

**Milwaukee County Autopsies have Increased 7.8%
Since 2013, Autopsies for Referral Counties
Increased 111.7%. A Lack of Contracts for Most
of the Referral Counties is a Concern.**

March 2019

**Milwaukee County Office of the Comptroller
Audit Services Division**

**Scott B. Manske, CPA
Milwaukee County Comptroller**



**Jennifer L. Folliard, Director of Audits
Molly R. Pahl, Deputy Director of Audits**

Audit Team

Molly Pahl
Narcisia "Edie" Bland
Sandra Swan

Review Team

Paul Grant, CPA
Matthew Hart, CFE

Administrative Support

Cheryl A. Hosp



Office of the Comptroller
Audit Services Division

Milwaukee County

Jennifer Folliard, Director of Audits
Molly Pahl, Deputy Director of Audits

To the Honorable Chairman
of the Board of Supervisors
of the County of Milwaukee

March 22, 2019

We have completed an audit, *Milwaukee County Autopsies have Increased 7.8% Since 2013, Autopsies for Referral Counties Increased 111.7%. A Lack of Contracts for Most of the Referral Counties is a Concern.*

A response from the Medical Examiner's Office is attached as **Exhibit 4**.

We greatly appreciated the cooperation extended by management and staff of the Medical Examiner's Office during the course of this audit.

Our report studied the autopsy workload at the Medical Examiner's Office and attempted to assess the impact due to the growth of drug related deaths and the increase in work for referral counties. It also contained a review of the facility and its capacity and condition for conducting autopsies. We found that while drug related deaths have increased since 2013, the number and type of drugs found in decedents has seen a more dramatic increase. Milwaukee County autopsies increased by 7.8% from 2013 while referral autopsies increased 111.7%. From 2013 to 2018 the Medical Examiner's pathologists averaged 264 autopsies per pathologist annually which is in excess of industry recommended standards. In 2013 the Medical Examiner performed autopsies for six referral counties and in 2018 it performed autopsies for 14 referral counties. Contracts are in place with only two of the 14 counties. We made 7 recommendations that we believe will help Milwaukee County improve autopsy operations at the Medical Examiner's Office.

Please refer this report to the Committee on Finance and Audit.

Jennifer L. Folliard
Director of Audits

JLF/mrp

Attachment

cc: Scott B. Manske, CPA, Milwaukee County Comptroller
Milwaukee County Board of Supervisors
Chris Abele, Milwaukee County Executive
Brian Peterson, MD, Medical Examiner, Milwaukee County's Medical Examiner's Office
Teig Whaley-Smith, Director, Milwaukee County Department of Administrative Services
Kelly Bablitch, Chief of Staff, Milwaukee County Board Staff
Steve Cady, Research & Policy Director, Office of the Comptroller
Janelle Jenson, Legislative Services Division Manager, Office of the Milwaukee County Clerk

ASD

HIGHLIGHTS

Why We Did This Audit

At the direction of the Milwaukee County Comptroller in response to a request from the Chairman of the Milwaukee County Board of Supervisors, the Audit Services Division (ASD) conducted an audit of the autopsy workload from 2013 to 2018 at the Milwaukee County Medical Examiner's Office. We looked at the impact the opioid crisis has had upon the workload along with the performance of autopsies for referral counties. The Chairman expressed an interest in additional information, including autopsy fees, to assist policymakers to "determine if it is in the best interest of our residents to provide these services outside of Milwaukee County."

What We Recommended

ASD made 7 recommendations that, if implemented, will improve the autopsy operation at the Medical Examiner's Office. The Medical Examiner's Office accepted all of our recommendations. Key recommendations include:

- *Present to policymakers a revised mission statement that includes guidance on the magnitude of referral autopsies to be performed by the Medical Examiner's Office.*
- *Present to the County Board a plan to help ensure that the office will not exceed the parameters established under NAME standards.*
- *Use the Employee Engagement data in an attempt to assess if any segment of employees are more affected by the increase in autopsies.*
- *Immediately execute contracts or other formal agreements such as letters of engagement with any outside entity for which they are performing autopsy services, brain or other organ extractions or other professional services.*
- *Conduct an analysis to determine the approximate cost to conduct an autopsy and seek County Board approval of the fee.*
- *Pursue the following items:*
 - a) *Create a check monitoring system to track payments for services provided including creating an electronic record of all invoices and payments received and creating a numbering system for invoices.*
 - b) *Seek to recoup any owed funds.*
 - c) *Include identifying information in the County's general ledger system when depositing payments from referral counties.*
 - d) *Immediately request inclusion of an invoice function in the new ERP system for autopsies.*
- *Work with the Department of Administrative Services to repair portions of the facility.*

For more information on this or any of our reports visit <http://county.milwaukee.gov/Audit>

To report County government fraud, waste or abuse call 414-933-7283 or visit <http://county.milwaukee.gov/Audit/Fraud-Reporting-Form.htm>



March 2019

Milwaukee County autopsies have increased 7.8% since 2013, autopsies for referral counties increased 111.7%. A lack of contracts for most of the referral counties is a concern.

BACKGROUND

The Medical Examiner's Office is charged with investigating and determining the cause, circumstances and manner in each case of sudden, unexpected or unusual death that occurs within Milwaukee County. In addition to Milwaukee County autopsy work, the Medical Examiner's Office provides autopsies and organ extraction services to other Wisconsin counties for a fee. Other functions of the office include detecting infectious disease to assist in the prevention of the spread of communicable disease, issuing death certificates, conducting cremation investigations and maintaining a forensic toxicology laboratory.

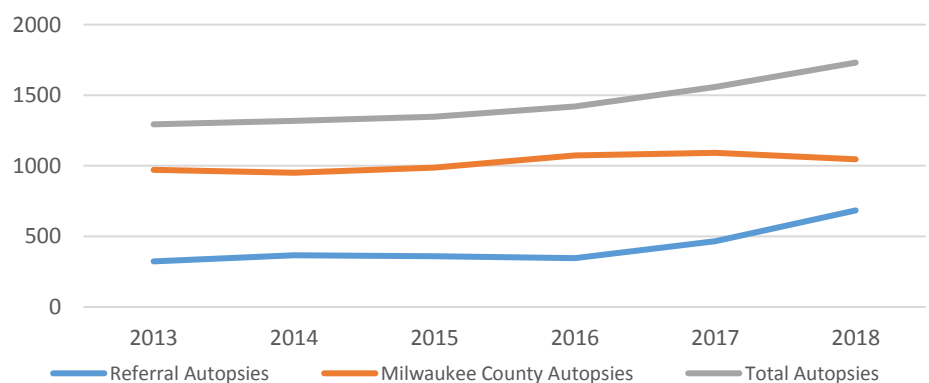
OVERALL OBJECTIVE

The objective of the audit was to review the autopsy workload of the Medical Examiner's Office to assist policymakers in determining if it is in the best interest of Milwaukee County to be providing autopsy services outside of Milwaukee County. We did this by reviewing the increase in drug related deaths since 2013 along with the amount of referral autopsies from 2013 to 2018. We also reviewed the administrative function as it relates to the provision of referral autopsies.

WHAT WE FOUND

- Drug related deaths have increased since 2013 but the number and type of drugs found in decedents has seen a more dramatic increase which results in a growing need for toxicology work.
- Milwaukee County autopsies have increased 7.8% since 2013 while autopsies for referral counties increased 111.7%, as shown in the chart below. Total annual autopsies performed by the Medical Examiner's Office increased by 437 since 2013. Of that increase, 361 were for referral counties and 76 were for Milwaukee County. In 2013, the Medical Examiner's Office performed 323 autopsies for six referral counties. In 2018, it performed 684 autopsies for 14 referral counties.
- In total, from 2013 to 2018 Milwaukee County deposited \$3.3 million in revenue from referral counties for autopsy services only.
- The Medical Examiner's Office averaged 264 autopsies per full time pathologist for 2013 to 2018 which is in excess of the National Association of Medical Examiners recommended maximum of 250.
- In total from 2013 to 2018 the Medical Examiner provided 941 autopsies to referral counties without a contract.
- We found the amount charged to referral counties to be reasonably related to costs, if not too low.
- The 2019 Capital Improvements Budget includes funding for a new facility, however, existing building issues should not be allowed to linger.

Autopsy Levels from 2013 to 2018



Milwaukee County Autopsies have increased 7.8% since 2013, Autopsies for referral counties increased 111.7%. A lack of contracts for most of the referral counties is a concern.

Table of Contents	Page
Summary	1
Background	7
Section 1: Total number of annual autopsies performed by the Medical Examiner's Office increased by 437 from 2013 to 2018. Milwaukee County autopsies increased by 76 while referral autopsies increased by 361	18
Section 2: During 2013 to 2018 Milwaukee County performed autopsies for 17 counties; the Medical Examiner's Office had contracts with only 2 counties	37
Section 3: Enhanced recordkeeping is needed to provide documentation to ensure proper payment is received for referral autopsies	47
Section 4: Existing facility issues should be rectified while planning has begun on a potential new facility for the Medical Examiner	50
Exhibit 1: Audit Scope	57
Exhibit 2: Wisconsin Coroners and Medical Examiners February, 2017	59
Exhibit 3: Daily Autopsy Observation Summary	60
Exhibit 4: Response from Medical Examiner's Office	61

Summary

The Milwaukee County Medical Examiner's Office is charged with investigating and determining the cause, circumstances, and manner in each case of sudden, unexpected to unusual death that occurs within Milwaukee County. An autopsy is performed by the Medical Examiner's Office when there is need to establish or confirm a cause and manner of death for the purpose of issuing a death certificate in cases involving criminal or suspected criminal wrongdoing. Autopsies may also be performed at the discretion of the Medical Examiner. Wisconsin counties either have an elected coroner or use an appointed medical examiner system. It is noted in the State Statutes that a medical examiner should be a qualified expert in pathology. Counties within Wisconsin with a population of 750,000 or more are required to have a medical examiner. Milwaukee County is currently the only county with a population in excess of 750,000. Chapter 59 of the Wisconsin State Statutes defines the responsibilities of coroners and medical examiners.

Drug related deaths have increased since 2013 but the number and type of drugs found in decedents has seen a more dramatic increase which results in a growing need for toxicology work.

In 2017, the City of Milwaukee created a City-County Task Force to address the opioid crisis. The work of the Task Force is ongoing. Information provided by the Medical Examiner to the Task Force shows that the increase in deaths from drug related causes increased 36% while all other causes (excluding natural) increased by an average of 12.1% from 2013 to 2018. Not all drug related deaths result in an autopsy being performed. Drug related deaths have seen an increase in the number and types of drugs found in the toxicology results.

Overall from 2013 to 2018 Milwaukee County saw an increase of 7.8% in Milwaukee County autopsies and an increase of 111.7% in referral autopsies. In 2013, the Medical Examiner's Office performed 323 autopsies for six referral counties. In 2018, it performed 684 autopsies for 14 referral counties.

We conducted our review of the autopsy workload during 2013 through 2018. In 2013, the Medical Examiner's Office conducted 971 Milwaukee County autopsies and 323 autopsies for referral clients for a total of 1,294 autopsies. In 2018, the Medical Examiner's Office conducted 1,047 Milwaukee County autopsies and 684 autopsies for referral counties for a total of 1,731 autopsies. This results in an increase of 76 for Milwaukee County autopsies and 361 for referral counties autopsies from 2013 to 2018. Total autopsies increased by 437 from 2013 to 2018. During the first year of our review, 2013, the Medical Examiner's Office performed autopsies for 6 referral counties; by 2018 that number had grown to 14 referral counties.

In total, from 2013 to 2018 Milwaukee County deposited \$3,268,975 in revenue from referral counties.

We reviewed cash receipts documenting payments for referral autopsies from 2013 to 2018 and we noted a lag in payments for autopsies at times. In one case in particular the autopsy was dated May 11, 2013 and payment was received more than two years later on July 20, 2015. Revenue received in 2013 to 2018 could be from autopsies performed as early as 2011. Payments from services in 2017 and 2018 may not yet have been received.

In an interview with the Medical Examiner, it was stated that the tax levy allocated to the Medical Examiner's Office annually offsets the costs of three pathologists. It was also stated that the revenue from referral counties more than offsets the cost for the additional pathologists in the office which are required for the referral autopsies. In years 2013 to 2016 the amount of revenue received from referral counties was in excess of the cost of one pathologist but less than the cost of two pathologists. In 2017, the revenue received from referral counties was in excess of the budgeted cost of two pathologists. In 2018, the revenue received from referral counties was in excess of the budgeted costs of three pathologists.

Total annual autopsies performed by the Medical Examiner's Office increased by 437 since 2013. Of that total, 361 were for referral counties and 76 were for Milwaukee County. The Medical Examiner's Office averaged 264 autopsies per full time pathologist, excluding fellows, for the years 2013 to 2017 which is in excess of the National Association of Medical Examiners (NAME) recommended maximum of 250.

Specifically, NAME standard B4.5 states, "the forensic pathologist shall not perform more than 325 autopsies in a year. Recommended maximum number of autopsies is 250 per year."

