decedent’s arrival.



Identification Process

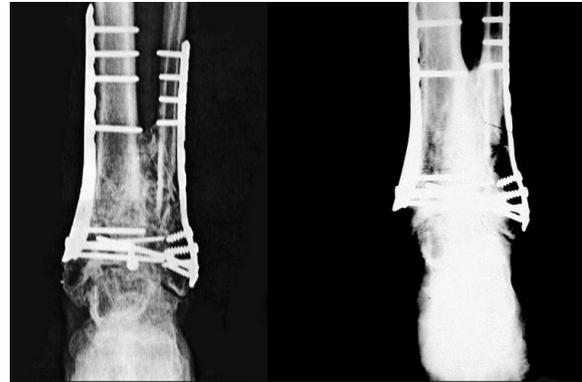
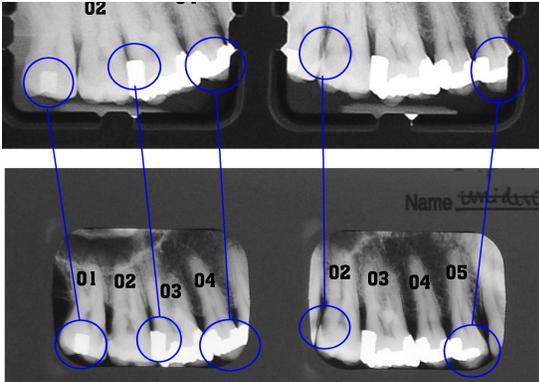


The Human Identification Laboratory's identification protocol normally begins with a fingerprint inquiry to determine if the decedent's fingers are suitable for fingerprinting. If they are, the lab can access the A.F.I.S. and/or the [Next Generation Identification](#) system (NextGen or N.G.I.), as well as request fingerprints from the Texas Department of Public Safety's driver's license database. International fingerprints can be obtained from the [Biometric Support Center West at the U.S. Department of Homeland Security](#). Fingerprint identification is generally quick and cost-effective, and a major advantage of the A.F.I.S. and NextGen systems is that there is no need to have any information

regarding the tentative identity of the decedent in order to perform the database inquiry.

If fingerprint analysis is not feasible, such as in cases with badly charred human remains, the next method employed by the lab is a review and comparison of dental and medical radiographs and records. With these methods, the lab does need to have some basic information regarding the tentative identity of the decedent. The lab obtains this information through interviews with the family or friends of the putative decedent, attempting to find out which dentists and healthcare providers the individual may have seen, or whether any radiographs, such as a head CT or chest x-ray, may have been made in a hospital.

If the lab does find a dentist or hospital where the putative decedent was treated, staff request any records they may have. If radiographs are available, Dr. Metcalf will evaluate the dental films while Dr. Austin evaluates any medical imaging. A recommendation regarding the decedent's identity will then be made to the medical examiner leading the case.



When other methods fail or cannot be used, DNA analysis is the last resort of the Human Identification Laboratory. [Section §63.056 of the Texas Code of Criminal Procedure](#) states:

COLLECTION OF SAMPLES FROM UNIDENTIFIED HUMAN REMAINS. (a) A physician acting on the request of a justice of the peace under Subchapter A, Chapter [49](#), a county coroner, a county medical examiner, or other law enforcement entity, as appropriate, shall collect samples from unidentified human remains. The justice of the peace, coroner, medical examiner, or other law enforcement entity shall submit those samples to the center for forensic DNA analysis and inclusion of the results in the DNA database.

The “center” in Section §63.056 refers specifically to the University of North Texas Human Identification Center in Fort Worth, colloquially known as the UNT Lab. The TCMEO’s Human Identification Laboratory submits specimens obtained at the time of examination of human remains to the UNT Lab, and a family member or two will be asked to go to the UNT Lab to provide a family reference sample for comparison. (The sample needed is a buccal swab, obtained by swabbing the inside of the cheek.) There is no charge to the family for this procedure.



The UNT Lab then develops the decedent’s DNA and compares it to the profile from the family reference sample. Occasionally, the family of a missing person will have already provided the reference sample to the database, and rarely, the decedent’s own DNA profile will already be in the database.

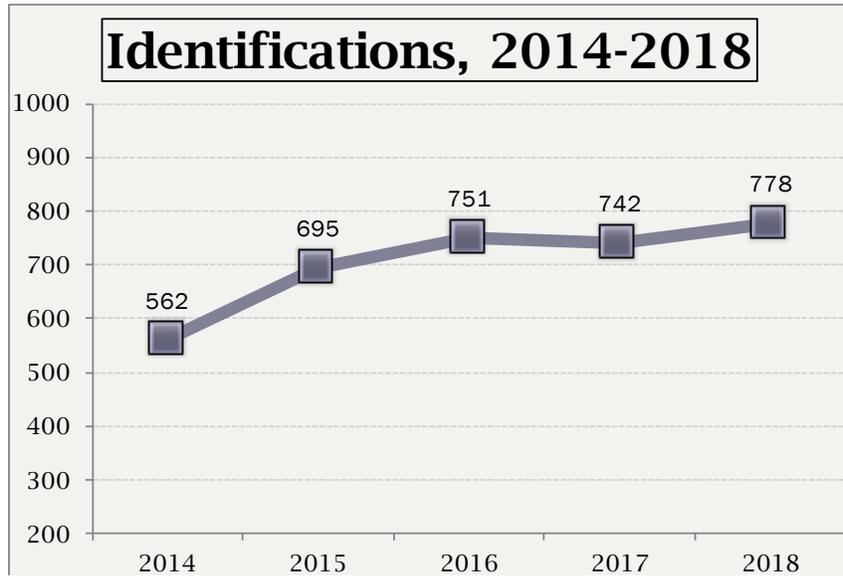
If identification cannot be made, the Human Identification Laboratory enters what information it has for the unidentified remains into the clearinghouse and the [National Crime Information Center's Unidentified Person File](#) within ten working days, in compliance with the Texas Code of Criminal Procedure Section §63.009(c), which states:

All Texas law enforcement agencies are required to enter information about all unidentified bodies into the clearinghouse and the National Crime Information Center Unidentified Person File. A law enforcement agency shall, not later than the 10th working day after the date the death is reported to the agency, enter all available identifying features of the unidentified body (fingerprints, dental records, any unusual physical characteristics, and a description of the clothing found on the body) into the clearinghouse and the National Crime Information Center file. If an information entry into the National Crime Information Center file results in an automatic entry of the information into the clearinghouse, the law enforcement agency is not required to make a direct entry of that information into the clearinghouse.

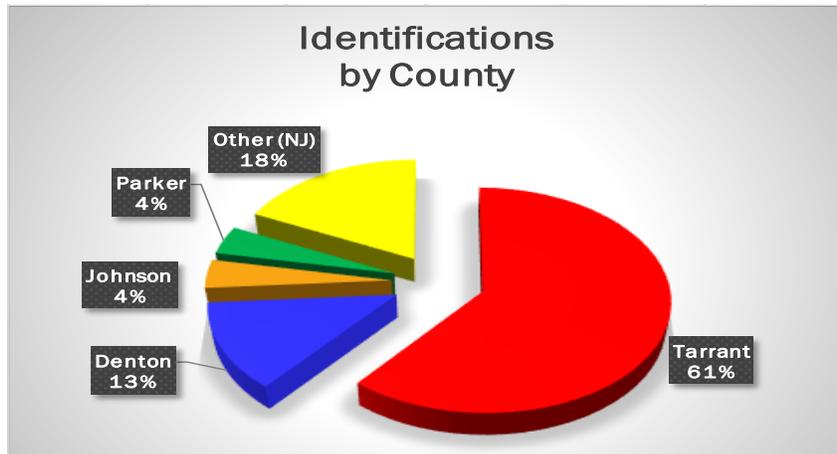
The Human Identification Laboratory also enters information regarding these cases into the [National Missing and Unidentified Person System](#) (NamUS) that is currently housed at the University of North Texas Health Science Center in Fort Worth. These various databases periodically compare the information about unidentified persons in their system to the information about missing persons that has been entered into the respective system, scanning for possible matches. Access to the N.C.I.C. database is limited to law enforcement agencies, while the NamUS missing persons' database is open to the general public.

The Human Identification Laboratory maintains a list of all unidentified individuals who have been buried by Tarrant County Human Services. Before an unidentified decedent can be released for burial, however, various samples are collected and preserved in the hope of eventual identification and in compliance with state law.

Human Identification Laboratory Statistics



Identification Method	Average Time to Identify (days)
Anthropology	5.2
Dental	1.4
DNA	65
Fingerprints	1
Visual	1.9
Pacemaker	0.75



The Morgue & Evidence Services

The heart of activity of any medical examiner's facility, the Tarrant County Medical Examiner's Office morgue was dedicated in 1989 and employs a design that centralizes morgue activity, effectively connecting interrelated morgue functions while isolating it from other work areas of the building. This design limits pathogen exposure and enables examiners and technicians to work with minimum interruption.



The main morgue consists of four workstations, each designed to further a dynamic work environment in which examinations can be carried out with maximum efficiency. A separate major case morgue and a two-station isolation/biohazard morgue were included in the new construction. The morgue also contains two holding areas, each capable of holding fifty bodies; one of the areas is dedicated to incoming cases only, while the other holds bodies awaiting release.