The 2018 Adopted Budget for the Medical Examiner created an additional position of pathologist to alleviate any issue with maintaining NAME accreditation. In an interview with the Medical Examiner, he indicated that the NAME accreditation review will look at the total staffing levels and total autopsy levels rather than the actual autopsies performed per pathologist. Under this method, 2014 and 2016 were the only years the autopsy per pathologist amounts were under the recommended standard. Using data from the case management system (CME) used by the Medical Examiner's Office the average number of autopsies per pathologist during 2013 to 2018 was calculated as 264. Three of the six pathologists had autopsy totals greater than 250 during 2018.

The increased workload for autopsies since 2013 could have a negative impact on the staff of the Medical Examiner's Office. We looked at a few available methods to attempt to see if there was evidence of this.

The first area we analyzed was the amount of staff turnover that occurred at the Medical Examiner's Office during the period of our review. Since 2013, the Medical Examiner's Office has had 13 employees leave employment. Of those, five retired, seven resigned or quit and one was discharged. We did not find evidence that the increased workload was affecting the separation rate for the Medical Examiner's Office as of the time of our review based on industry standard rates published by the Bureau of Labor Statistics. However, of the seven employees that resigned or quit, five were Investigators and all left service between 2015 and 2018.

In addition to conducting a review of the separation rates for the Medical Examiner's Office, we looked at the amount of overtime that was paid to staff at the Medical Examiner's Office from 2013 to 2018. We found that overtime increased 62% from 2017 to 2018. Our review showed that 97% of the overtime paid was paid to investigators. The 2019 Adopted Budget created one additional Forensic Investigator due to the increasing workload and a projected increase in cremation investigations, which should provide some overtime relief in 2019.

Milwaukee County began a project in 2016 where it offered a survey to its employees in an attempt to measure employee engagement. Employees were resurveyed in 2018. We found that the Medical Examiner's Office employee engagement data shows a decline in almost every area from 2016 to 2018. However, the 2016 scores for the Medical Examiner's Office were higher than the County-wide results.

We conducted interviews with 16 of 32 staff members at the Medical Examiner's Office and common feedback was that the referral autopsies were having an impact on the workload of the staff members.

In total during the period of our review of 2013 to 2018 the Medical Examiner provided 941 autopsies to referral counties without a contract. In addition, 34 brain and other organ extractions were conducted without a contract.

The Medical Examiner has properly executed contracts with Racine and Kenosha Counties to provide autopsy services. Both contracts received full County Board approval. From 2013 to 2018, the Medical Examiner provided 941 autopsies without a contract in place. The Medical Examiner indicated that often these autopsies are arranged via a phone call or email from the requesting county. In 2013, the Medical Examiner performed a total of 1,294 autopsies. Of those, 26.0% were for referral counties, 19.1% were under contracts with Racine and Kenosha and 6.9% were for counties without a contract. In 2018, the Medical Examiner performed a total of 1,731 autopsies. Of those, 35.0% were for referral counties, 16.6% were under contracts with Racine and Kenosha Counties and 18.4% were for counties without a contract.

We found the amounts that the Medical Examiner's Office charges to referral counties to be in-line with other counties' fees and to be reasonably related, if not too low, to actual costs based upon three testing methodologies. The rates are determined via negotiations with individual counties. While the Medical Examiner's Office submitted the average autopsy fee charged via the annual fee schedule as a part of their Requested Budget, we were unable to determine that County Board approval of the fees occurred.

There are guidelines within State Statutes that the coroner or medical examiner shall act as coroner in an outside county when requested to do so. In regards to fees, State Statute 59.36 states, "The board shall set the fees for all services rendered by the coroner or medical examiner. The fees may not exceed an amount that is reasonably related to the actual and necessary cost of providing the service."

Milwaukee County charges a flat rate per autopsy conducted, however, the rate varies by county. For example, the contract with Racine County establishes the rate at \$1,600 per autopsy while Kenosha County is charged \$1,500. These two rates received direct Board approval as the contracts were authorized by the County Board. The rate for the autopsy does not fluctuate based upon the type of autopsy being performed.

In an attempt to determine if the Medical Examiner was in compliance with the State Statute that calls for the fee to be an amount reasonably related to the actual and necessary cost of providing the service we performed three calculations. We found that the Medical Examiner was charging a fee that was reasonably related, if not too low, to the costs to perform an autopsy.

We reviewed cash receipts containing documentation for the payment of 2,300 autopsy records in an attempt to verify receipt of payment for all autopsy services to referral counties. We could not document that payment was received for 17 autopsies totaling \$23,200 in revenue from 2013 to 2017.

We found that the Medical Examiner's Office could not verify that all autopsies had been invoiced nor that they had received payment from all invoiced autopsies. We conducted a review of the cash receipts entered into the County's financial system and the autopsies that were entered into the CME system. The revenue was deposited into an account that was blended with other revenue items. Also, the deposits were not segregated by county when recorded into the general ledger system which resulted in a need for a review of the cash receipts paperwork to determine both if proper payment had occurred and what amount had been paid by each referral county.

The Medical Examiner's Office provided cash receipts with documentation of payment for 2,300 autopsies. We reviewed those records and compared them to autopsy data from the CME system in

an attempt to verify if any payments were outstanding from autopsy work during the period of 2013 to 2017. We found we could not verify payments of \$23,200 from 2013 to 2017 for 17 referral autopsies. We also accessed the County's OnBase system where copies of completed autopsies are stored. For referral autopsies copies of the invoice should be included within the OnBase file. We researched and found that of the 17 autopsies that we could not verify payment for, 14 had copies of invoices in the OnBase file for the autopsy.

The 2019 Adopted Capital Improvements Budget includes funding for the planning of a new Forensic Science Center for Milwaukee County, however, existing building issues should not be allowed to linger while staff continues to work in the existing facility.

The NAME accreditation check list includes a review of the space and equipment provided and the security, safety and maintenance of the facility. Specifically, the check list states, "Are the facilities and all work areas clean, structually sound and well maintained?" The existing facility for the Medical Examiner was converted from an abandoned hospital in 1989. Numerous concerns were raised by staff of the Medical Examiner's Office to us and included:

- The lack of functioning showers in the locker room for all staff working on autopsies.
- Climate control within the office due to a need to keep the toxicology lab temperature cold enough for the machines to not overheat, resulting in areas of the office being too cold for staff.
- Air circulation that according to our interview with facilities management is probably not up to code.
- Drainage of waste from autopsies to the sewage system.
- Flooding in the basement.

Funding of \$940,262 was included in the 2019 Adopted Capital Improvements Budget for the planning and design phase to create a new Center for Forensic Science and Protective Medicine with a pending analysis from the Office of the Comptroller on the cost-benefit of leasing versus owning the building required prior to the release of all of the funding.

This Page Intentionally Left Blank

Background

The Milwaukee County Medical Examiner's Office is charged with investigating and determining the cause, circumstances, and manner in each case of sudden, unexpected to unusual death that occurs within Milwaukee County. Additional activities important to the public health and safety function of the Medical Examiner include:

- Detect tuberculosis, meningitis and other infectious diseases to assist in prevention against the spread of communicable disease;
- Coordinate with other public health and safety organizations and entities to reduce the incidence of preventable deaths;
- Participate as part of the governmental response team for emergency management services;
- Issue death certificates for deaths investigated by the office;
- Conduct cremation investigations for all Milwaukee County deaths in which cremation is selected as a means of disposition;
- Maintain a forensic toxicology (drug) laboratory for testing blood and body fluid specimens for the presence of drugs, poisons or other toxic agents; and
- Host an annual seminar designed to educate pathologists, coroners, attorneys, law enforcement officers, and other health professionals on a variety of topics related to forensic science.

An autopsy is performed by the Medical Examiner's Office when there is a need to establish or confirm a cause and manner of death for the purpose of issuing a death certificate in cases involving criminal or suspected criminal wrongdoing. An autopsy may also be performed at the discretion of the Medical Examiner. An autopsy is defined as an examination and dissection of a dead body by a physician for the purpose of determining the cause, mechanism, or manner of death, or the seat of disease, confirming the clinical diagnosis, obtaining specimens for specialist testing, retrieving physical evidence, identifying the deceased, or educating medical professionals and students.

The mission of the Medical Examiner's Office is:

to promote and maintain the highest professional standards in the field of death investigations; provide a timely, accurate, and legally defensible determination of the cause and manner of death; enhance public health and safety through reducing the incidence of preventable deaths, protect the interests of deceased individuals and their families and serve the community.

Statutory Authority

Wisconsin counties either have an elected coroner or use an appointed medical examiner system. It is noted in the State Statutes that a medical examiner should be a qualified expert in pathology. Counties within Wisconsin with a population of 750,000 or more are required by statute to have a medical examiner. Milwaukee County is currently the only Wisconsin county with a population in excess of 750,000. Chapter 59 of the Wisconsin State Statutes defines the responsibilities of coroners and medical examiners as to “participate in inquest proceedings when required by law,” and,

whenever requested by the court or district attorney, the medical examiner shall testify to facts and conclusions disclosed by autopsies performed by him or her, at his or her direction or in his or her presence; shall make physical examinations and tests incident to any matter of a criminal nature up for consideration before either the court or district attorney upon request; shall testify as an expert for either the court or the state in all matters where the examinations or tests have been made; and shall perform such other duties of a pathological or medicolegal nature as may be required.

A 1980 Attorney General opinion stated, “Clearly, the Legislature intends that the office of medical examiner be occupied by one who is able to be qualified as an expert witness in the field of pathology.”

Both coroners and medical examiners determine the cause and manner of death which is the underlying disease or injury responsible for setting in motion a series of physiologic events culminating in death. For example, the **cause** of death is a gunshot wound. After reviewing the results of the autopsy and the investigative report, the **manner** of death is determined to be a suicide. According to the Milwaukee County Medical Examiner’s Office, only medical examiners who are Forensic Pathologists are able to perform autopsies. The standard manners of death used in death certificates include: natural, accident, suicide, homicide and undetermined.

Wisconsin has 72 counties of which 40 have coroners and 32 have medical examiners. Exhibit 2 shows the distribution by county. Of those with a medical examiner system including Milwaukee County, ten counties use a Board Certified Forensic Pathologist, however, some pathologists serve multiple counties. This results in a demand for autopsy services for those counties that do not have a pathologist who can perform autopsies. We conducted research and found a variety of options employed by counties without a pathologist. Many used other counties’ medical examiner’s offices to conduct their autopsies, some contracted with private companies and some contracted with medical examiners from the State of Minnesota. According to the Medical Examiner, there is shortage of forensic pathologists nationwide which is creating an increased need for regional resources.

An on-site accredited toxicology lab is also a feature of Milwaukee County's Medical Examiner's Office. Milwaukee is the only county in Wisconsin with an in-house toxicology laboratory. In general, the toxicology lab takes specimens such as blood, urine, vitreous humor (eye), gastric contents, bile and liver tissue and analyzes tissue samples to help the pathologists determine the cause of death.

Additional Statutes that impact the operation of the Medical Examiner's Office include State Statute 979.22 which states, "A medical examiner may perform autopsies and toxicological services not required under this chapter and may charge a fee established by the county board for such autopsies and services. The fee may not exceed an amount reasonably related to the actual and necessary cost of providing the service."

Investigative responsibilities described in State Statute 979.10 direct the Medical Examiner to view the remains, and make an investigation into the cause and manner of all deaths in which the next of kin selected cremation for disposition.

NAME Standards

Founded in 1966, the National Association of Medical Examiners (NAME) lists itself as the premier professional organization for medical examiners, forensic pathologists, and medicolegal affiliates and administrators. In a letter dated May 4, 2018, the Milwaukee County Medical Examiner's Office received notification of its continuing full accreditation from NAME. According to the NAME website, Milwaukee County was first awarded accreditation on January 1, 1990. The Milwaukee County Medical Examiner's Office is the sole office within the State of Wisconsin accredited by NAME. The Milwaukee County District Attorney's Office expressed its belief to audit staff that it is important for the Medical Examiner's Office to maintain its accreditation.

Milwaukee County's Medical Examiner's Office Budget and Operational Overview

The 2019 Adopted Budget for the Milwaukee County Medical Examiner's Office allocated tax levy in the amount of \$1.3 million and provided funding for staffing of 32.6 FTE positions. In addition to the performance of autopsies, the Milwaukee County Medical Examiner's Office provides the following services with the associated 2019 fee:

- Death Certificate - \$153.00
- Cremation Permit - \$357.00
- Disinterment Permit - \$50.00
- Daily Body Storage Fee - \$35.00
- Body Transport Fee - \$153.00
- Bio-Seal - \$200.00

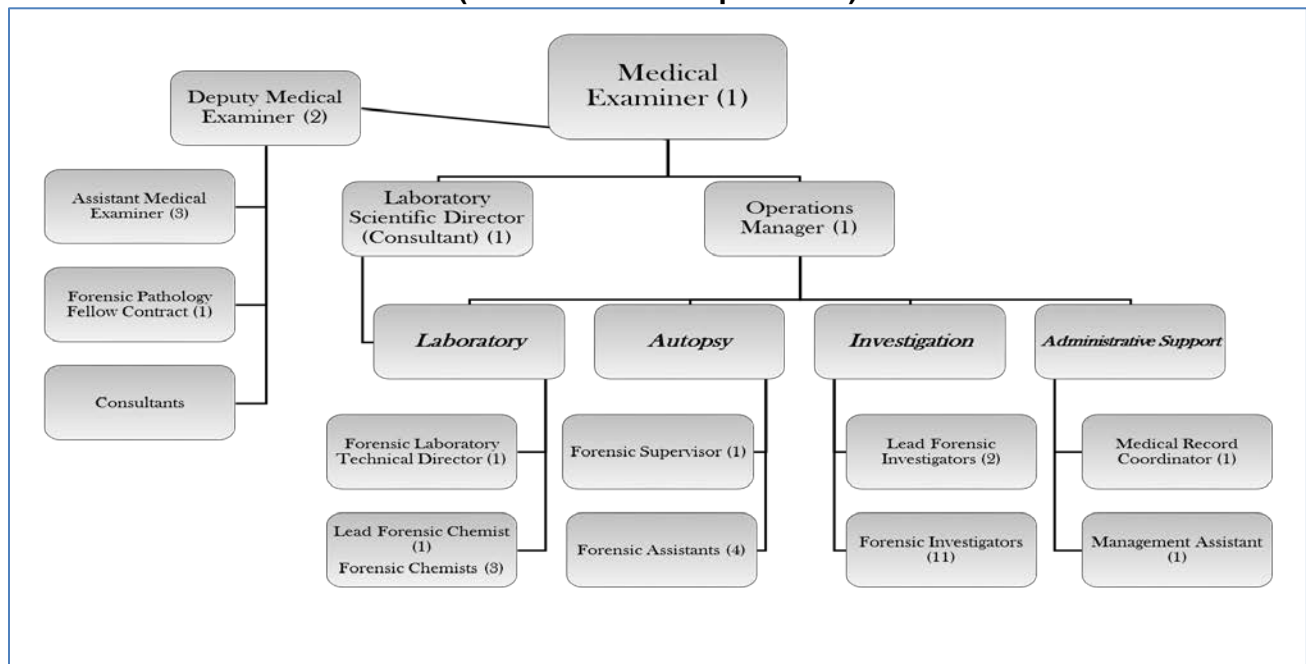
As well as conducting autopsies for Milwaukee County, the Medical Examiner's Office conducts autopsies and brain and other organ extractions for referral counties and for private cases when requested. Table 1 shows the annual revenue received from other counties for autopsies from 2013 to 2018, which totaled \$3.3 million. The amounts in the table do not include other revenues from referral counties for items such as testimony or consultation fees. The 2019 Adopted Budget for the Medical Examiner's Office listed as a major change an anticipated increase of approximately 30 percent in referral autopsies which resulted in an increase in revenue of \$190,000 from the amount budgeted in 2018.

Table 1 Medical Examiner's Office Referral Autopsy Revenues 2013 to 2018							
<u>Year</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total 13-18</u>
Autopsy Revenue	\$428,700	\$460,030	\$412,550	\$449,625	\$637,650	\$880,420	\$3,268,975

Source: Audit Services Division created table based upon cash receipts provided by the Medical Examiner's Office.

The 2018 organizational chart for the department is included in Figure 1. Staffing at the Medical Examiner's Office during the period of our review showed an increase in budgeted staffing of 4.3 FTE from a total staff of 28.3 in 2013 to 32.6 in 2019 based upon the adopted budgets. Two Forensic Pathologists, one Lead Forensic Investigator, one Forensic Investigator and one Forensic Assistant were added, while one Clerical Assistant was eliminated during 2013 to 2019.

**Figure 1 – 2018 Organization Chart for the Medical Examiner's Office
(includes contract positions)**



Source: Organizational chart provided by the Medical Examiner's Office.

The Medical Examiner's Office also has a Forensic Pathology Fellowship program. One of the Deputy Medical Examiners is the Program Director and is responsible for training fellows. A fellow is a fully credentialed physician who chooses to pursue additional training in pathology. Autopsies and work performed by a fellow have to be supervised by a pathologist. Fellows are allowed to perform 125 autopsies per year per NAME. The Director of the Forensic Pathology Fellowship program stated in an interview that it would help the Medical Examiner's Office if there were more spaces or autopsy stations for fellows and medical students to work. The Medical Examiner's office contracts with the Medical College of Wisconsin for its Forensic Pathology Fellowship program.

Funding of \$940,262 was included in the 2019 Adopted Capital Improvements Budget for the planning and design phase to create a new Center for Forensic Science and Protective Medicine which would house the Medical Examiner's Office.

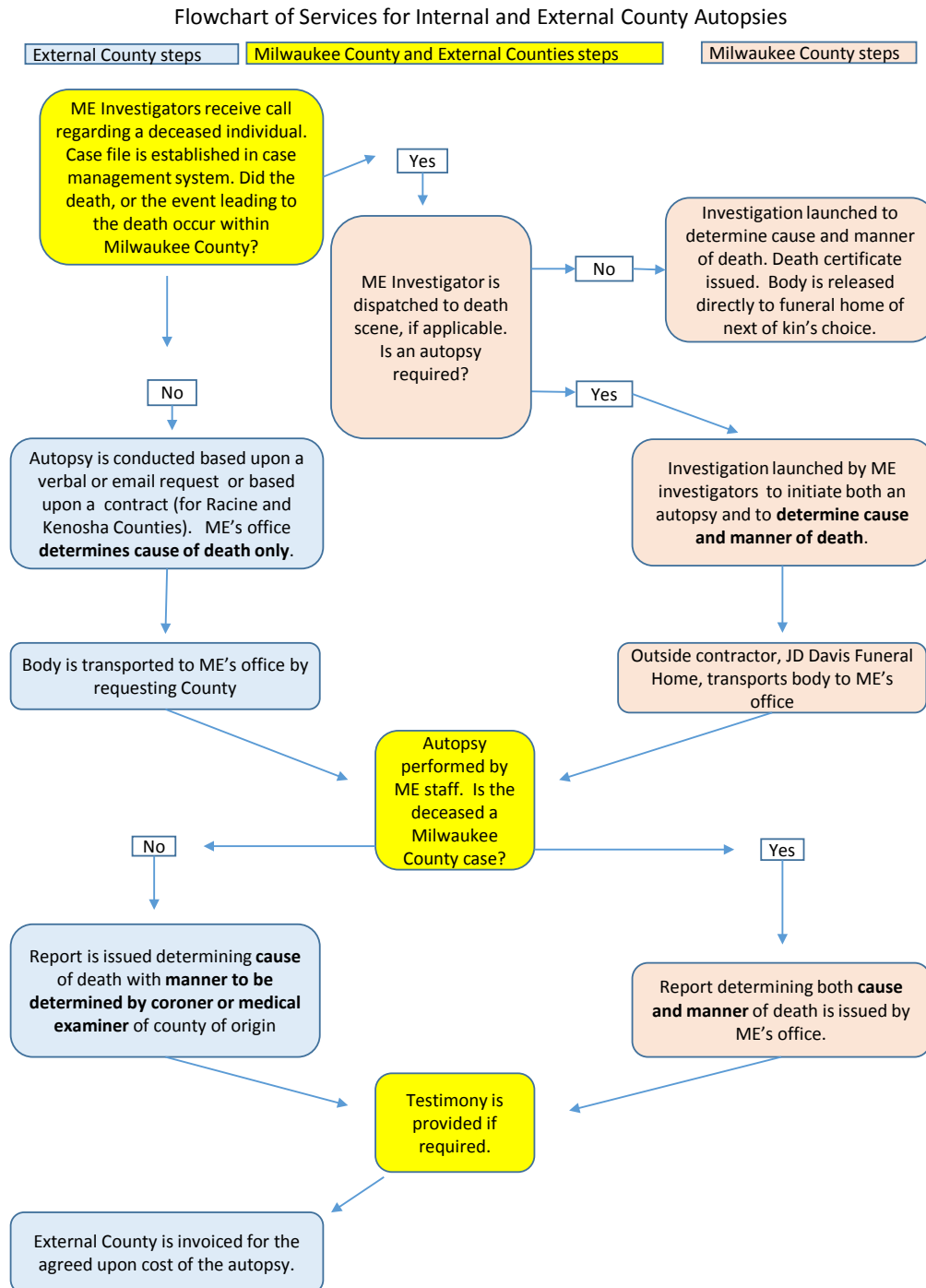
Table 2 displays the annual activity indicators for the Medical Examiner's Office and is based upon data from 2017 provided by the Medical Examiner's Office to NAME as a part of its accreditation review. While 9,007 deaths occurred within Milwaukee County in 2017, 12% or 1,086 resulted in an autopsy being performed at the Medical Examiner's Office. The Medical Examiner's Office investigated 1,260 death scenes and of those 174 did not result in an autopsy being performed.

Table 2	
Annual Activity Indicators for Medical Examiner for 2017	
<u>Category</u>	<u>2017</u>
Deaths in jurisdiction	9,007
Deaths reported to Medical Examiner	6,675
Deaths investigated (certified)	2,599
Scenes investigated by Medical Examiner	1,260
Bodies brought to the facility	1,185
Full autopsies	1,086
Source: Audit Services Division created table based upon data found in annual NAME accreditation questionnaire from the Medical Examiner's Office.	

The performance of an autopsy for both Milwaukee County and a referral county requires a contribution from almost every member of staff within the Medical Examiner's Office from investigators who field initial calls to the office to the administrative staff who handle the billing for any referral autopsy performed.

Figure 2 is a flowchart that demonstrates the process for autopsies and shows the delineation in the process when an autopsy is being performed for a referral county versus Milwaukee County.

Figure 2 – Flowchart of the Autopsy Process



Source: Audit Services Division created flowchart based on interviews with Medical Examiner's Office.

As a part of our fieldwork we interviewed 16 of 32 staff members at the Medical Examiner's Office involved in all aspects of the autopsy process. We also conducted observation of autopsies on two separate days and attended one death scene with a Forensic Investigator.

We were told, and noted during our on-site observation, that different types of autopsies take varying amounts of time to complete. For example, an autopsy with injuries such as multiple bruises requires additional time as all bruise locations need to be documented. A young child, infant or decedents that are generally healthy also result in a longer autopsy due to the amount of time needed to research and discover medical conditions and review medical records. Drug related deaths are often shorter for the physical autopsy, but may also require additional toxicology work.

The Medical Examiner's Office uses an electronic tracking board to alert all staff to current or pending autopsies and death investigations as pictured in Image 1. The board is color coded based upon the suspected cause of death and in the case of an autopsy for a referral county, it is listed in the notes section. The board pictured in Image 1 is from our tour in May of 2018. The color code is:

- Green - Decomposed
- Red - Homicide
- Gray - Overdose
- Yellow - Infant
- Blue - Water death
- No Color - Not yet determined

Image 1 – Autopsy Tracking Board

Case Type	Path	Autopsy Date	Autopsy Compl.	Tissue Bank Status	Family Wishes	Can Release	Prop	Notes
Exam	5/22/2018	Not Reportable	Pending	Accept	No	No		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	No	No		Winnebago
Exam	5/22/2018	Not Reportable	Accept	Accept	No	No		
Exam	5/22/2018	Not Reportable	Accept	Accept	No	No		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	Yes		Racine Dodge- No PD
Exam	5/22/2018	Not Reportable	Not Asked	Accept	No	No		
Exam	5/22/2018	Not Reportable	Completed	Accept	Yes	Yes		Kenosha
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	No		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	No		FDL - PD at 0800
Exam	5/22/2018	Not Reportable	Not Asked	Accept	No	No		Racine
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	Yes		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	Yes		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	No		
Exam	5/22/2018	Not Reportable	Not Asked	Accept	Yes	No		

Source: Audit Services Division staff photograph

The autopsy suite of the Medical Examiner's Office currently has five autopsy stations, pictured in Image 2, which results in a maximum of five autopsies that may occur at one time. The stations include an exam table, a scale, sink, desk, drawers and cabinets. In an interview, the Medical Examiner stated that if the office is relocated to a new facility his goal would be to have 10 to 15 autopsy stations.

Image 2 – Autopsy Station



Source: Audit staff photograph

Image 3 is a picture of the new x-ray equipment installed in the Medical Examiner's Office.

Image 3 – New X-Ray equipment



Source: Audit staff photograph

In April of 2018, the Medical Examiner changed the schedule for autopsies and currently limits pathologists to no more than 3 autopsies per day and autopsies are no longer performed on the weekends. This allows the pathologists to work a standard Monday through Friday work schedule. The investigation function is staffed 24 hours a day and 7 days a week due to the need to attend to calls and appear at death scenes. The pathologists have a rotating 7 day schedule where they are on call for the forensic investigators to call with questions.

The Medical Examiner's Office also includes a cooler, pictured in Image 4, which is used to store bodies prior to and after autopsies are performed. Total storage capacity is approximately 35 – 40 bodies according to management of the Medical Examiner's Office. The last time that the storage space was inadequate was in 1995. In case of a need for additional storage, the Medical Examiner's Office does retain a contract with a refrigerated truck company. In addition, Froedtert Lutheran Memorial Hospital has a portable morgue.

Image 4 - Cooler



Source: Audit Services Division staff photograph

After the physical work of the autopsy is completed, the pathologist will complete a report of the results of the autopsy including toxicology results when applicable. Some pathologists dictate the report while other pathologists draft the report themselves. At times, the pathologist's testimony in court will be required.

Beginning in 2016, the Medical Examiner's Office's toxicology lab was accredited by the American Board of Forensic Toxicology. The lab contains a variety of equipment that allows for the testing of chemicals found within tissue samples. The toxicology lab takes specimens such as blood, urine, vitreous humor (eye), gastric contents, bile and liver tissue and analyzes tissue samples to help the

pathologists determine the cause of death. The following pictures show a sampling of the equipment used in the toxicology lab.