The morgue's autopsy technicians, or deiners, assist the medical examiners in forensic examination. Each deiner is responsible for obtaining photographs, radiographs (x-rays), fingerprints, and biological samples from the decedent before autopsy.

Because the identification of foreign bodies in or on a decedent is vitally important to a comprehensive examination, the medical examiner's office relies on radiography tools like the C-arm fluoroscope, which enables imaging of the body without prior removal from the transport gurney. Other tools include a fixed flat plate device and articulated dental radiography equipment.

Evidence Services

In order to preserve evidentiary integrity, each piece of evidence collected by or submitted to the Tarrant County Medical Examiner's Office must be paired with a detailed chain-of-custody log. Forensic technicians with expertise in evidentiary preservation maintain and secure chain-of-custody to ensure that all evidence is handled and stored properly.

Drug Chemistry & Toxicology

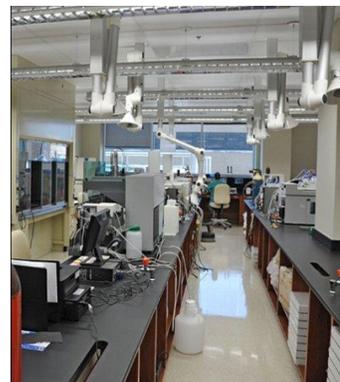
Forensic chemists analyze drugs submitted by other agencies. Drug types received commonly range from clandestine chemical substances to the therapeutic or prescribed medications. Cocaine, heroin, marijuana, and amphetamines, all drugs of abuse, represent the most common products received for chemical assay. Daily, law enforcement agencies within the TCME District are faced with the challenge of identifying drugs found following an arrest or search warrant execution.

Breath Alcohol Program

An Intoxilyzer instrument measures a sample of breath for determinable levels of alcohol concentration, providing an objective, scientific means of testing someone who is suspected by police to have been driving under the influence of alcohol. In 1994, using grant funds supplied by the Texas Department of Transportation, the Intoxilyzer program was established at the Tarrant County Medical Examiner's Office. Under the program, forensic chemists establish Intoxilyzer test sites, calibrate and maintain equipment, and train Intoxilyzer operators, which benefits local police agencies.

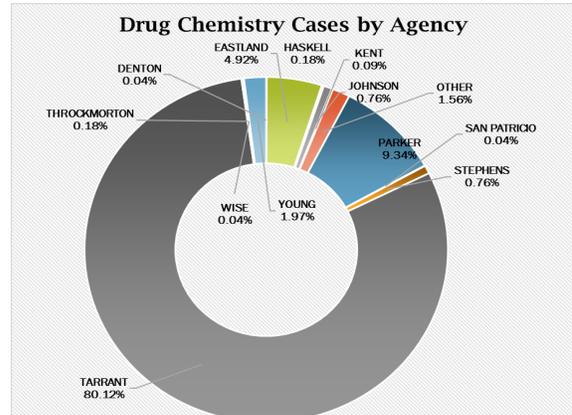
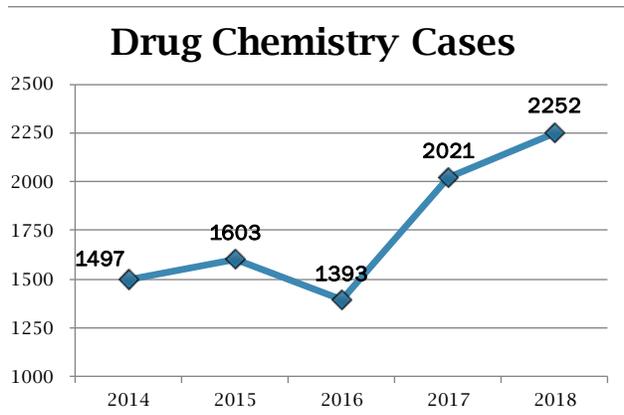
Forensic Toxicology

Established at the Tarrant County Medical Examiner's office in 1983, the toxicology laboratory has subsequently expanded to include mass spectrometry, gas chromatography, and high-pressure liquid chromatography analysis. The toxicology laboratory provides drug testing to assist the medical examiners in determining the cause and manner of death by isolating, identifying, and determining the level of chemicals present in specimens. The forensic toxicology laboratory also participates regularly in established analytical proficiency testing and quality assurance programs.



Drug Chemistry

2018 saw an increase in casework by approximately 10% allowing continual improvements with new instrumentation as well as training new lab personnel. With these challenges, the average turnaround time was 37 days to complete a case.



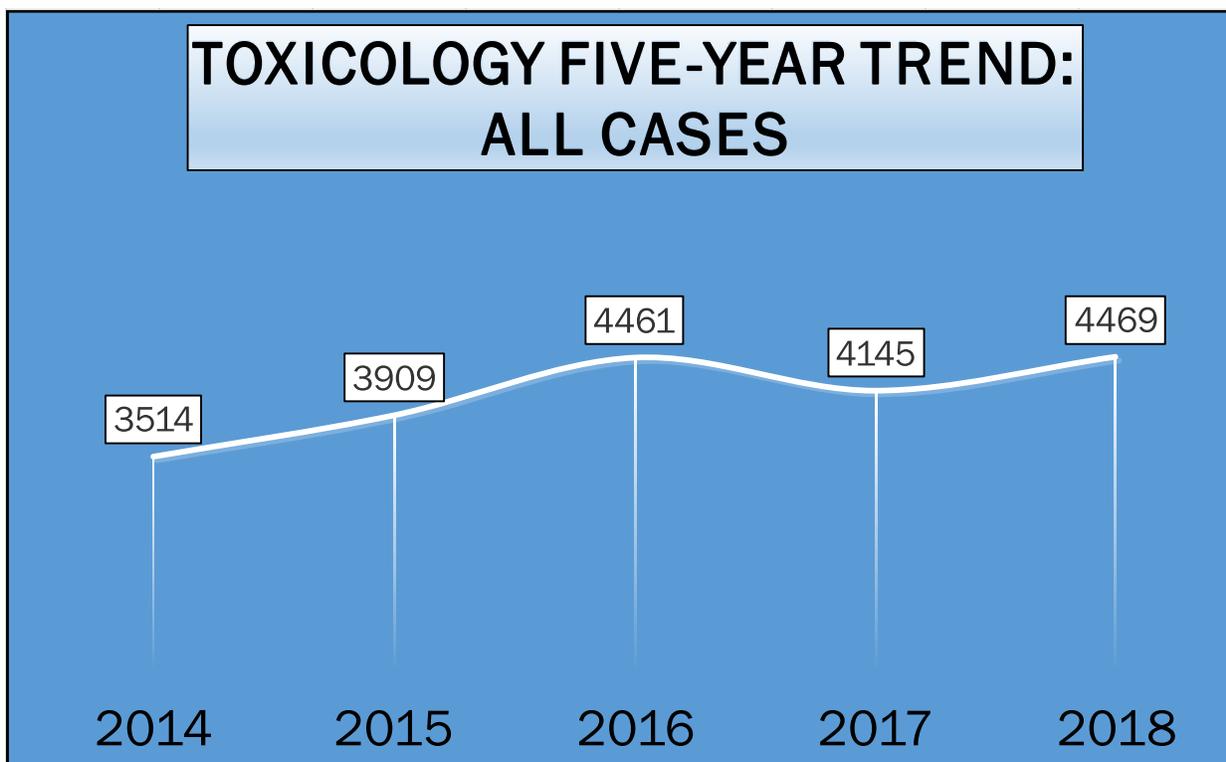
Breath Alcohol

Accomplishments of Technical Supervisor:

- Inspected and maintained 18 testing locations at 15 agencies monthly
- Re-certified over 213 Breath Test Operators
- Prepared 576 affidavits for Administration License Revocation hearings
- Prepared 74 document requests subpoena/discovery motion
- Testified in 40 trials
- Number of completed breath tests: 1780

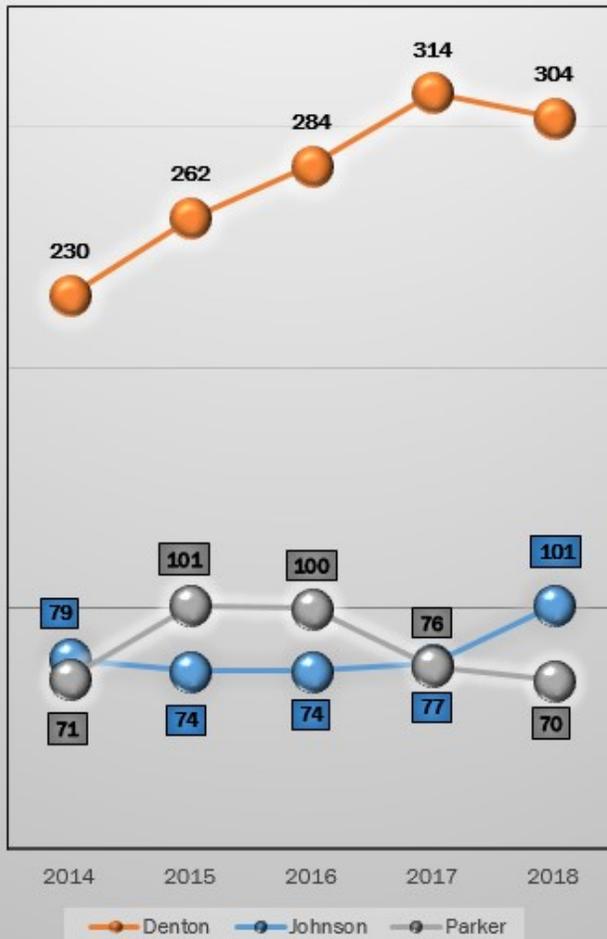
Toxicology

In 2018, Toxicology cases from the four counties in the Tarrant County Medical Examiner's District totaled 1754 up 1.5% from 1728 the previous year, and accounting for 39% of all Toxicology cases. Other medical examiner (627) and outside agency (2088) cases bring the total cases completed by the Toxicology laboratory in 2018 to **4469**, representing an 8% increase over 2017's total of 4145.