Image 5 – Toxicology Lab Equipment



Image 6 - Toxicology Lab Equipment



Image 7 - Toxicology Lab Equipment

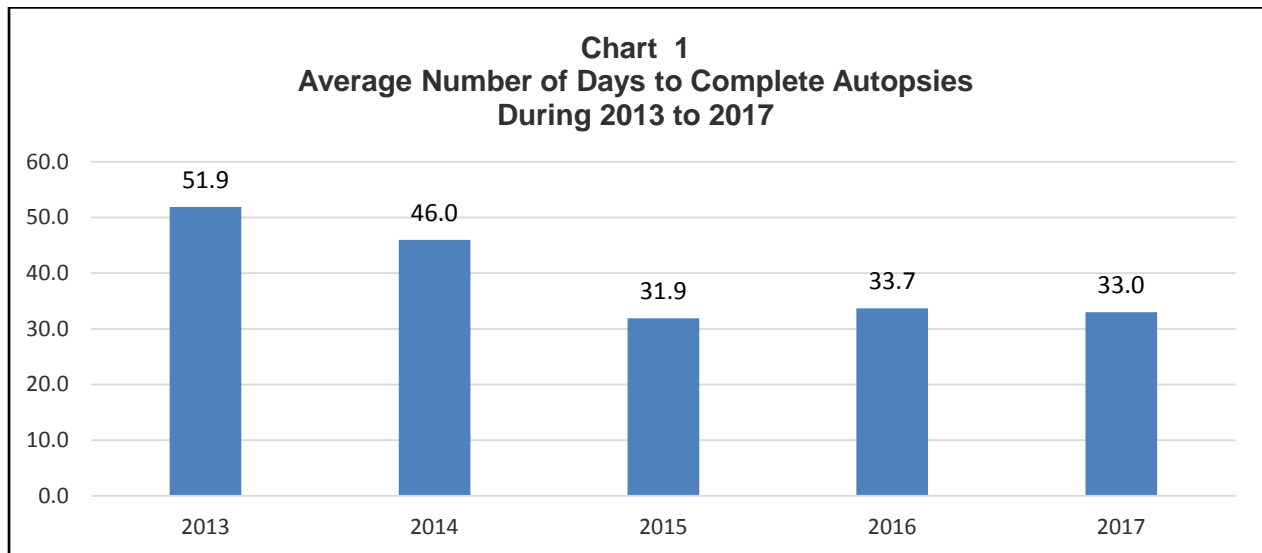


Source: Audit Services Division staff photographs

Exhibit 3 contains a summary of our observations of autopsies that occurred on October 1, 2018.

As noted earlier, the type of autopsy can impact the length of time it takes to complete an autopsy. We calculated turnaround time for autopsies based upon data from the case management system (CME) that the Medical Examiner's Office uses. The start date is the date of the autopsy exam. The completed turnaround time is when the autopsy report is signed by the assigned pathologist.

Chart 1 shows the average turnaround time for the autopsies during 2013 to 2017. This data was not yet compiled for 2018. Due to the length of time to complete an autopsy, many 2018 autopsies were still pending at the time of the completion of this audit.



Source: Audit Services Division created table based on data provided by the Medical Examiner's Office.

At the direction of the Milwaukee County Comptroller in response to a request from the Chairman of the Milwaukee County Board of Supervisors, the Audit Services Division conducted an audit of the autopsy workload from 2013 to 2018 at the Milwaukee County Medical Examiner's Office. In his request the Chairman cited the reported impact the opioid crisis has had upon the workload along with the performance of autopsies for referral autopsies as noted in recent budgeting requests for additional resources. The Chairman expressed an interest in additional information, including autopsy fees, to assist policymakers to "determine if it is in the best interest of our residents to provide these services outside of Milwaukee County."

While we have included data on the increase in drug related deaths during our review period, we believe that our work was better focused on the impact of the referral counties due to both the large increase in that work we noted during our review and the Medical Examiner possessing a greater ability to impact his staff's workload based upon referral autopsies than the opioid crisis. Our findings and recommendations are detailed in the following sections and are based on the project scope and methodology, which are presented in Exhibit 1.

Section 1: Total number of annual autopsies performed by the Medical Examiner's Office increased by 437 from 2013 to 2018. Milwaukee County autopsies increased by 76 while referral autopsies increased by 361.

Drug related deaths have increased since 2013 but the number and type of drugs found in a decedent has seen a more dramatic increase which results in a growing need for toxicology work.

The City of Milwaukee created a City-County Task Force in 2017 to address the opioid crisis. The work of the Task Force is ongoing.

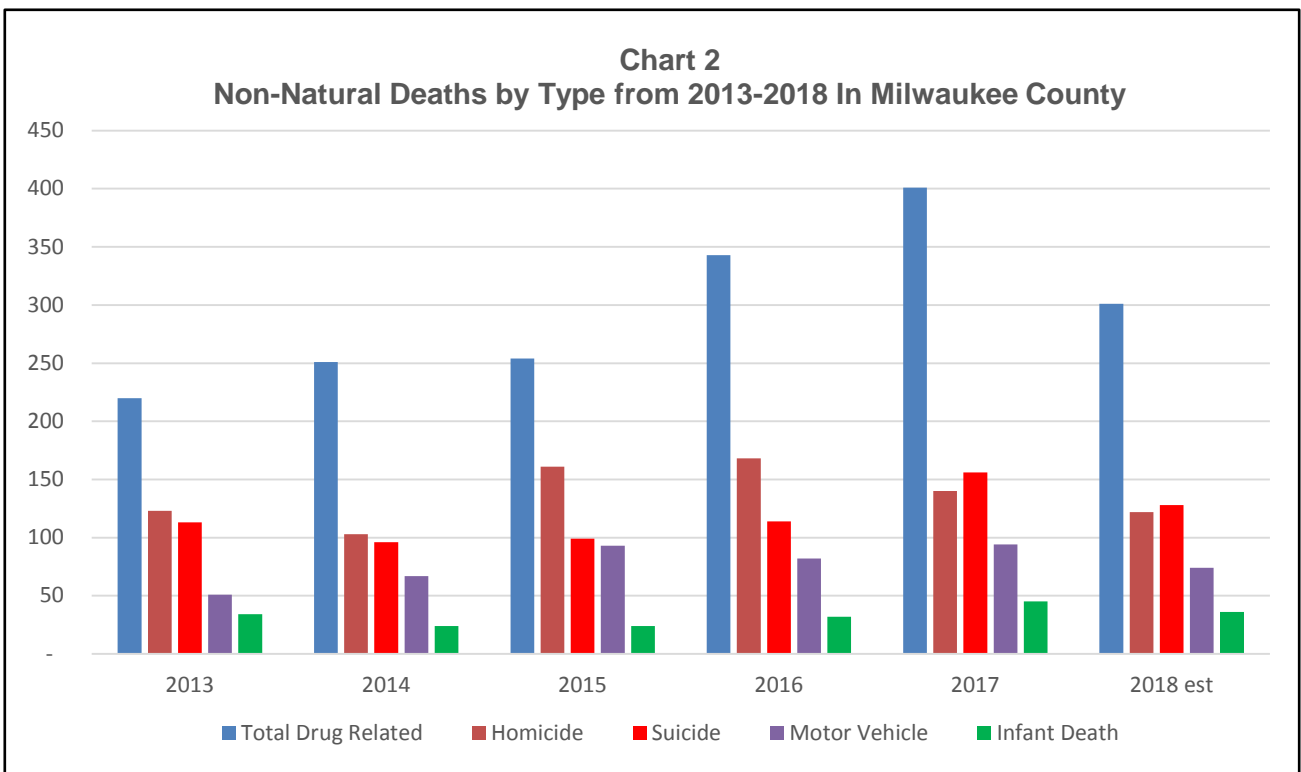
The City of Milwaukee's Common Council passed a resolution in January of 2017 creating the City-County Heroin, Opioid, and Cocaine Task Force (Task Force) to address the opioid crisis in Milwaukee County. It is charged with investigating and making recommendations regarding ways to ensure long-term health and safety of City and County residents by reducing fatal and non-fatal overdose from misuse of opioids, heroin, and synthetic analogs, and cocaine (in both powder and crack form) through data-driven public health prevention.

There are currently 13 members on the Task Force including the Chief Medical Examiner for Milwaukee County. The members are from multiple sectors of city, county, state agencies and people that have personal experience with substance abuse. According to the Task Force, Wisconsin has experienced a 300% increase in drug overdose deaths since 2000.

In February of 2019, the City of Milwaukee's Common Council passed a resolution extending the work of the Task Force until directed by the Common Council to cease. Prior

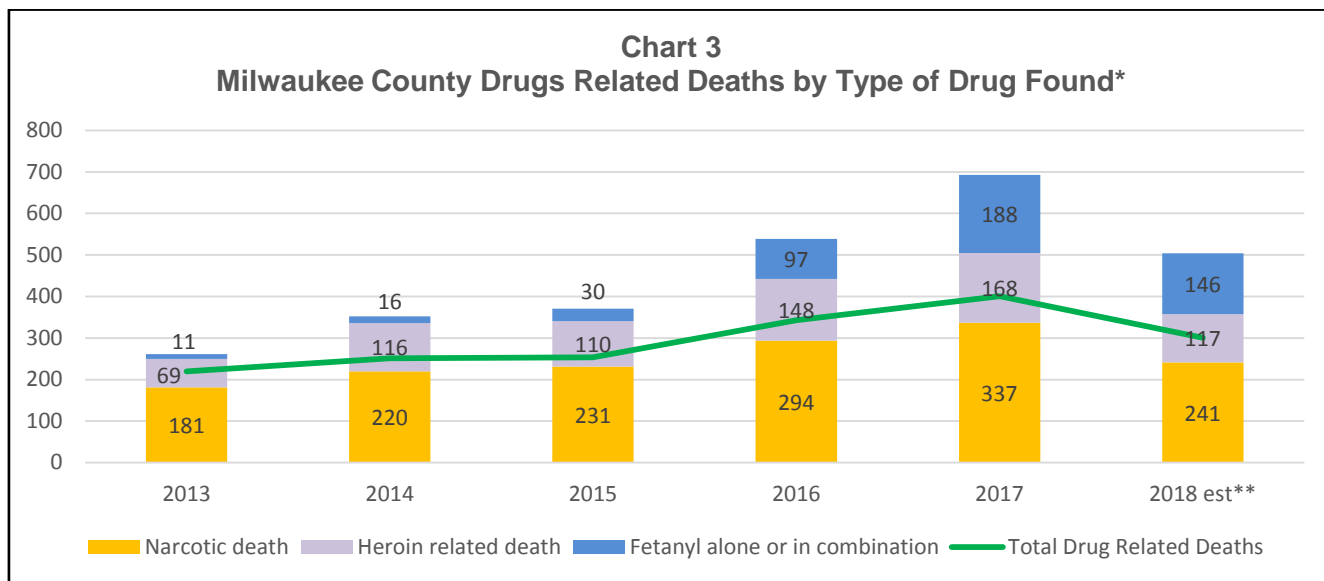
to this, the Task Force had anticipated completing its work in December of 2018.

Chart 2 shows the non-natural deaths by type in Milwaukee County from 2013 to 2018 provided by the Medical Examiner's Office to the Task Force. The increase in deaths from drug related causes increased 36% while all other causes increased by an average of 12.1%. According to the Medical Examiner's Office, not all drug related deaths that occur by drugs result in an autopsy. For example, a person who remains in the hospital for a number of days before dying who has drugs in their system will be included in their count of drug related deaths but will not be autopsied as the cause and manner of death is known.



Source: Audit Services Division created table based on data provided by the Medical Examiner's Office to the Task Force.

Chart 3 further breaks down the data to show the type of drugs found in drug related deaths. Deaths resulting from Fentanyl alone or in combination was 4.2% of all drug related deaths in 2013. Deaths resulting from Fentanyl alone or in combination increased to 29.0% of all deaths in 2018. Drug related deaths have seen an increase in the number and types of drugs found in the toxicology results as can be seen in Chart 3. Many decedents whose cause of death is drug related are found to have multiple types of drugs in their system in the toxicology results.



*Some deaths had multiple types of drugs found and will not match deaths by Total Drug Related in Chart 2.

**2018 is an estimated number due to the time required to compile the data, final 2018 numbers were not yet available upon completion of the audit.

Source: Audit Services Division created table based on data provided by the Medical Examiner's Office to the Task Force.

Overall from 2013 to 2018 Milwaukee County saw an increase of 7.8% in Milwaukee County autopsies and an increase of 111.7% in referral autopsies. In 2013, the Medical Examiner's Office performed 323 autopsies for six referral counties. In 2018, it performed 684 autopsies for 14 referral counties.

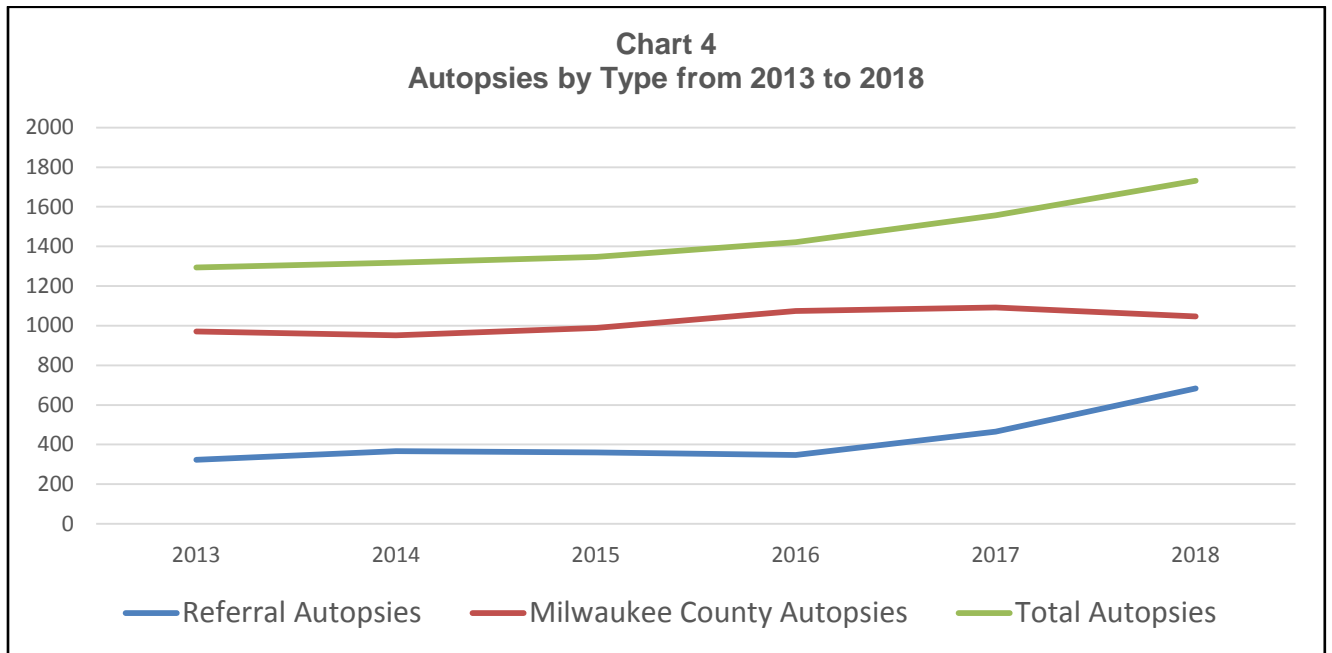
From 2013 to 2018, the Medical Examiner's Office provided autopsy services to the following counties in addition to Milwaukee County autopsies:

- Racine
- Kenosha
- Manitowoc
- Calumet
- Waupaca
- Sheboygan
- Shawno
- Ozaukee
- Jefferson
- Dodge
- Outagamie
- Winnebago
- Fond du Lac
- Lincoln
- Waushara
- Menominee
- Marathon

Milwaukee County autopsies increased by 76 and referral autopsies increased by 361 from 2013 to 2018. Total autopsies increased by 437.

We conducted our review of the autopsy workload during 2013 through 2018. In 2013, the Medical Examiner's Office conducted 971 Milwaukee County autopsies and 323 autopsies for referral counties for a total of 1,294 autopsies. In 2018, the Medical Examiner's Office conducted 1,047 Milwaukee County autopsies and 684 autopsies for referral counties for a total of 1,731 autopsies. This results in an increase of 76 for Milwaukee County autopsies and 361 for referral counties from 2013 to 2018. Total autopsies increased by 437.

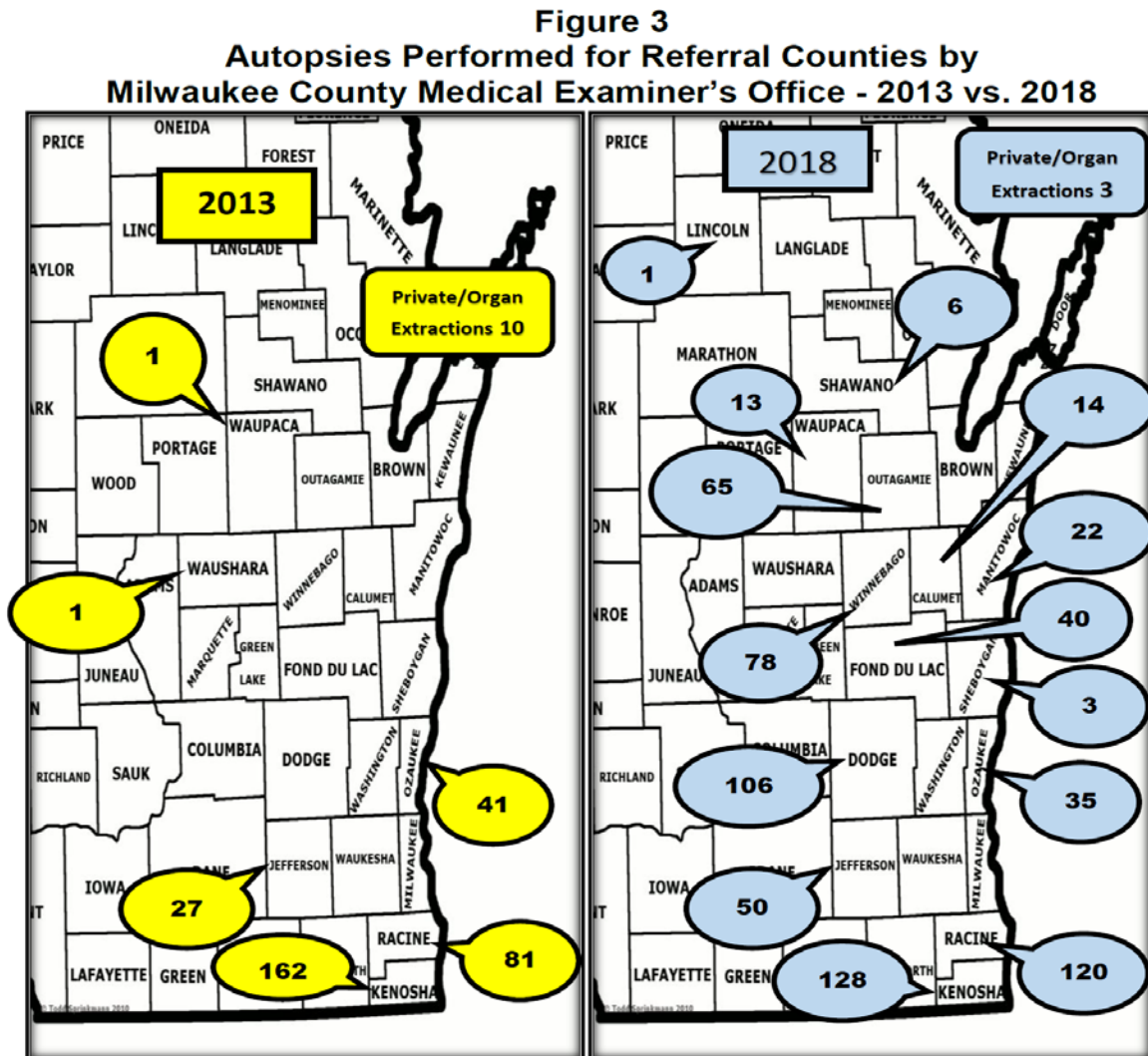
Chart 4 shows the annual total autopsies for Milwaukee County, referral counties and total autopsies.



Source: Audit Services Division created chart based on data from the CME system.

During the first year of our review, 2013, the Medical Examiner's Office performed autopsies for 6 referral counties; by 2018 that number had grown to 14 referral counties.

Figure 3 shows the distribution of autopsies by county in 2013 and in 2018.



Key Code: 2013	
County	Autopsies
Jefferson	27
Kenosha	162
Ozaukee	41
Private/External	10
Racine	81
Waupaca	1
Waushara	1
Total Autopsies	323

Key Code: 2018	
County	Autopsies
Calumet	14
Dodge	106
Fond Du Lac	40
Jefferson	50
Kenosha	128
Manitowoc	22
Menominee	1
Outagamie	65
Ozaukee	35
Private/External	3
Racine	120
Shawano	6
Sheboygan	3
Waupaca	13
Winnebago	78
Total Autopsies	684

Source: Audit Services Division created based on data from the Medical Examiner's Office.

Table 3 shows the distribution of autopsies from 2013 to 2018 as well as the percentage of total autopsies attributed to each county. The data was exported from the Medical Examiner's case management (CME) system on a calendar year basis.

Table 3 Autopsy by County by Year and % of Total for 2013-2018								
County	2013	2014	2015	2016	2017	2018	TOTAL	%
Kenosha	162	166	148	157	179	128	940	10.84%
Racine	81	117	104	92	118	120	632	7.29%
Ozaukee	41	32	50	43	50	35	251	2.90%
Jefferson	27	37	42	37	48	50	241	2.78%
Dodge					17	106	123	1.42%
Outagamie					26	65	91	1.05%
Winnebago				1	1	78	80	0.92%
Fond du Lac					8	40	48	0.55%
Private/External	10	15	15	17	9	3	69	0.80%
Manitowoc					5	22	27	0.31%
Calumet					2	14	16	0.18%
Waupaca	1					13	14	0.16%
Sheboygan			1		1	3	5	0.06%
Shawno						6	6	0.07%
Menominee					1		1	0.01%
Lincoln						1	1	0.01%
Waushara	1						1	0.01%
Marathon					1		1	0.01%
Total Referral Autopsies	323	367	360	347	466	684	2,547	29.4%
Milwaukee County Autopsies	971	951	988	1,074	1,092	1,047	6,123	70.6%
Total Autopsies	1,294	1,318	1,348	1,421	1,558	1,731	8,670	

Source: Audit Services Division created table based on data from the CME system.

In April of 2018 Milwaukee County hired the Medical Examiner from Fond du Lac County to be a pathologist at Milwaukee County. This resulted in many counties that previously had autopsies being performed by the Fond du Lac County Office to request autopsy services from Milwaukee County. In August of 2018 Fond du Lac County reopened its office.

We reviewed monthly autopsy levels in 2018 in an attempt to determine if monthly referral levels declined after the reopening of the Fond du Lac Office in August. The data for referral autopsies during the fall of 2018 in Table 4 show a slight decline in monthly referral autopsies totals except for the month of October which has the highest total for all of 2018.

Table 4 Monthly Total for Referral Autopsies in 2018													
<u>Month</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Avg</u>
Referral Autopsies	48	53	62	54	64	68	63	55	51	77	42	47	57
Source: Audit Services Division created table based on data from the CME system.													

From 2013 to 2018, the Medical Examiner’s Office increased the provision of autopsy services to referral counties from 323 autopsies performed for six referral counties in 2013 to 684 autopsies performed in 2018 for 14 referral counties.

While the Medical Examiner’s Office has guidance from state statute to perform autopsies for referral counties, a mission statement that says it will serve the “community” and a County Ordinance that states, “The medical examiner has the discretion under state statute, with certain exceptions, to determine whether to conduct an autopsy,” the increase in referral autopsies and the number of referral counties have doubled since 2013. Therefore, we recommend that the Medical Examiner:

1. *Present to policymakers a revised mission statement that includes guidance on the magnitude of referral autopsies to be performed by the Medical Examiner’s Office.*

In total, from 2013 to 2018 Milwaukee County deposited \$3,268,975 in revenue from referral counties for autopsy services only.

In total, from 2013 to 2018 Milwaukee County deposited \$3,268,975 in revenue from referral counties for autopsy services only.

State Statute requires the approval of the Medical Examiner's Office fees by the County Board which occurs as a part of the annual budget process according to the Medical Examiner's Office. We found the fees, outside of autopsy services, to be clearly posted on the website for the Medical Examiner's Office with a reference that the fees are Board approved.

In addition State Statutes require the Medical Examiner to report at the end of every three months to the Board and to the Treasurer an accurate report or statement of all fees and income collected. We were not provided evidence that this reporting is occurring, however, the Medical Examiner's Office did indicate it provides copies of all cash receipts to the Treasurer.

Table 5 shows the revenue collected from 2013 to 2018 by referral county for autopsy services. The amounts in the table do not include other revenues from referral counties for items such as testimony or consultation fees. The revenue amounts are based upon deposits made into the County's financial system and are on a cash basis. These transactions are discussed in greater detail in Section 3.

Table 5
Annual Actual Revenue Received by Year from Referral Counties
for Payment of Autopsy Services

<u>County</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Calumet					\$2,600	\$15,000	\$17,600
Columbia	\$1,500						\$1,500
Dodge	\$1,200				\$14,000	\$112,500	\$127,700
Fond du Lac					\$7,000	\$60,700	\$67,700
Jefferson	\$38,000	\$30,180	\$37,000	\$31,475	\$51,500	\$72,750	\$260,905
Kenosha	\$205,200	\$212,400	\$160,600	\$197,400	\$282,700	\$180,625	\$1,238,925
Manitowoc					\$5,000	\$21,560	\$26,560
Marathon					\$1,000		\$1,000
Menominee					\$1,000		\$1,000
Outagamie					\$14,000	\$72,850	\$86,850
Ozaukee	\$58,800	\$44,900	\$57,400	\$68,550	\$65,600	\$57,000	\$352,250
Racine	\$123,000	\$169,500	\$157,550	\$151,200	\$192,000	\$199,685	\$992,935
Shawno						\$7,500	\$7,500
Sheboygan	\$1,000			\$1,000		\$6,000	\$8,000
Waupaca		\$1,500				\$10,500	\$12,000
Waushara		\$1,550					\$1,550
Winnebago					\$1,250	\$63,750	\$65,000
Total	\$428,700	\$460,030	\$412,550	\$449,625	\$637,650	\$880,420	\$3,268,975

Source: Audit Services Division created table based on data provided from the Medical Examiner's Office.