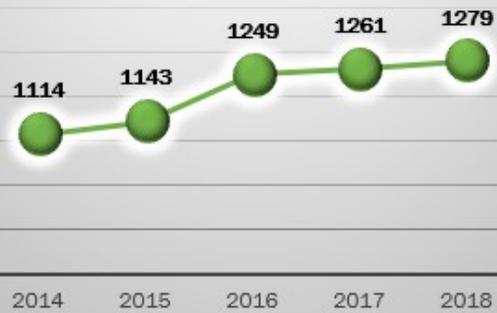


Outside cases, which typically include DWI, DFSA (drug-facilitated sexual assault), and defense attorney cases, increased by 15% from 1813 cases in 2017 to **2088 cases in 2018**. DWI cases continue to be more complex as fewer cases involve alcohol analysis only and more service requests are made for court-ordered retest. The average turnaround time to complete a toxicology service request was 17 days (21 days in 2017).

Toxicology Five-year Trend: Denton, Parker, and Johnson Counties



Toxicology Five-year Trend: Tarrant County



Toxicology Five-year Trend: Other Cases



	2018										
	2014	2015	2016	2017	Tarrant	Denton	Johnson	Parker	Other		Total
					ME	Non-ME					
JAN	266	329	405	427	129	38	16	7	52	235	477
FEB	314	306	395	385	104	19	3	5	44	139	314
MAR	256	317	407	353	105	22	4	6	53	187	377
APR	328	311	375	354	98	27	3	4	46	162	340
MAY	283	301	358	372	108	33	6	5	58	178	388
JUN	289	306	370	351	96	29	10	8	52	135	330
JUL	276	354	404	316	106	26	8	6	55	121	322
AUG	277	308	412	345	116	20	10	3	47	128	324
SEP	285	255	393	298	107	20	12	5	41	122	307
OCT	312	377	273	288	96	17	7	11	61	268	460
NOV	316	317	341	323	98	31	13	4	45	251	442
DEC	312	428	328	333	116	22	9	6	73	162	388
TOTAL	3514	3909	4461	4145	1279	304	101	70	627	2088	4469

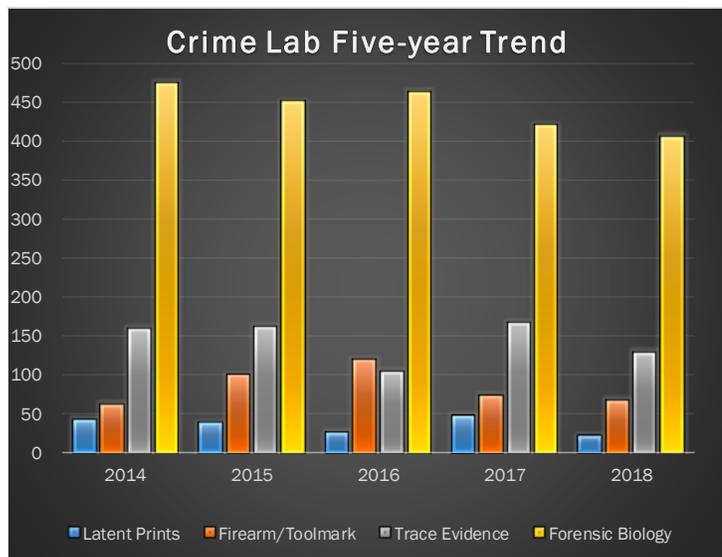
Criminalistics

Since 1989, the Tarrant County Medical Examiner’s Office has operated a full-service crime laboratory, serving the needs of not only its medical examiners, but also of law enforcement agencies and district attorney’s offices in North Central Texas and throughout the United States.

Equipped with modern analytical instrumentation, the various sections of the crime laboratory combine scientific technology with an experienced professional staff. The five specialized sections of the crime laboratory identify, analyze, and report on such forms of evidence as DNA, blood spatter, trace materials, chemical compounds, firearms, tool marks, and latent fingerprints.

In 2016, the Trace Evidence laboratory expanded the scope of their ASCLD/ LAB International accreditation to include imprint/impression evidence comparisons (footwear and tire tread examinations),

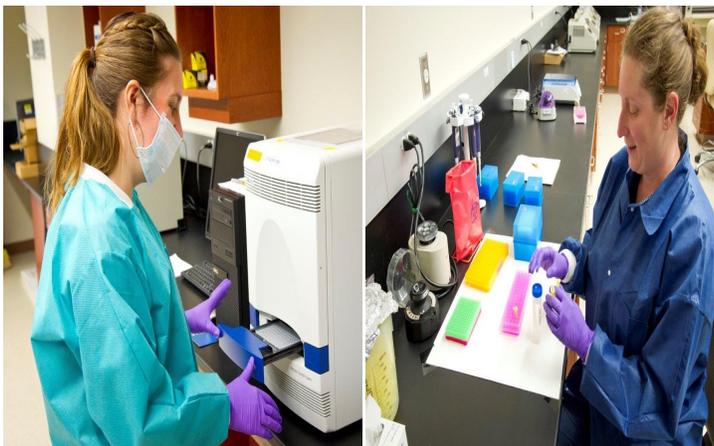
Criminalistics Cases by Laboratory				
	Latent Prints	Firearm/ Toolmark	Trace Evidence	Forensic Biology
Total reports issued in 2018	21	67	127	405
Reports issued within TCME	13	61	98	331
Reports issued outside TCME	8	6	29	74
TCME or law enforcement on TCME case	5	27	51	28
Non-ME case	16	14	54	377



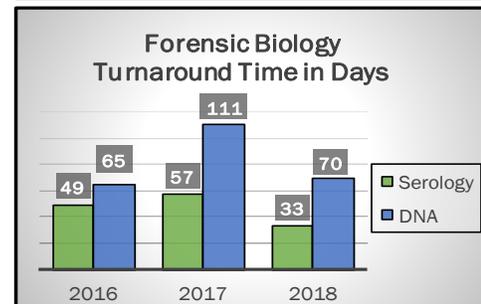
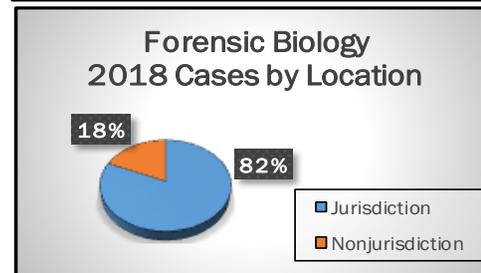
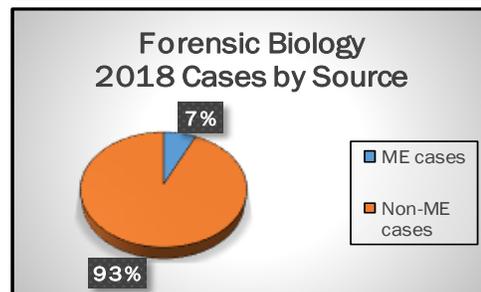
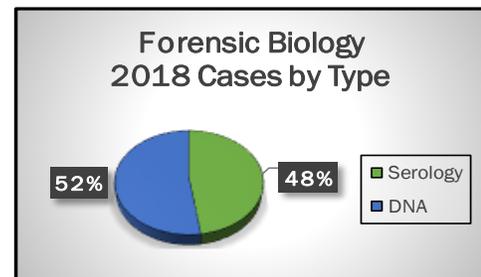
Forensic Biology

DNA analysis provides the ability to restrict the potential population of persons to whom a biological sample might belong to a much smaller subset of suspects. This helps identify the source of a sample and connect it to a particular death or crime scene.

The Tarrant County Medical Examiner’s DNA unit is a designated CODIS (Combined DNA Index System) laboratory. CODIS is the FBI’s DNA database that ultimately links all 50 states and 18 countries in order to compare forensic casework profiles. A database search can provide significant investigative leads and may link unsolved cases to a single perpetrator.



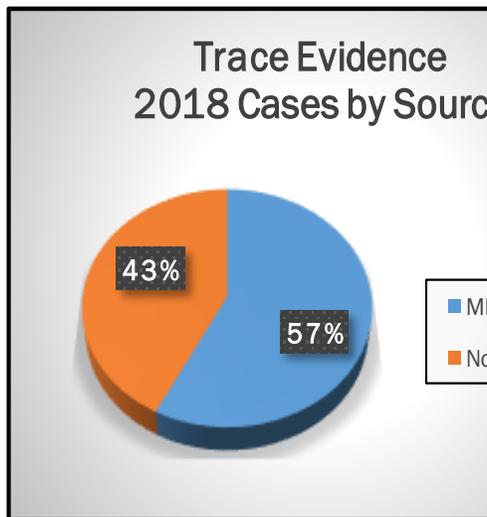
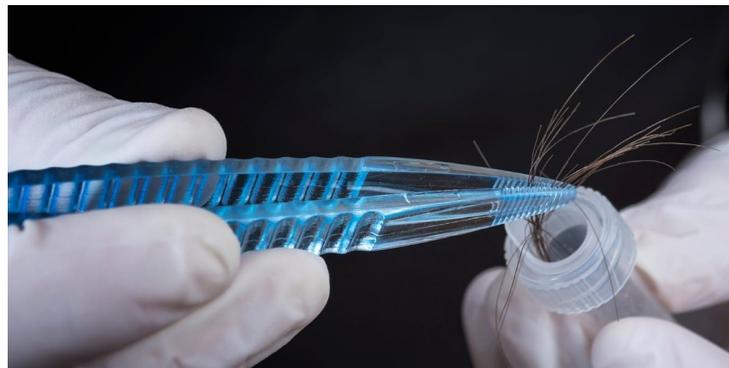
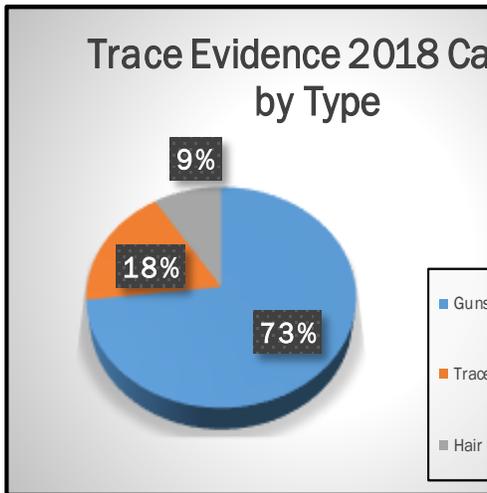
Forensic Biology issued reports on 405 cases in 2018. These cases are categorized at right by *type* (serology or DNA), *source* (requestor), and *location* (within or without the Tarrant County Medical Examiner’s District).



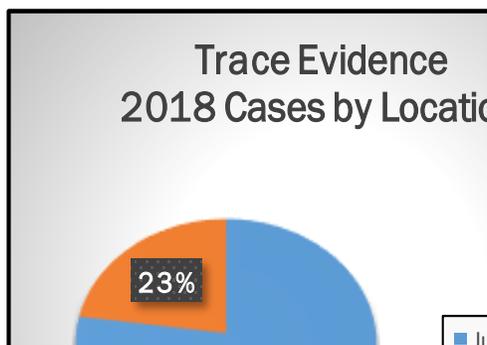
Trace Evidence

Trace evidence is material that can be easily transferred from one site to another because of its size or weight. During the commission of a crime, substances may be transferred between people or objects or acquired from the surrounding environment. Gunshot residue, hair, glass, paint, and fibers are items commonly submitted for examination.

Trace analysis uses advanced technology and instrumentation to obtain chemical profiles of materials, in order to relate them to each other or to a common source. This enables investigators to potentially link a suspect and a victim to a shared location.



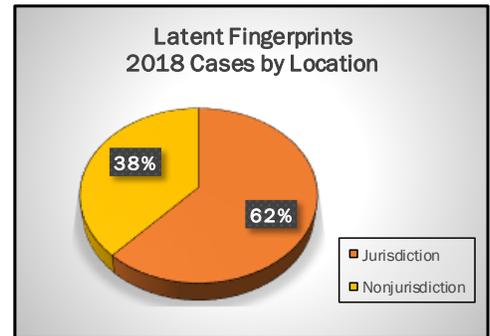
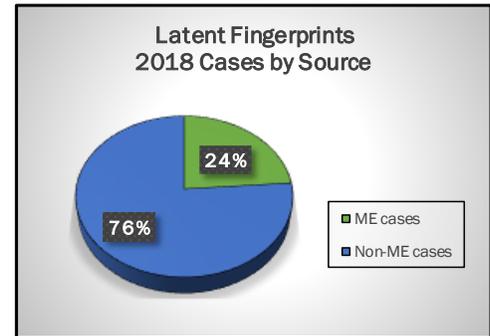
Trace Evidence issued reports on 127 cases in 2018. These cases are categorized at left by *type* (gunshot residue or trace recovery), *source* (requestor), and *location* (within or without the Tarrant County Medical Examiner's District).



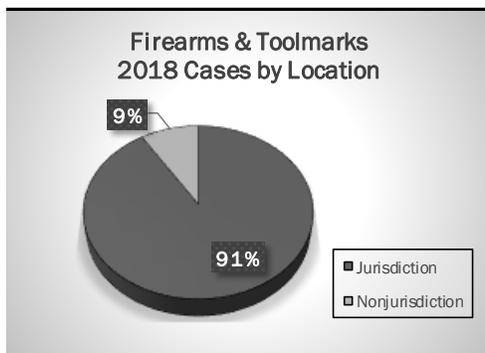
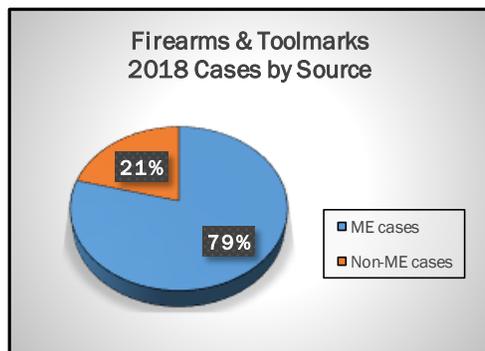
Latent Fingerprints

A fundamental tool of the Tarrant County Medical Examiner's Office, latent fingerprint examination helps to identify bodies that arrive to the morgue unidentified. Latent prints can also be retrieved from submitted evidence and used to assist in identifying a criminal suspect. Using the newest technology and considerable expertise, the latent print examiner achieves remarkable results in lifting prints from various substrates.

Latent Fingerprints issued reports on 21 cases in 2018. These cases are categorized at right by *source* (requestor) and *location* (within or without the Tarrant County Medical Examiner's District).



Firearms and Toolmarks



Much as its name suggests, this laboratory analyzes firearms, projectiles, ballistics, and markings imparted by any form of tool. Firearms submitted are examined for inherent characteristics, unique identifiers, and safety-related factors. They can also be test-fired to obtain reference material that can subsequently be compared to submitted evidence. The laboratory boasts a 40-foot indoor firing range, used to carry out range-of-fire determinations.

Firearms and Toolmarks issued reports on 67 cases in 2018. These cases are categorized at right by *source* (requestor) and *location* (within or without the Tarrant County Medical Examiner's District).

Forensic Photography

A fully equipped forensic photography laboratory was added to the Criminalistics Laboratory of the Tarrant County Medical Examiner's Office in 1994. By 2005, Forensic Photography had replaced all film processing with digital photography.

In addition to more traditional photography, the laboratory is capable of making photographs using ultraviolet and infrared techniques. Image enhancement can also be performed. Pictures, enlargements, and other services are provided to medical examiners, courts, and individuals for educational or research-based presentations.



The Forensic Photography laboratory produced 147,945 autopsy and scene photographs and worked on a total of 1901 cases in 2018. An average of 12,329 photographs were produced by the laboratory monthly.

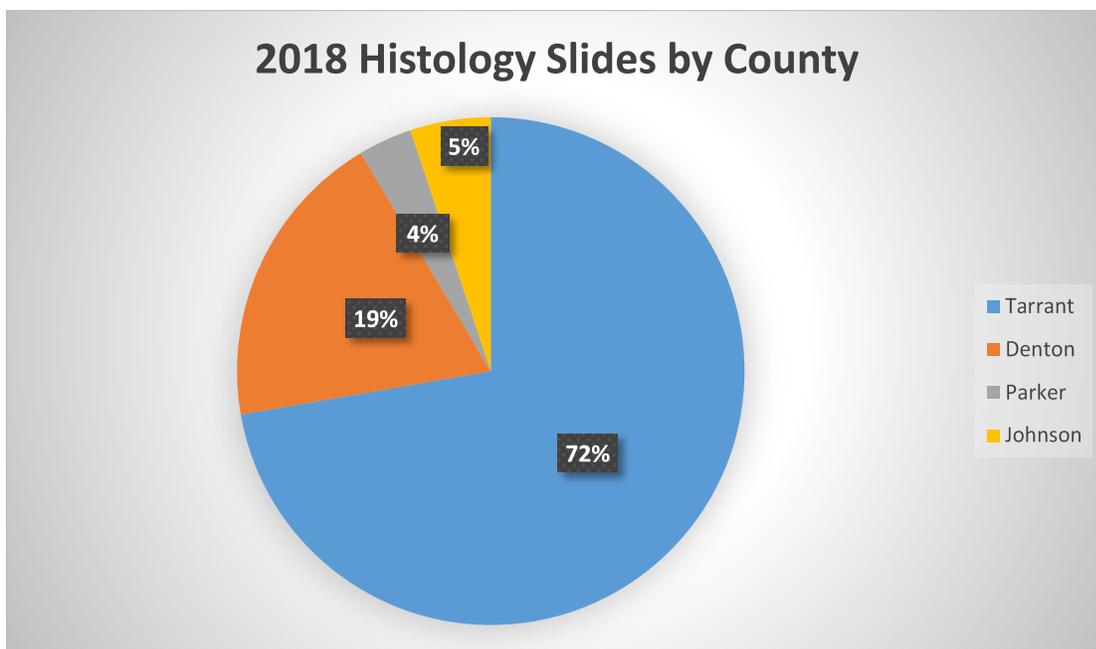


Forensic Histology

Histological examination is the microscopic study of tissues and cells.