We noted a lag in payments for autopsies at times. One case in particular, the autopsy was dated May 11, 2013 and payment was received more than two years later on July 20, 2015.

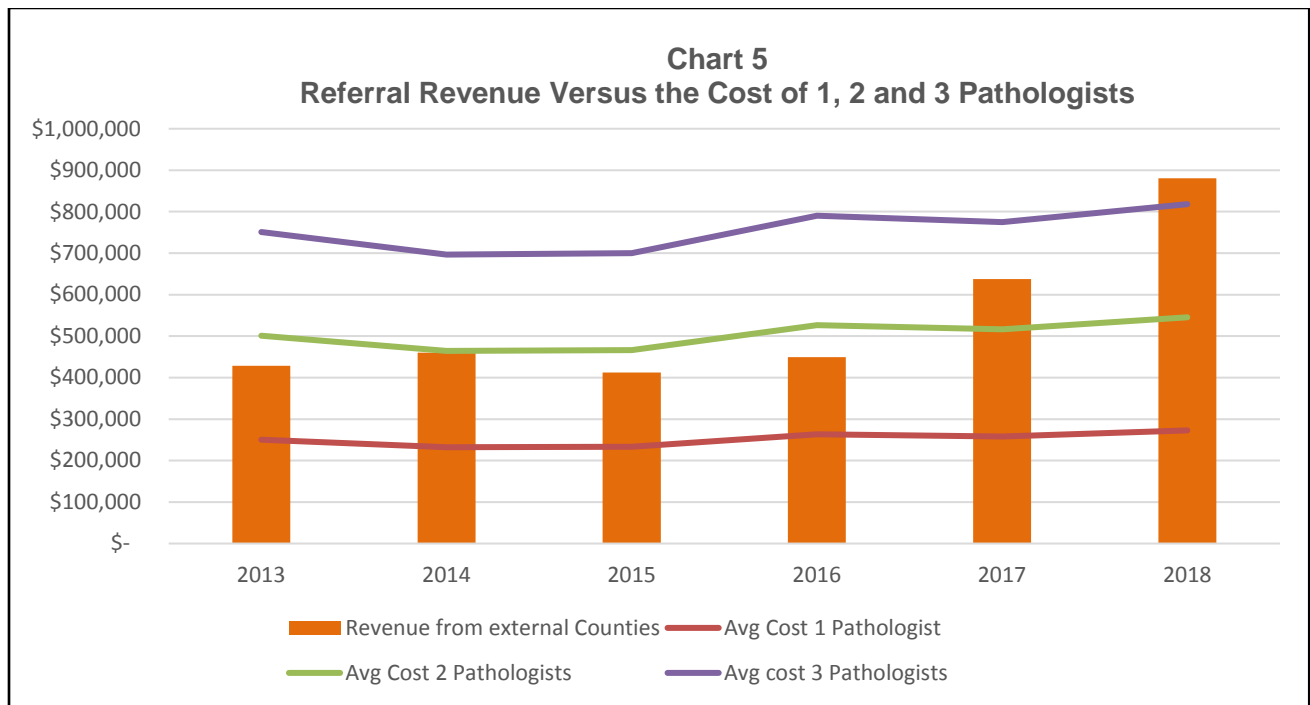
We noted a lag in payments for autopsies at times. One case in particular, the autopsy was dated May 11, 2013 and payment was received more than two years later on July 20, 2015. Therefore, while Table 5 reflects the payments received from each County from 2013 to 2018, the payment could be for services received from as early as 2011. Payments from services in 2017 and 2018 may not yet have been received.

In total based upon our review of cash receipts, from 2013 to 2018 Milwaukee County deposited \$3,268,975 in revenue from referral counties for autopsy services only.

The Medical Examiner stated that the revenue from referral counties for autopsy services only more than offsets the cost for additional pathologists in the office.

In an interview with the Medical Examiner, it was stated that the tax levy allocated to the Medical Examiner's Office annually offsets the costs of three pathologists. According to the Medical Examiner, those three pathologists provide almost enough staff to perform all of Milwaukee County's autopsies. It was also stated that the revenue from referral counties more than offsets the cost for the additional pathologists in the office which are required for the referral autopsies.

Chart 5 shows that the annual amount of revenue received from referral counties along with the annual budgeted salary and benefit costs for one, two and three pathologists. In 2018, the pathologist staff was increased from five to six.



Source: Audit Services Division created chart based on data from the Medical Examiner's Office and the County Budget software system.

In years 2013 to 2016 the amount of revenue received from referral counties was in excess of the cost of one pathologist but less than the cost of two pathologists. In 2017, the revenue received from

referral counties was in excess of the budgeted cost of two pathologists. In 2018, the revenue received from referral counties was in excess of the budgeted costs of three pathologists. However, as noted earlier there are additional staff within the Medical Examiner's Office who work on autopsies.

Total Autopsies performed by the Medical Examiner's Office increased by 437 since 2013. Of that total, 361 were for referral counties and 76 were for Milwaukee County. The Medical Examiner's Office averaged 264 autopsies per full time pathologist, excluding fellows, for the years 2013 to 2017 which is in excess of the NAME recommended maximum of 250.

The National Association of Medical Examiners (NAME) began issuing autopsy standards in the 1970s with the principle objective of the standards to: "provide a constructive framework that defines the fundamental services rendered by a professional forensic pathologist practicing his or her art...Deviation from these performance standards is expected only in unusual cases when justified by considered professional judgement." The standards for accreditation include an annual survey providing specific data points along with an on-site visit once every four years.

The Medical Examiner's Office averaged 264 autopsies per full time pathologist, excluding fellows, for the years 2013 to 2017.

NAME Forensic Autopsy Performance Standards include guidelines that investigations can be conducted by inquiry with or without examination. Inquiries are typically conducted via telephone interview, personal interview, or review of records. Examination may include scene investigation, external inspection and forensic autopsy.

Autopsy standards dictate that the forensic pathologist shall prepare a written report for each postmortem examination and include:

- The date, place and time of examination
- The name of deceased, if known
- The case number
- Observations of the external examination, and when performed the internal examination

- A separate section on injuries
- A description of internal and external injuries
- Descriptions of findings in sufficient detail to support diagnoses, opinions and conclusions
- A list of the diagnoses and interpretations in forensic autopsy reports
- Cause of death
- Name and title of each forensic pathologist
- Sign and date each postmortem examination report

NAME standard B4.5 states, “the forensic pathologist shall not perform more than 325 autopsies in a year. Recommended maximum number of autopsies is 250 per year.”

Specially, NAME standard B4.5 states, “the forensic pathologist shall not perform more than 325 autopsies in a year. Recommended maximum number of autopsies is 250 per year.”

The 2018 Adopted Budget for the Medical Examiner stated,

National Association of Medical Examiner (NAME) guidelines dictate the number of autopsies that can be performed to remain in compliance for continued accreditation. Under those guidelines, case numbers forcing pathologists to perform over 250 autopsies per year generate a “Phase 1 deficiency” – accreditation can be maintained, but a plan for amelioration must be in place. Once that number exceeds 325 per year, a “Phase II deficiency” means that full accreditation is lost, and, again, a plan must be in place to address the deficiency. At least four offices nationwide have lost accreditation in 2016 by exceeding the maximum number of allowable autopsies, and some have simply abandoned the quest for accreditation due to overwhelming case load and difficulty in recruiting additional staff. Loss of accreditation could result in loss of federal grant monies, difficulty in recruiting, and issues with credibility of courtroom testimony. The addition of one Forensic Pathologist would alleviate this issue.

Using total autopsies and total staffing levels results in the autopsy per pathologist amount being above the recommended standard in every year except 2014 and 2016.

In an interview with the Medical Examiner, he indicated that the NAME accreditation review will look at the total staffing levels and total autopsy levels rather than the actual autopsies performed per pathologist.

As a part of the NAME accreditation review an entity is required to answer over 350 questions. In order to achieve full NAME accreditation the entity can answer deficiently for no more than fifteen questions or a Phase 1 deficiency will result. If the amount of autopsies per pathologists is in excess of 250 but less than 325 it would count as one deficient answer. However, according to

the Medical Examiner, if the autopsies per pathologist were to exceed 325 that would trigger a Phase 2 deficiency.

Table 6 contains total autopsies and total pathologist staffing levels. Under this method, in every year except 2014 and 2016 the autopsy per pathologist amounts were above the recommended standard.

Table 6
Total Autopsies Divided by Total Pathology Staff

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Pathologist on staff	4	4.5	4.5	5	5	6
NAME Recommended autopsies total per Pathologist	250	250	250	250	250	250
Total NAME Recommended Maximum	1,000	1,125	1,125	1,250	1,250	1,500
Total Autopsies Performed by Full Time Pathologists	1,070	1,106	1,139	1,217	1,441	1,531
Total (under) or over NAME Recommended Maximum	70	(19)	14	(33)	191	31

Source: Audit Services Division created table from data from the ME's case management system and the County's budgeting software.

Using actual autopsy performed, the average autopsy per pathologist during 2013 to 2018 was 264 and three of the pathologists had autopsy totals greater than 250 in 2018.

Table 7 displays the actual number of autopsies per full time pathologist in the Medical Examiner's Office during 2013 to 2018. The data was derived from the case management system used by the Medical Examiner's Office (CME) on a calendar year basis and includes only full time Milwaukee County pathologists.

As shown in Table 7, the average autopsy per pathologist during 2013 to 2018 was 264 and three of the pathologists had autopsy totals greater than 250 during 2018 according to the listings within the case management system.

Table 7
Autopsies Performed per Pathologist 2013–2018*

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Avg.</u>
Pathologist 1	276	289	286	231	292	273	275
Pathologist 2	283	157					252
Pathologist 3	275	263	276	249	301	243	268
Pathologist 4	236	267	285	243	320	295	274
Pathologist 5		130	216	242	282	240	247
Pathologist 6			76	252	245	270	247
Pathologist 7						210	280
Total	1,070	1,106	1,139	1,217	1,441	1,531	
Average per Pathologist	268	260	258	243	288	266	264
Number of Pathologist over 250	3	3	3	1	4	3	

*Averages were adjusted for the numbers of months actually worked within a year by a pathologist and for the determination by NAME that the performance of three external exams is equal to one autopsy in terms of workload.

Source: Audit Services Division created table from data from the ME's case management system.

In an interview with the Medical Examiner's Office it was stated that according to the NAME Accreditation Board, fellows can perform 125 autopsies per year. No single fellow performed autopsies in excess of 125 autopsies in a calendar year during the course of our review. Autopsies performed by fellows and autopsies performed by residents are not included in Table 7 nor in either of the average autopsy per pathologist calculations.

The Medical Examiner's Office also performs brain extractions. The majority of these cases were for Creutzfeldt - Jakob Disease (CJD), which is a rare, degenerative, fatal brain disorder. These types of cases are for research purposes and are not complete autopsies since they are autopsies of the brain or brain extractions. The CJD cases that were performed during our review were from various Wisconsin counties, the States of Illinois and Michigan, the Medical College of Wisconsin and the National Prion Disease Center. The Medical Examiner's Office performed 29 of these cases during 2013 to 2018. The cases require protective clothing and special prepping of the autopsy suite.

The Medical Examiner's Office performed 29 brain extractions and five other organ extractions during 2013 to 2018.

The Medical Examiner's Office also performed five other organ extractions during 2013 to 2018. Both brain and organ extractions are included in the calculation of autopsies per pathologist due to the inclusion of these in the CME system and in the NAME standards for annual autopsy levels.

Due to the NAME accreditation standards along with the average autopsy per Milwaukee County pathologist at 264 which is in excess of the standards and the information contained in the 2018 Adopted Budget regarding the need for a plan if an entity is in excess of the accreditation standards, we recommend that the Medical Examiner's Office:

2. *Present to the County Board a plan to help ensure that the office will not exceed the parameters established under NAME standard B4.5 of a recommended maximum of 250 with loss of accreditation if the amount increases to 325 autopsies per pathologist.*

The increased workload for autopsies since 2013 could have a negative impact on the staff of the Medical Examiner's Office. We looked at a few available methods to attempt to see if there was evidence of this.

The first area we analyzed was the amount of staff turnover that occurred at the Medical Examiner's Office during the period of our review. Since 2013, the Medical Examiner's Office has had 13 employees leave employment. Of those, five retired, seven resigned or quit and one was discharged.

We did not find evidence that the increased workload was affecting the separation rate for the Medical Examiner's Office as of the time of our review.

Based upon data from the Bureau of Labor Statistics, the average employee separation rate for State and Local government employees, excluding education, from 2013 to 2017 was 19.2%. The Medical Examiner's separation rate for 2013 to 2018 was 7.0% or less than half of the reported national average.

Table 8 shows the turnover at the Medical Examiner's Office from 2013 to 2018. We did not find evidence that the increased workload was affecting the overall separation rate for the Medical Examiner's Office as of the time of our review. However, of the seven employees that resigned or quit, five were Investigators and all left service between 2015 and 2018.