The histology department assists the pathologists in determining the cause of death by preparing slides for microscopic examination. After processing and sectioning the tissue, the histologist submits the completed slide to the forensic pathologist for examination. Some cause-of-death determinations rely solely upon the examination of the decedent's tissues and organs. The histology plays a vital role in helping the pathologist with identifying disease processes and certain tissue changes that occur in response to trauma, lifestyle habits and other variables.

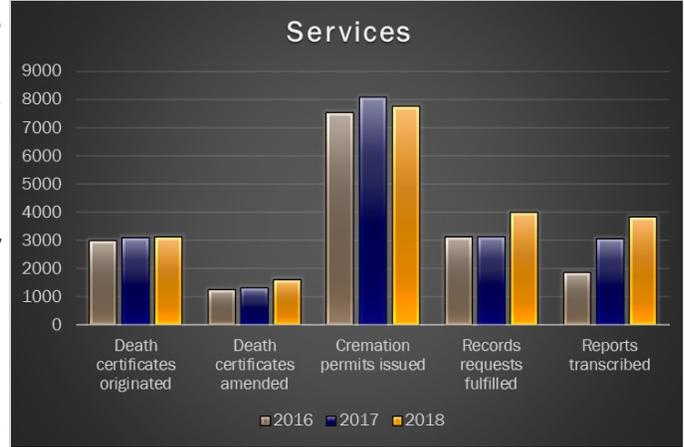
In 2018, the Forensic Histology laboratory worked over 5,000 cases and prepared over 6,000 slides for examination for the counties served by the Tarrant County Medical Examiner District. The chart below represents the percentage of cases by county.



Administrative & Facility Support

Secretarial Services

Secretaries for the medical examiner's office work directly with the public, assisting bereaved families, law enforcement personnel, judicial authorities, healthcare providers, and funeral directors through what many people understandably find to be a difficult and perplexing time. Each medical examiner is assigned a secretary, who provides the



administrative support services necessary to the daily operation of the business. Additional services provided by the secretarial team include issuing death certificates and medical amendments, preparing and distributing cremation permits, transcribing autopsy reports, managing case records, documenting continuing medical education (CME) credits, and producing other business reports.

Business Office

The Business Office was established to meet the increasing complexities of the day-to-day management of the business aspects of the TCME. The Business Manager and Bookkeeper comprise the office and carry out budgeting, contracting, financial reporting, accounts payable, accounts receivable, personnel timekeeping, and other related fiscal tasks. The Business Office also maintains inventory of all supplies, office equipment, and scientific equipment, and ensures all service warranties are current. The Transportation of Human Remains contract, a key requirement of business operation, is also supervised by the Business Manager.

Building Superintendent

Responsible for all general maintenance of the building, the Building Superintendent oversees vendors and contractors to ensure work is performed properly, and supervises work-release individuals assigned to janitorial and grounds duties. This role is especially vital in maintaining the ventilation and air conditioning requirements unique to a medical examiner's office, with its inherent biohazards and significant investment in scientific instruments that cannot tolerate temperature changes.

Cardiac Pacemakers and Defibrillators

Cardiac Pacemakers and Defibrillators

Overview

Electronic medical devices (EMDs) with downloadable memories, such as implantable cardiac pacemakers, defibrillators, and others are now a part of routine medical practice in the United States. These devices have become an integral part of diagnostic and therapeutic modalities in all branches of medicine, are increasing in number, and have thus become increasingly significant to the pathologist not only as postmortem diagnostic tools for establishing in some instance the precise time of death but also recognizing that the cause of death may be attributed to hardware or program failure.

Implantable EMD encountered in forensic practice may include:
Implantable cardiac pacemakers and defibrillators.

Drug pumps.

Insulin pumps.

Blood glucose monitors.

Peripheral nerve stimulators.

Implantable loop recorders.

Implantable neuro-stimulators devices.

Historic Background

The electronic rhythms of the heart were discovered by Augustus Desire Waller, who recorded the first electrocardiogram (ECG) in London in 1887, although he did not realize the clinical significance of his findings. In 1929 Hans Berger

recorded the first electroencephalogram (EEG) and identified the 2 major rhythms, α - and β -waves, and speculated that this could be used to diagnose diseases and tumors of the brain.

The era of therapeutic EMDs in human medicine began with the invention of the first artificial cardiac pacemaker by Hyman, a physiologist, in New York in 1932. This was followed by implantation of the first complete pacemaker in Sweden by Ake Senning, a surgeon, and Rune Elmquist, an engineer, in a patient with Adams-Stokes syndrome in 1958. In 1960, Chardack and Heartbach in 1960 implanted in the abdominal subcutaneous tissue the first transistorized pacemaker with leads sutured to the heart powered by a mercury zinc battery in a patient with atrioventricular (AV) block. Also in the early 1960s, a portable EKG that could store 24 hours of ECG tracings correlated with patient symptoms was developed by Jeff Holter, a physiologist in California.

Implantable Cardiac Pacemakers and Defibrillators

1. Implantable Cardiac Pacemakers

A cardiac pacemaker is essentially a computer generator connected to leads inserted into the heart via the vasculature, which serves to monitor and correct abnormal cardiac rhythms using electrical impulses. The most common indication for cardiac pacing in the United States is sinus nodal dysfunction, A-V block post congenital A-V block, bi-fascicular or tri-fascicular block, hypersensitive carotid sinus and neurocardiac syndromes. Pacing in hypertrophic cardiomyopathy although previously controversial, AV sequential pacing with or without an implantable cardioverter defibrillator is currently employed.

About 3 million people worldwide are living with a pacemaker, and each year about 600,000 pacemakers are implanted to treat bradycardia patients. Out of 30 global companies that make an implantable pacemaker, Medtronic, St. Jude Medical and Boston Scientific combined account for 90% of U.S. pacemaker.

Types of Pacemakers

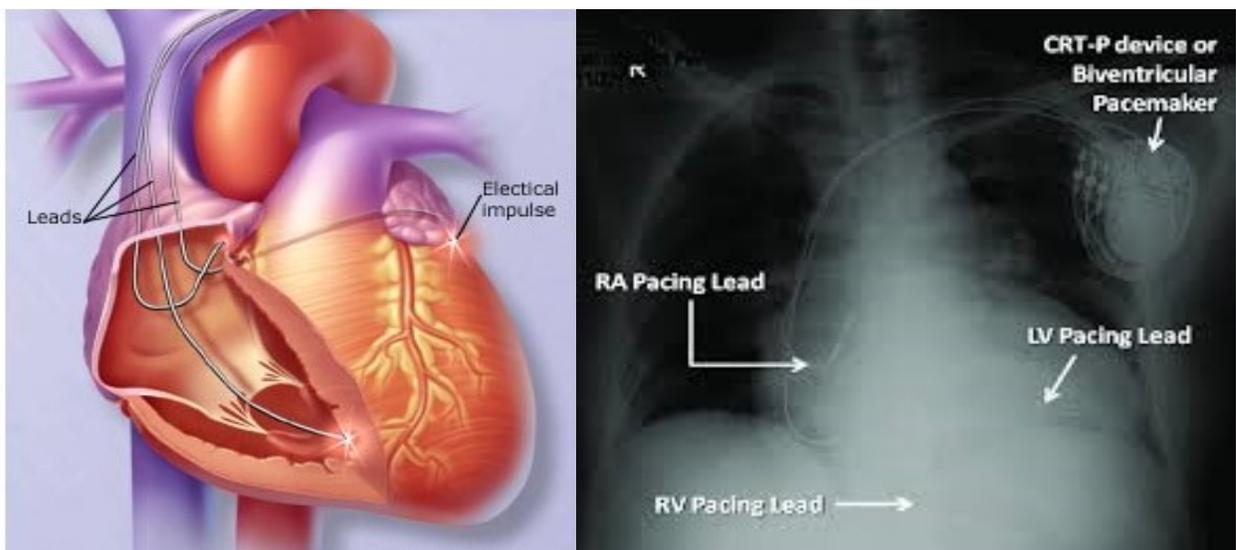
- A. Single-chamber pacemaker: This type of pacemaker has one lead that connects the pulse generator to one chamber of your heart. The lead is generally connected to the right ventricle.
- B. Dual-chamber pacemaker: With two leads, this device connects to both chambers on the right side of heart, the right atrium and the right ventricle. The programs regulate the pace of contractions of both chambers. This pacemaker helps the two chambers work together, contracting and relaxing in the proper rhythm. The contractions allow blood to flow properly from the right atrium into the right ventricle.
- C. Biventricular pacemaker: This pacemaker has three leads which are connected to the right atrium and both the ventricles.

Heart Failure and Biventricular Pacing

When a person has heart failure, often the right and left ventricles do not pump together. And when the heart's contractions become out of sync, the left ventricle is not able to pump enough blood to the body. This eventually leads to an increase in heart failure symptoms, such as shortness of breath, dry cough, swelling in the ankles or legs, weight gain, increased urination, fatigue, or rapid or irregular

heartbeat. Whilst traditional pacemakers maintain AV synchrony by keeping the atrium and ventricle working together, the biventricular pacemakers add a third lead to help the left ventricle have a normal contraction when it also doesn't function properly.

Biventricular pacing, also known as the cardiac resynchronization therapy (CRT), uses a special kind of pacemaker - a biventricular pacemaker -- that is designed to help the ventricles contract more normally. It keeps the right and left ventricles pumping together by sending small electrical impulses through the leads.



Certain types of biventricular pacing devices also provide the ability to shock the heart. These devices are called biventricular defibrillators and function in the same manner as implantable cardioverter defibrillators (ICDs).

Cardiac Arrhythmias

Although as early as 1850 Hoffa and Ludwig had determined that electrical current could terminate ventricular fibrillation it was not until 1962 that the concept of cardioversion/defibrillation gained acceptance with the publication in JAMA by Lown et al their experiences with alternating and direct current shocks to restore sinus rhythm. In February 1980, the first Implantable Cardiac Defibrillator (ICD) was successful implanted in a human through the efforts of Mirowski. This first model weighed 225 g, required a thoracotomy for implantation of the electrode patches, and was only capable of defibrillation.

Table 1. Major Risk Factors for Sudden Cardiac Death

Common

- CAD
 - Acute MI
 - Prior MI
 - CAD or risk factors
- Heart failure
 - Reduced left ventricular ejection fraction due to ischemic or nonischemic (dilated) cardiomyopathy
- Arrhythmias
 - Prior sustained or nonsustained ventricular arrhythmias

Less common

- Structural heart disease
 - Hypertrophic cardiomyopathy
 - Arrhythmogenic right ventricular dysplasia/cardiomyopathy
 - Severe left ventricular hypertrophy
 - Congenital heart disease
 - Coronary circulatory anomalies
 - Myocarditis
- Electrical disease
 - Long QT syndrome
 - Brugada syndrome
 - Catecholaminergic polymorphic ventricular tachycardia
 - Primary electrical disease (idiopathic ventricular fibrillation)
 - Preexcitation syndrome
 - Chest wall trauma (commotio cordis)
 - Complete heart block
 - Drug-induced QT prolongation and polymorphic ventricular tachycardia (torsades de pointes)

NOTE: Risk factors listed by clinical significance.
 CAD = coronary artery disease; MI = myocardial infarction.

Table-1 Source: Citation No 12 – see endnote.

This was a significant milestone since Sudden Cardiac Death (SCD) affects 500,000 persons in the United States, accounting for more deaths than stroke, lung cancer, and breast cancer combined. The most common electrical sequence of events in SCD is ventricular tachycardia (VT) degenerating into ventricular fibrillation (V-Fib) although in elderly persons and those with advanced heart failure, bradyarrhythmias or electro-mechanical dissociation may be the underlying primary electrical event. There is now evidence to suggest that in some non-cardiac conditions, such as pulmonary embolism (PE), the common pathway to sudden death may also be V-Fib, although as the Vienna study demonstrated that in clear majority of cases (> 95%), the terminal cardiac event is pulseless electric activity (PEA) and asystole.

SCD is a catastrophic usually fatal common event, and often the first manifestation of coronary artery disease with 60 percent of cases occurring outside of the hospital setting. Only 10 to 15 percent of SCDs occur after recurrent arrhythmic events. Coronary artery disease is present in two-thirds of all persons with SCD. Men have a 50 percent higher age-adjusted

relative risk of SCD

than women, with 75 percent of all SCDs occurring in men. The most common risk factors are reduced left ventricular ejection fraction, acute or prior myocardial infarction, prior ventricular arrhythmias, and congestive heart failure (Major risk are defined in Table 1).

Identifying high-risk persons is critical since the index arrhythmic event is usually fatal in persons with SCD. Unfortunately, almost all tests and clinical features lack adequate sensitivity, specificity, and reproducibility to identify vulnerable patients; therefore, criteria for selecting patients for primary prevention are difficult to define. Nonetheless, studies have shown, as noted above, that

reduced left ventricular ejection fraction predicts sudden death in ischemic and non-ischemic dilated cardiomyopathy and is one of the better criterion to identify vulnerable patient who would a candidate for and ICD.

Recent Advancements in Pacemaker Technologies



There have been several advancements in pacemaker technologies over the past few years. As illustrated below, the pacemakers that weighed over 73 gms in 1958 now weigh approximately 2 ms.

Summary of Newer Technologies

The technologies that will have the most impact on patient care can be grouped into the following areas:

- Tracking device data and patient health through wireless remote monitoring systems (telemetry);
- Models that are magnetic resonance imaging (MRI) safe; Biotronik is the first company in the United States to offer both single- and dual-chamber pacemakers approved for use in an MRI environment and by May 2015, the company reported 60 percent of the pacing devices it sold were MRI-approved. All major companies now offer this feature.
- Longer battery life and technology to help reduce pacing requirements to conserve battery power ranging from 9.4 years to 14.4 years.
- New data recording functionality to provide more information on patient health and device status; and
- The introduction of single-chamber, transcatheter-delivered, leadless pacemaker systems.

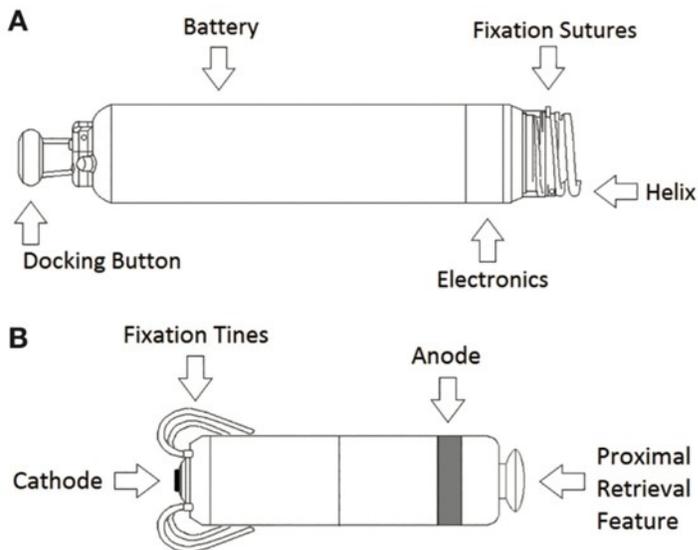
Leadless Pacemakers

One of the biggest issues with implantable electronic pacemaker devices is the leads that connect the device to the heart. Leads are the weakest component of pacing, implantable cardioverter defibrillator (ICD) or cardiac resynchronization therapy (CRT) due to wearing out or complications due to infection. Furthermore, traditional implantable devices require surgery to install the leads, increasing the complexity of the procedure, adding cost and exposing the patient to infection risks.

Wireless technologies and the miniaturization of both electronic components and the batteries have enabled the development of transcatheter implantable pacing and now CRT systems, eliminating the need for surgery or the placement of venous leads.

Fig-1: Leadless Pacemakers: A = Nanostim (Abbott/St. Jude) and B = Micra (Medtronic)

In early 2016, the U.S. Food and Drug Administration (FDA) approved the Medtronic



Micra device, the first leadless, catheter-implanted pacemaker approved in the United States. It is the world's smallest pacemaker at 0.8 cc in size, being a little smaller than its competitor, the Abbott/St. Jude Medical Nanostim. The device has a 20 French diameter and uses a 27 French introducer in the femoral vein, allowing catheter access to the right ventricle. Micra has four self-expanding nitinol hooks that extend as it is unsheathed from its delivery catheter. These act as an anchor, hooking into the tra-

beculation at the apex of the right ventricle. The operator performs a tug on it to ensure it will not embolize prior to final release. Out of more than 1,600 patients in the post-FDA approval study of the device, there has only been one embolization of a Micra. The battery, while small, is expected to have a 12-year life.



Fig-2: Medtronic Micra: Old and New



Fig-3: Medtronic Micra

The Abbott/St. Jude Medical Nanostim pacemaker is currently pending final FDA review. The single-chamber pacemaker device is designed to be fully retrievable. It has a docking button on the top of the device (Fig-1) which can be grasped by a snare catheter and twisted to turn the device and unscrew the corkscrew-like anchor in the myocardium.

One issue with these two leadless pacing systems is that they are single-chamber devices, which only account for about 10-15 percent of the U.S. pacemaker market. Medtronic is currently working on implantation of a Micra pacemaker in each ventricle of the heart and enabling wireless communications between the devices to synchronize their pacing.

Interrogation of Pacemakers

While most individuals with an implantable EMD will have died from cause unrelated to the presence of the device, consideration should be given to the retention and interrogation of any device as part of postmortem examination, where, based on clinical judgment of the pathologist conducting the postmortem examination, such studies are likely to contribute to establishing the cause of death (COD).

The necessity for such retention and interrogation of any device will in part depend on the type of postmortem being conducted and on the burden of proof required in the given case. The burden of proof in many cases is the “balance of probability” and hence it may not be necessary to conduct such studies when an adequate COD is found.

However, the retention and interrogation of any device as part of a postmortem examination is likely to be particularly important in cases where no macroscopic (gross) COD is apparent as some cases are associated with adverse events that may have contributory to COD.