Table 8 Separation of Staff from 2013 to 2018							
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>
Retired	1	1		2		1	5
Quit/Resigned		1	3		1	2	7
Discharged			1				1
Total	1	2	4	2	1	3	13
Budgeted FTE	28.3	28.1	27.5	29.5	29.9	31.7	
Turnover %	3.5%	7.1%	14.5%	6.8%	3.3%	9.5%	
Industry Standard Turnover Rate	16.8%	18.6%	19.7%	20.5%	20.6%	N/A	
Source: Audit Services Division created table based on data from the Milwaukee County Human Resource System (HPW) and the Bureau of Labor Statistics Annual total separation's rates by industry and region, not seasonally adjusted.							

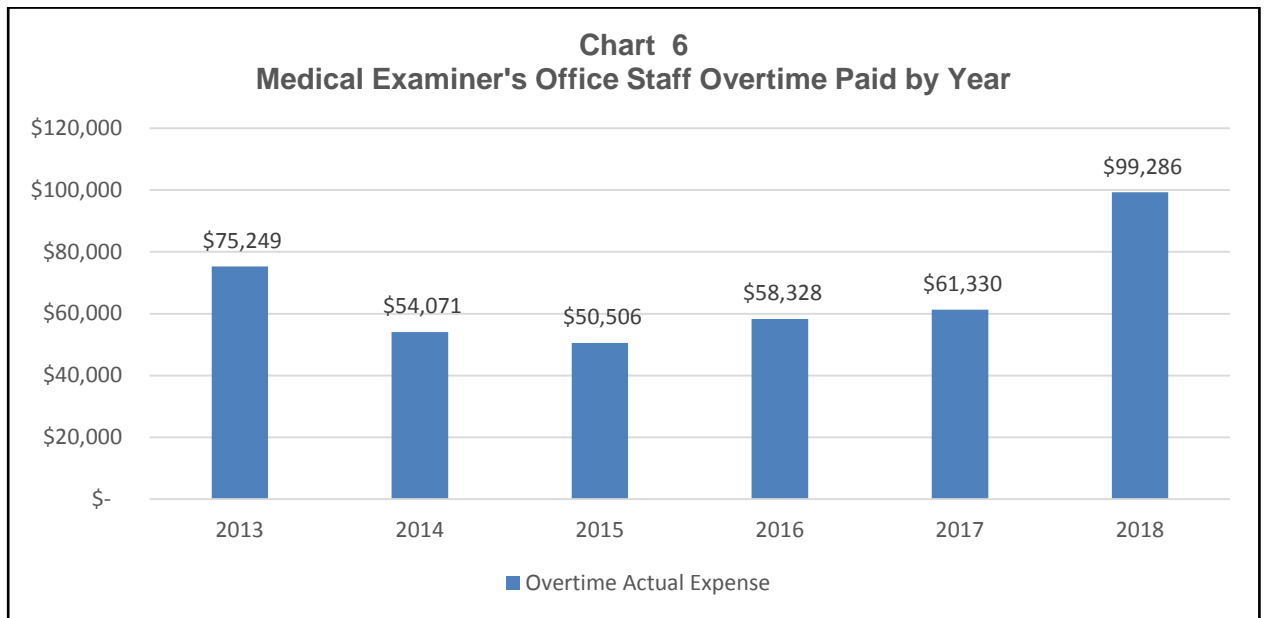
In addition to conducting a review of the separation rates for the Medical Examiner's Office, we looked at the amount of overtime that was paid to staff at the Medical Examiner's Office from 2013 to 2018.

Our review showed that 97% of the overtime paid was paid to investigators. In addition to their work at death scenes and with autopsies, investigators are also tasked with visiting funeral homes prior to the release of a cremation permit. In interviews with staff from the Medical Examiner's Office it was noted that cremations have increased in recent years adding to the workload of the investigators.

Overall for the Medical Examiner's Office, we found that while there was not a substantial increase from 2016 to 2017 when referral autopsies were on the rise, the office experienced a 62% increase in overtime from 2017 to 2018 as shown in Chart 6. Four members of the investigative staff had significant family medical

leave off time in 2018 which contributed to the increase in overtime.

Chart 6 displays paid overtime from 2013 to 2018.



Source: Audit Services Division created table based upon Milwaukee County payroll records.

Investigators averaged 174 hours of overtime in 2018, however, the 2019 Adopted Budget created one additional position of Investigator due to increasing workload.

Investigators averaged 174 hours of overtime paid in 2018 and the highest amount paid to an investigator was for 518 hours. However, the 2019 Adopted Budget created one additional Forensic Investigator due to the increasing workload and a projected increase in cremation investigations, which should provide some overtime relief in 2019.

Milwaukee County began a project in 2016 where it offered a survey to its employees in an attempt to measure employee engagement. The County then resurveyed its employees in 2018. We requested and received from the Medical Examiner's Office a copy of its results from both 2016 and 2018. We reviewed the data to see if there was any change in employee satisfaction from 2018 which included the change in indicators from 2016.

We found that the Medical Examiner's Office employee engagement data shows a decline in almost every area. However, the 2016 scores for the Medical Examiner's Office were

higher than the County-wide numbers. According to management at the Medical Examiner's Office they were one of the top scorers within the County for 2016.

The employee engagement levels are defined as:

- Fully engaged is maximum effort and high loyalty
- Moderately engaged is moderate effort and moderate loyalty
- Under engaged is just adequate effort and little loyalty
- Disengaged is minimum effort and looking/leaving

Overall the County had 32% of staff moderately or fully engaged in 2016 and 68% were under or disengaged. For the Medical Examiner's Office the staff's level of engagement in 2016 was 50% were moderately and fully engaged. Under and disengaged was 50% in 2016. Based on this data, the Medical Examiner's Office staff was more engaged than staff in general at the County in 2016.

In 2018 of the 32 employees in the office, 24 participated in the survey. The 2018 scores were above 50% in all categories except one which was at 44%. In 2018 the number of moderately or fully engaged staff at the Medical Examiner's Office dropped from 50% to 39% while the number for under and disengaged increased from 50% to 61%.

A common theme in our interviews with staff was that the referral autopsies were having an impact on their workload.

We conducted interviews with 16 of 32 staff members at the Medical Examiner's Office and common feedback was that the referral autopsies were having an impact on the workload of the staff members.

Given the results of the 2018 Employee Engagement survey and our discussions with staff, we recommend that the Medical Examiner's Office:

3. *Use the Employee Engagement data in an attempt to assess if any segment of employees are more affected by the increase in autopsies resulting in declining employee engagement on the survey.*

Section 2: During 2013 to 2018 Milwaukee County performed autopsies for 17 counties; the Medical Examiner's Office had contracts with only 2 counties.

In total during the period of our review of 2013 to 2018 the Medical Examiner provided 941 autopsies to referral counties without a contract. In addition, 34 brain and other organ extractions were conducted without a contract.

On September 24, 2014 the Office of the Comptroller issued a memo to outline the steps for contract processing at the County.

On September 24, 2014 the Office of the Comptroller issued a memo to outline the steps for contract processing at the County after the adoption of 2013 Wisconsin Act 14 which changed many of the County's contract requirements. The memo issued by the Comptroller included information on the proper execution of contracts where the County is providing a service to a referral entity for a fee. The autopsy services provided by the Medical Examiner's Office to the referral counties is similar in nature to the revenue contract examples in the memo and results in the following requirements to be in place for proper execution of revenue contracts. Multiple signatures are required on the contract including:

- Department head or designee
- External Entity
- Comptroller
- Corporation Counsel – Approved for Execution
- County Executive
- Corporation Counsel – Approved as to Wis. Stats. 59.42

Two signatures are requested by the County Executive to be obtained:

- Community Business Development Partners
- Risk Management

In addition, the memo established the type of legislative review required for the revenue contracts as follows:

- No review is required when the contract is less than \$100,000 and is for one calendar year or less.

- A contract with a value of \$100,000 to \$300,000 requires passive review by the County Board.
- A contract in excess of \$300,000 or which is multi-year requires full County Board approval.

The Medical Examiner has properly executed contracts with Racine and Kenosha Counties to provide autopsy services.

The Medical Examiner has properly executed contracts with Racine and Kenosha Counties to provide autopsy services. Both contracts received full County Board approval. The Racine County contract is for the period of January 1, 2018 to December 31, 2020, while the Kenosha County contract is for the period of January 1, 2018 to December 31, 2022.

We conducted a review of the monthly contracts report provided to the County Board from the Office of the Comptroller to determine if other County departments were following the guidelines for revenue contracts. Our review of those reports from 2013 to 2018 found that while it is a rare occurrence for the County to be the provider of a service versus the purchaser, other examples did exist. They include the following contracts:

- The Office of the Sheriff and the Kettle Moraine High School Prom
- The Office of the Sheriff and Children's Hospital
- The Parks Department and The Village of Shorewood Lifeguard provision
- Milwaukee County and My Choice Family Care

All of the revenue contracts that were found in the Comptroller's report to the Board followed the procedures described in the memo which includes obtaining all required signatures and Board approval when required. In addition, these contracts limited the County's liability during the provision of services.

While the memo issued by the Comptroller contained guidelines for how departments should issue revenue contracts, there was no mechanism we found to confirm that a department follows the guidelines. Controls exist at the County via the Docusign system and the accounts payable review that will not process a payment by the County to a vendor providing a service if the contract was not properly executed. Revenue contracts are not currently

monitored and the practices for depositing of revenue do not contain contract verification.

In 2018, the Medical Examiner provided 436 autopsies to 12 counties without a contract.

In addition to providing autopsy services to Racine and Kenosha Counties under existing contracts, in 2018, the Medical Examiner provided autopsies to the following counties without a contract:

- Ozaukee
- Jefferson
- Dodge
- Outagamie
- Winnebago
- Fond du Lac
- Manitowoc
- Calumet
- Waupaca
- Sheboygan
- Lincoln
- Shawno

From 2013 to 2018, the Medical Examiner provided 941 autopsies without a contract in place. The Medical Examiner indicated that often these autopsies are arranged via a phone call or email from the requesting county.

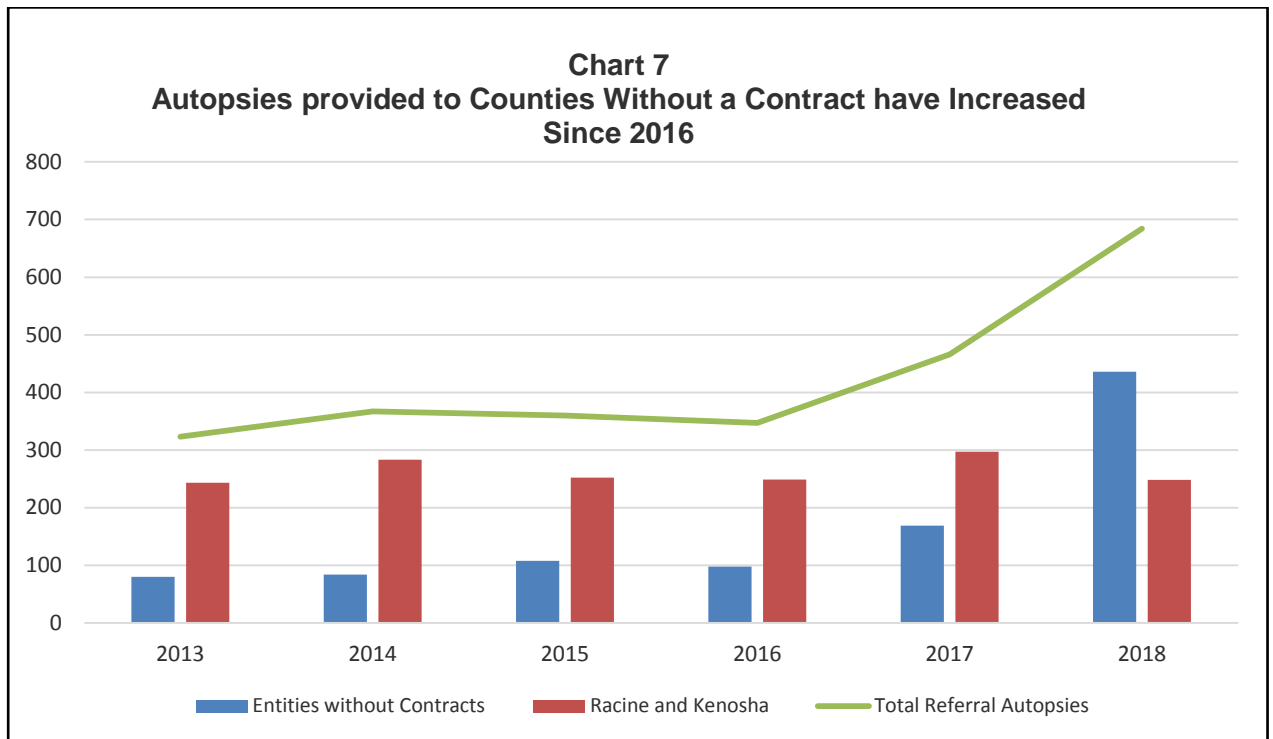
As a part of our review we consulted with the Office of Risk Management and the Office of Corporation Counsel. Both offices indicated that best practices would be to have a contract when conducting autopsies for outside entities.