A pathologist should consider following possibilities when an EMD is present:

- a. The cause of death (COD) is due to a disease process for which the EMD has neither caused nor contributed to the death of an individual who died for example because of a ruptured aneurysm and who has a cardiac pacemaker.
- b. The death is due to the presence of the implantable medical device, for example, an individual who develops sepsis following insertion of a cardiac defibrillator device.
- c. The death is due to malfunction of implantable medical devices.

Postmortem interrogations of cardiac implantable electronic devices (CIEDs) may also assist in defining the precise time of death in an unattended death by analyzing several parameters such as changes in lead impedance, sensing and pacing threshold, pacing frequency and stored arrhythmic episodes. At the time of death, sensing declines and pacing threshold increases to not measurable values corresponding to cardiac arrest. Lead impedance increases at the time of death, followed by a second peak upon cutting of the leads during autopsy. Lacour from the Berlin group describe 40 cases (26.7%) where the time of death and in 51 cases (34.0%) where cause of death could not be determined by forensic autopsy. Of these, CIED interrogation facilitated the determination of time of death in 70.0% of the cases and clarified the cause of death in 60.8%. Additionally, device concerns were identified in 9 cases (6.0%), including 3 hardware, 4 programming, and 2 algorithm issues.

Interrogation is facilitated by contacting the local area representative for CIED who will conduct the interrogation at the medical examiner's office.

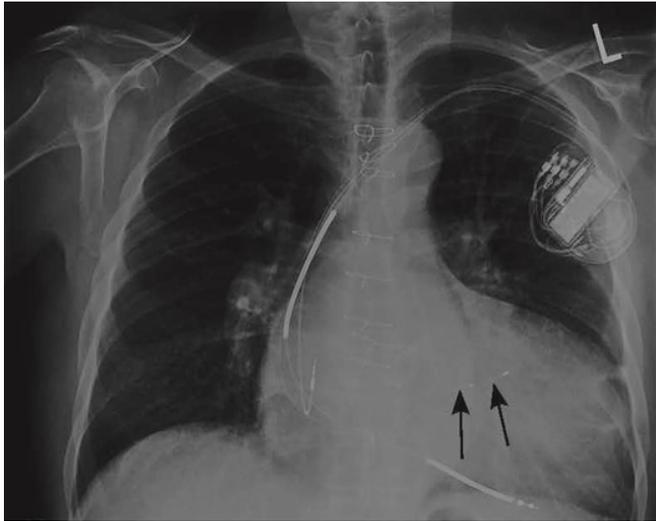
2. Implantable Cardioverter Defibrillators (ICDs)

An ICD will continuously scan the patient's intrinsic heart rhythm in real time to detect and treat life-threatening arrhythmias, especially tachycardia. If detection criteria are met for VT or VF, usually based on ventricular rate, the device can terminate the ventricular arrhythmia with overdrive pacing, cardioversion, or defibrillation. The discharge delivered by an ICD is about 25 to 40 J, approximately 1 million times greater than an impulse produced by pacemakers.

An ICD consists of a pulse generator and lead, analogous to a pacemaker but with a few notable differences:

- a. The ICD generator is larger because it houses a large-capacity battery, a high-voltage capacitor, and a more complex microprocessor.
- b. The ICD lead, which is placed in the right ventricular apex, consists of a pacing tip electrode and one or two integrated defibrillator or shock coils that are positioned in the right ventricle and superior vena cava.

- c. Biventricular ICDs, or cardiac resynchronization therapy defibrillators, have an additional lead placed in a branch of the coronary sinus via the right atrium for left ventricular pacing. A chest radiograph can help differentiate among these devices.



X-Ray: Biventricular ICD, or cardiac resynchronization therapy defibrillator. A lead overlying the left ventricle silhouette is implanted via the coronary sinus ostium in the right atrium and is placed in a coronary sinus vein branch on the epicardial surface of the left ventricle (arrows). The right atrial pacing and right ventricular ICD leads are also seen. In contrast to pacemakers, defibrillator leads have one or two electrode shock coils enveloped on the right ventricular lead and appear as discrete radio-opaque bands on the lead. Note that the ICD generator is larger than the pacemaker generator.

Although ICDs have pacing capabilities nearly identical to conventional pacemakers, ICDs are generally programmed to minimize ventricular pacing, although cardiac resynchronization therapy defibrillators are intended to always pace the right and left ventricles to prevent ventricular desynchrony from underlying intraventricular conduction delay or bundle branch block.

Nizam Peerwani, MD
Chief Medical Examiner
June 2019

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Knowledge Sharing

A Passion to Educate

From annual conferences to weekly reviews to daily meetings, opportunities to educate are always welcomed by the staff of the Tarrant County Medical Examiner's Office. Our medical examiners, criminologists, and other scientists are routinely sought for their expertise in the field of forensics and relish every chance they get to augment the collective fund of knowledge in it. In this section, we highlight some of the 2018 events at which staff of the Tarrant County Medical Examiner's Office shared their expertise:



Society of Forensic Toxicologists

January 2018

Robert Johnson, Ph.D.

“Standard for the Scope and Sensitivity of Forensic Toxicological Testing”



Forensic Anthropology Society - Texas State University

March 2018

Dana Austin, Ph.D.

“Forensic Anthropology Practice Within the Medical Examiner/Justice of the Peace System in Texas”



**University of North Texas Graduate School of
Biological Sciences
April 2018**

Susan R. Howe, Ph.D.

“Toxicology Overview” & “Forensic Drug Chemistry”



**American University of Science & Technology
Beirut, Lebanon
April 2018 & November 2018**

Nizam Peerwani, M.D.

“Forensic Medicine” & “Introduction to Criminalistics”



**Oklahoma State University Graduate School
July 2018**

Robert Johnson, Ph.D.

“Casework in a Medical Examiner’s Office”



Society of Forensic Toxicologists

October 2018

Chris Heartsill

“Risky Business: The Dance between ISO/IEC 17025:2017’s Risk Based Requirements & Forensic Toxicology Laboratories”

Robert Johnson, Ph.D.

“The Toxicological Investigation of Drug Impaired Driving Cases”



Tarrant County Sheriff’s Office Crime Scene

October 2018

Heather Kramer

“Forensic Serology and Biology”



Abu Dhabi Pathology

October 2018

Susan Roe, M.D.

“Scientific Workshops in Forensic Medicine”



Texas Christian University

October 2018

Dana Austin, Ph.D.

“Forensic Anthropology at a Medical Examiner’s Office”



Intoxication Manslaughter, Investigating the Crime Scene: The Crash and Beyond

November 2018

Robert Johnson, Ph.D.

“ Drugs and Driving”



American College of Medical Toxicology

December 2018

Robert Johnson, Ph.D.

“ The Opioid Impaired Driver”



Tarrant County Medical Examiner's Office Grand Rounds Conference

Various Topics - Tuesday mornings during the year

Dana Austin—Anthropology

Jonathan Bishop—Drug Chemistry

Chris Heartsill—Quality Management

Teshia Kyser—Trauma Support Services

Peggy Le—DNA

Ronald Singer—Passion Crimes

Susan Roe—Pathology



Anne Koettel

American Society of Trace Evidence Examiners
Communication Committee Newsletter

Dana Austin, Ph.D.

Journal of Forensic Anthropology
Reviewer

Leanne Hazard

American Board of Criminalistics
Proficiency Review Committee

A Passion to Learn

The field of forensics evolves rapidly, as new technological developments enable improved methods and techniques. The staff of the Tarrant County Medical Examiner's Office are committed to keeping abreast of these changes and seek out opportunities to do so, as shown below.



American Academy of Forensic Sciences 70th Annual Meeting: Seattle, WA February 2018

Chief Medical Examiner, Nizam Peerwani, M.D.

Deputy Medical Examiner, Tasha Z. Greenberg, M.D.

Deputy Medical Examiner, Richard C. Fries, D.O.

Technical and Administrative Director, Ronald Singer, M.S.

Chief Toxicologist, Robert Johnson, Ph.D.

Crime Lab Director, Susan Howe, Ph.D.

Chief of Human Identification, Roger Metcalf, D.D.S; J.D.

Senior Anthropologist, Dana Austin Ph.D.

Quality Manager Chris Heartsill, B.S.



United States and Canadian Academy of Pathology Annual March 2018

Deputy Medical Examiner, Richard Fries, D.O.



ANSI—National Accreditation Board Root Cause Analysis for Forensic Science Providers - May 2018

Jonathan Bishop

Dawn Boswell

Joe English Jr.

Michael Floyd

Richard Fries

Christina Coucke-Garza

Vicki Hall

Kristen Hammonds

John Harris

Leanne Hazard

Susan Howe

Robert Johnson

Rebecca Klein

Anne Koettel

Heather Kramer

Beryl Landry

Peggy Le

Connie Lewis

Aria McCall

Roger Metcalf

Michelle O'Neal

Connie Patton

Nizam Peerwani

Tracye Poirier

Katie Scott

Sarah Skiles

Debra Smith

Kira Tillman

William Walker

Traci Wilson





Organization of Scientific Area Committees Meeting - March 2018

Chief Toxicologist, Robert Johnson, Ph.D.

Chief of Human Identifications, Roger Metcalf, DDS



Southwestern Association of Toxicologists May and November 2018

Chief Toxicologist, Robert Johnson, Ph.D.

Technical Lead & Senior Toxicologist, Aria McCall, B.S.

Senior Toxicologist, Connie Lewis, B.S.

Forensic Toxicologist III, Beryl Landry B.S.

Forensic Toxicologist III, Cheryl Wheeler, B.S.

Forensic Toxicologist III, LeAnne Hazard, M.S.

Forensic Toxicologist II, Katie Scott, B.S.



Texas Association of Crime Laboratory Directors Meeting *February and July 2018*

Crime Laboratory Director, Susan Howe, Ph.D.



**Association of Firearm & Toolmark Examiners
Annual Training Seminar
June 2018**

Technical Lead & Senior Criminalist, Jamie Becker, B.S.
Senior Criminalist, Loandra Pellot Vazquez, B.S.



**Association of Forensic DNA Analysts and
Administrators Conference
August 2018**

Senior Forensic Biologist, Heather Kramer, M.S.
Senior Forensic Biologist, Peggy Le, B.S.
Senior Forensic Biologist, Kristen Hammonds, B.S.
Forensic Biologist, Kira Tillman, B.S.



Senior Forensic Biologist, Heather Kramer, M.S.
Senior Forensic Biologist, Peggy Le, B.S.



**ANSI National Accreditation Board
Assessor Training
August 2018**

Technical Lead & Senior Toxicologist, Aria McCall, B.S.



**Alcohol Testing Alliance
August 2018**

Senior Forensic Chemist, Sarah Skiles, B.S.



**Hennepin County ME & Minnesota
Coroners & Medical Examiner
Association Forensic Seminar
September 2018**

Deputy Medical Examiner, Susan Roe, M.D.



**Scientific Working Group on DNA
Analysis Methods– October 2018
Senior Forensic Biologist, Peggy Le, B.S.**



**Tarrant County Sexual Assault Response Team
Quarterly Meeting—October 2018
Senior Forensic Biologist, Heather Kramer, M.S.**



**National Association of Medical
Examiners Annual Conference
October 2018**

**Deputy Medical Examiner, Tasha Z. Greenberg, M.D.
Deputy Medical Examiner, Richard C. Fries, D.O.**



**Southwestern Association of Forensic
Scientists *Annual Meeting***
October 2018

Senior Forensic Chemist, Michelle O'Neal, B.S.



Society of Forensic Toxicologists
October 2018

Chief Toxicologist, Robert Johnson, Ph.D.

Technical Lead & Senior Toxicologist, Aria McCall, B.S.

Toxicologist, Leanne Hazard, M.S.

Toxicologist, Katie Scott, B.S.

Quality Manager, Chris Heartsill, B.S.



Federal Bureau of Investigations
National FBI CODIS Conference
December 2018

**DNA Technical Lead & CODIS Administrator,
Constance Patton, B.S.**



Texas Vital Statistics Conference
December 2018

Vital Statistics Coordinator, Christie Smith

Education in the Office

For there are some who long to know for the sole purpose of knowing, and that is shameful curiosity; others who long to know in order to become known, and that is shameful vanity . . . others still who long for knowledge in order to sell its fruits for money or honors, and this is shameful profiteering; others again who long to know in order to be of service, and this is charity. —Bernard of Clairvaux

Staff of the Tarrant County Medical Examiner’s Office meet regularly to review cases, continue professional education, and exchange ideas. A lecture calendar is published and distributed each month to encourage participation.

Critical Case Review (Twice Monthly)

Generally meeting at lunch on the second and fourth Wednesdays of each month, Critical Case Review gives the medical examiners time to discuss their most complex or high-profile cases with each other and with key members of staff from the investigative, laboratory, and identification sections of the office. Unexpected findings, unusual developments, and contradictory evidence are all reviewed and analyzed before a consensus regarding cause and manner of death is reached. In particularly difficult cases, examiners may agree to “re-pond” a case and review it again at a later Critical Case Review, while the case’s medical examiner solicits more information by ordering specialized testing, seeking law enforcement agency input, requesting more medical records, or some combination thereof.



A summary of reviewed cases and their disposition is produced by the meeting’s scribe and submitted to qualify Critical Case Review meetings for Continuing Medical Education (CME) credits. In this way, Critical Case Review fulfills two needs at once and enables medical examiners to spend more of their time working on cases for

Child Mortality Case Review (Monthly)

A “cousin” of Critical Case Review, Child Mortality Case Review was born of the desire to increase transparency with child welfare advocates and educate health, law, and social service agencies about the rigorous process of determining cause and manner of death in pediatric cases. It is limited to cases in which (1) the decedent is between 0 and 17 years of age at the time of death and (2) the death occurred within Tarrant County.

As with Critical Case Review, a summary of reviewed cases and their disposition is produced by the meeting’s scribe and submitted to qualify these meetings for Continuing Medical Education (CME) credits, again helping medical examiners spend more of their time completing cases.

Grand Rounds (Near-Weekly)

At 8:00 a.m. most Tuesdays of the year, excluding those following Monday holidays, the Tarrant County Medical Examiner's Office hosts an hour-long presentation given by an invited speaker or by a member of our staff on a range of topics in the fields of forensics, law, health, and medicine. Audiences are typically drawn from medical students, healthcare providers, and law enforcement personnel.

Journal Club (Monthly)

The Journal Club meets for lunch in the second floor library of the Tarrant County Medical Examiner’s Office. A scholarly article in forensics, medicine, or a closely-related discipline is selected ahead of time for discussion to help participants stay better informed of developments in their fields.

Morning Mortality Conference (Daily)

Each morning at 8:30 a.m., the forensic pathologists of the Tarrant County Medical Examiner’s Office meet to review the day’s schedule of cases, determine what procedure (autopsy, partial autopsy, or external examination) each case requires, and assign cases to each examiner. In this way cases are triaged effectively, much as they would be in a hospital or clinical setting. Morning Mortality also serves as a short-form Critical Case Review, in that guidance may be sought from the group on how best to proceed with complex or sensitive cases.

Future Forensic Scientists

In all, 47 residents enrolled in 39 accredited forensic pathology programs in 2010—low compared with many other medical subspecialties and barely on the radar of the roughly 6,000 students who go into internal medicine in the U.S. every year.

Part of the problem, experts say, is there isn't enough material support or direct connections to pathology departments in medical schools and training hospitals, where students could get more exposure to the work of forensic pathology and become more interested in pursuing it as a subspecialty. —“Forensic Pathologists: The Death Detectives,” PBS Frontline Post Mortem: Death Investigation in America

As part of our commitment to those we serve, the Tarrant County Medical Examiner’s Office is proud to do its part to train the next generation of forensic pathologists and other forensic scientists through the comprehensive educational initiatives described below.

Tarrant County and United Arab Emirates

In 2015, Tarrant County entered into a partnership with the Abu Dhabi Judicial Department in the United Arab Emirates, enabling scientists from the forensic laboratory to spend the beginning six months of the year training in Toxicology and Drug Chemistry.

Training included comprehensive lectures on laboratory quality, method development and validation, and forensic laboratory operations. Hands-on training was additionally provided in the analytical evaluation of drug analysis and identification, postmortem toxicology, and human performance toxicology.

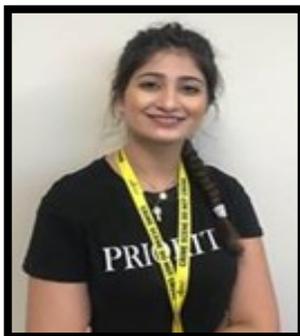


In 2016 and 2017, Tarrant County followed up the training that took place in 2015 with visits to Abu Dhabi. The focus of these visits was to assist and ensure laboratory implemented validated procedures, analyst training programs, and a quality management system in preparation for international accreditation. Training and laboratory support were provided by Dr. Nizam Peerwani, Dr. Robert Johnson, Chris Heartsill, continuing the long distance partnership for learning with the Abu Dhabi Judicial Department.



Students from Abroad

Students from a variety of programs at the American University in Beirut and the American University of Science and Technology in Achrafieh attend a long internship, rotating through the Tarrant County Medical Examiner's Office and each forensic laboratory section within it. The students observe all aspects of forensic laboratory operations and medicolegal death investigation. As they would in an apprenticeship, students progress at their own pace and are free to delve more deeply into areas that particularly excite their interest. Interactions with staff allow them to expand their knowledge of scientific, medical, and forensic issues.



Lana Chaya



Yara El Bacha



Christina Saedeh



Paul Sakr

Also participating in Tarrant County Medical Examiner's internship program in 2018 were students from Boston and Baylor Universities.



Beatriz Renner
Boston University
July 2018



Rebekah Cameron
Baylor University
December 2018

Medical School Rotation

The Tarrant County Medical Examiner's Office offers a month-long rotation for fourth-year medical students from qualifying educational institutions. These students get comprehensive exposure to autopsy processes, death investigation, and all aspects of forensic laboratory operation.



A rigorous schedule allows for students to spend time in each section of the forensic laboratory, in administration and investigations, and in morgue operations. One-on-one lectures given by specialized staff members provide depth and detail to the student's experience. The time spent in a comprehensive forensic facility offers educational opportunities that meet the requirements of any medical rotation. In 2018 students rotating through the Tarrant County Medical Examiner's Office were:

Tony Balda

Fabiola Righi

Joshua Smith

Reba Cherian