In 2013 to 2016 74% of autopsies performed were for Milwaukee County, in 2017 to 2018 65% were for Milwaukee County.

In 2013 to 2016, 74% of autopsies performed were for Milwaukee County, in 2017 to 2018 65% were for Milwaukee County.

In 2013, the Medical Examiner performed a total of 1,294 autopsies. Of those, 26.0% were for referral counties, 19.1% were under contracts with Racine and Kenosha and 6.9% were for counties without a contract. In 2018, the Medical Examiner performed a total of 1,731 autopsies. Of those, 35% were for referral counties, 16.6% were under contracts with Racine and Kenosha Counties and 18.4% were for counties without a contract.

Chart 7 displays this data for the years 2013-2018. In total during the six-year period of our review, the Medical Examiner provided 941 autopsies to referral counties without a contract.



Source: Audit Services Division created table from CME data provided by the Medical Examiner's Office.

The numbers in Chart 7 include the 34 brain and other organ extractions performed by the Medical Examiner's Office from 2013 to 2018. The Medical Examiner performed these services without a contract.

When performing an autopsy for a referral county, the referral counties transport the decedent to Medical Examiner's Office. Depending on the type of death investigation, staff from the referring counties attend the autopsies such as the Coroner or Medical Examiner of the county, law enforcement or hospital staff. The initial call to the Medical Examiner's office is answered by a Milwaukee County Forensic Investigator who completes the Investigation Report, which has the following information:

- Synopsis
- Description of Incident
- Property and Evidence

- Medical History
- Social History
- Law Enforcement Communication

An additional report called the Demographic Report is completed by the Forensic Investigator which has information from the referral county of the decedent's demographics, notification of the family members, final disposition, and a field to indicate that the referral county will transport the decedent to the Medical Examiner's Office.

In interviews with staff from the Medical Examiner's Office they indicated that the investigative work performed by referral counties was not on par with the work of the Milwaukee County investigators.

In interviews with staff from the Medical Examiner's Office they indicated that the investigative work performed by referral counties was not on par with the work of the Milwaukee County investigators. This was in part attributed to investigators in referral counties having other job duties, working other outside jobs, or performing investigative work on a part-time basis. Since there is no contract in place for most of the referral counties, obligations of both parties have not been clearly established.

Due to the County guidelines requiring contracts when providing a service to an outside entity and the noted risks involved with operating without contracts, we recommend that the Medical Examiner's Office:

4. *Immediately execute contracts or other formal agreements such as letters of engagement with any outside entity for which they are performing autopsy services, brain or other organ extractions or other professional services.*

We found the amounts that the Medical Examiner's Office charges to referral counties to be in-line with other counties' fees and to be reasonably related, if not too low, to actual costs based upon three testing methodologies. The rates are determined via negotiations with individual counties. While the Medical Examiner's Office submitted the average autopsy fee charged via the annual fee schedule as a part of their Requested Budget, we were unable to determine that County Board approval of the fees occurred.

There are guidelines within State Statutes that the coroner or medical examiner shall act as coroner in an outside county when

requested to do so. In regards to autopsies, State Statute 979.22 states, “A medical examiner may perform autopsies and toxicological services not required under this chapter and may charge a fee established by the county board for such autopsies and services. The fee may not exceed an amount reasonably related to the actual and necessary cost of providing the service.”

Milwaukee County charges a flat rate per autopsy conducted, however, the rate varies by county.

Milwaukee County charges a flat rate per autopsy conducted, however, the rate varies by county. For example, the contract with Racine County establishes the rate at \$1,600 per autopsy while Kenosha County is charged \$1,500. These two rates are the only rates with direct Board approval as the contracts were authorized by the County Board. The rate for the autopsy does not fluctuate based upon the type of autopsy being performed.

The Medical Examiner's Office provided a copy of the fee schedule that was submitted as part of their 2018 Requested Budget. The schedule included a weighted average autopsy fee of \$1,505. We were unable to determine if the County Board was provided this document as part of the budget documents it approved.

Table 9 lists the various rates charged, which counties paid which rate and the year we verified the rate.

Table 9 Rates Charged to Referral Counties and Other Entities for Autopsies and Organ Extractions*	
<u>Autopsy Rate</u>	<u>Counties</u>
\$1,250	Jefferson, Outagamie – 2018
\$1,500	Calumet, Dodge, Fond du Lac, Kenosha, Manitowoc, Ozaukee, Shawno. Sheboygan, Waupaca, Winnebago – 2018
\$1,600	Racine – 2018
\$2,000 to \$3,000	Organ Extraction – 2018 according to the Medical Examiner
Source: Audit Services Division created table based upon data provided by the Medical Examiner's Office.	

*We found a charge of \$3,000 for a Private Autopsy in 2016. The Medical Examiner's Office indicated it is rare they perform a private autopsy.

In an attempt to determine if the Medical Examiner was in compliance with the State Statute that calls for the fee to be an amount reasonably related to the actual and necessary cost of providing the service we performed three calculations.

All three methods used the number of autopsies performed in 2018. The first method was to determine the cost per autopsy based upon the total adopted expenditure budget for the Medical Examiner's Office in 2018 divided by the number of autopsies performed in 2018 which resulted in a per autopsy cost of \$2,770. The Medical Examiner's Office does perform functions beyond autopsies so it was expected that this calculation may be in excess of the fees charged and may not comply with the statute requiring the fee to be reasonably related to the actual and necessary cost of providing the service. The calculation is shown in Table 10.

Table 10	
Cost Per Autopsy based on Total Adopted 2018 Expenditures	
<u>Method</u>	<u>Total Adopted 2018 Expenditures*</u>
Total Cost	\$4,794,150
Autopsies	1,731
Cost Per Autopsy	\$2,770
*Includes employee fringe benefits costs which were budgeted centrally in 2018.	
Source: Audit Services Division created table based on information from the County's budgeting software system.	

The second calculation was the total Adopted 2018 Budget for personnel expenses for all staff in the Medical Examiner's Office divided by the number of autopsies performed in 2018 which resulted in a per autopsy cost of \$2,195.

The performance of an autopsy for both Milwaukee County and a referral county requires a contribution from almost every member of staff within the Medical Examiner's Office from investigators who field initial calls to the office administrative staff who handle

the billing for any referral autopsy performed. However, the Medical Examiner's Office does perform other duties. The calculation is shown in Table 11.

Table 11 Cost Per Autopsy based on Total Adopted 2018 Expenses	
Method	<u>Total Adopted 2018 Personnel Expenses*</u>
Total Cost	\$3,799,334
Autopsies	1,731
Cost Per Autopsy	\$2,195
*Includes employee fringe benefits costs which were budgeted centrally in 2018.	
Source: Audit Services Division created table based on information from the County's budgeting software system.	

We found based upon our analysis that the fees charged by the Medical Examiner's Office to be reasonably related, if not too low, to its costs to perform an autopsy.

The final calculation was the total Adopted 2018 Budget for personnel expenses for staff whose primary, if not exclusive function, is the performance of autopsies. Staff selected for this analysis include: Pathologists, Supervisor Forensic, Forensic Assistants and the Toxicology Lab staff. Since many members of the staff of the Medical Examiner's Office perform work on the autopsy process but are not dedicated to the process, and since the calculation does not include equipment and supplies, we expected this calculation to be less than the fees charged. The fees charged by the Medical Examiner's Office range from \$1,250 to \$1,600.

We divided the total dedicated personnel costs by the number of autopsies performed in 2018 which resulted in a per autopsy cost of \$1,441 as shown in Table 12.

Table 12
Cost Per Autopsy based on Total Dedicated Personnel from the Medical Examiner's Office

<u>Method</u>	<u>Partial Adopted 2018 Personnel Expenses*</u>
Total Cost	\$2,495,196
Autopsies	1,731
Cost Per Autopsy	\$1,441

*Includes employee fringe benefits costs which were budgeted centrally in 2018.

Source: Audit Services Division created table based on information from the County's budgeting software system.

We found based upon our analysis that the fees charged by the Medical Examiner's Office to be reasonably related, if not too low, to its costs to perform an autopsy.

We researched the referral fee charged by other counties which are displayed in Table 13.

Table 13
Other County Rates for Referral Autopsies

<u>County Providing Autopsy</u>	<u>County Receiving Autopsy</u>	<u>Autopsy Cost</u>	<u>Year</u>
Dane	Brown	\$1,100	2017
Dane	Rock	\$1,300	2017/2018
Waukesha*	Washington	\$211,150	2016
Waukesha**	Walworth	\$1,847	2016

*Contract call for a flat rate for one pathologist.

**Waukesha provides full medical examiner's services in fee in addition to autopsy services.

Source: Audit Services Division created table from data found on the Dane, Waukesha, Walworth and Washington County websites.

In the Dane County contracts it listed the per autopsy fee once a set amount of autopsies is exceeded (the set amount is not listed in the contract). The contracts also specifies that toxicology testing will be billed directly to the referral county and are not included in the autopsy fee.

Waukesha County contracts are for full medical examiner services. For Waukesha County's contract with Walworth County, we estimated the per autopsy cost by taking the contract amount divided by the number of autopsies that occurred in Walworth County in 2016. The Walworth County contract includes testing, analysis and other fees unless extraordinary testing is required.

Waukesha County's contract with Washington County included a flat rate of \$211,150 for 2016 for the provision of one pathologist. It is not specified in the authorizing resolution which entity is responsible for toxicology costs.

Milwaukee is the only county in Wisconsin with an in-house toxicology laboratory.

While we conducted a simple analysis on autopsy costs and were able to research a few comparable fees for autopsies charged by other counties, we believe further work is needed and approval of all fees by the County Board is required by State Statute. The Medical Examiner's Office is in the best position to determine the appropriate level of staff and overhead costs that support the autopsy function. As a result, we recommend the Medical Examiner:

- 5. Conduct an analysis to determine the approximate cost to conduct an autopsy and establish fees at that amount and seek County Board approval of the fee schedule once complete.*

Section 3: Enhanced recordkeeping is needed to provide documentation to ensure proper payment is received for referral autopsies.

We reviewed cash receipt documentation for 2,300 autopsy records in an attempt to verify receipt of payment for all autopsy services to referral counties. We could not document that payment was received for 17 autopsies totaling \$23,200 in revenue from 2013 to 2017.

In addition to the autopsy function of the Medical Examiner's Office, the office provides a variety of permits such as for cremation and disinterment and other fees. The majority of these costs are collected from families by funeral homes and then remitted to the Medical Examiner's Office.

The Medical Examiner's Office uses an electronic case management system to track its autopsies however, the system does not include an invoice function.

The Medical Examiner's Office uses an electronic case management system called the CME to track its fees and permits for funeral homes along with entering all autopsies into the system. While the CME system includes an invoice function for billings to funeral homes, it was never updated to include an invoice function for autopsies. This resulted in the Medical Examiner's Office developing a manual process for its autopsy invoice function.

Invoices are created in a word document by saving over the latest invoice that was created. The invoices are then sent out with the final autopsy documents to the requesting county. Invoices do not include a unique number, although the name of the deceased and case number are listed. The Medical Examiner's Office retains a paper copy of the invoice in a binder but does not retain an electronic copy prior to receipt of payment. We found that the Medical Examiner's Office could not verify that all autopsies had been invoiced nor that they had received payment from all invoiced autopsies.

During an interview with the management of the Medical Examiner's Office it was stated that if the paperwork remains in the binder then it is not paid. If the autopsy was never invoiced then it would not be in the binder and the lack of payment would be unknown. We requested a copy of the policy and procedures on account receivables/billings and were provided, at a later date, an undated policy on Accounts Receivable/Billing which accurately reflects the process.

We conducted a review of the cash receipts entered into the County's financial system and the autopsies that were entered into the CME system. The revenue was deposited into an account that was blended with other revenue items. Also, the deposits were not segregated by county when recorded into the general ledger system which resulted in a need for a review of the cash receipts paperwork to determine both if proper payment had occurred and what amount had been paid by each referral county.

The Medical Examiner's Office provided copies of cash receipts for 2,300 autopsies that had documentation of payment. We found we could not verify payments of \$23,200 from 2013 to 2017 for 17 referral autopsies.

The cash receipts included the names of the decedents along with the county remitting payment. We cross referenced this data with the autopsy data from the CME in an attempt to verify receipt of payment for all autopsies. The cash receipts contained documentation for payment of 2,300 autopsies. We found we could not verify payment for 17 referral autopsies in the amount of \$23,200 from 2013 to 2017. We also accessed the County's OnBase system where copies of completed autopsies are stored. For referral autopsies copies of the invoice should be included in the final autopsy paperwork that is scanned into the OnBase file. We researched and found that of the 17 autopsies three did not have copies of invoices in the OnBase file for the autopsy.

Table 14 shows the amounts annually that we were unable to verify.

Table 14 Outstanding Amounts by Year for Autopsy Services to Referral Counties						
<u>Year</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Total</u>
Amount	\$5,300	\$8,400	\$3,000	\$1,400	\$5,100	\$23,200
Source: Audit Services Division created table based on data provided by the Medical Examiner's office.						

We asked the Medical Examiner's Office if it had asked the Department of Administrative Services – Information Management Services Division (IMSD) to update the CME system to include an autopsy invoice function and were provided documentation that in 2016 the Medical Examiner submitted a Technology Investment Intake Proposal to IMSD. The Medical Examiner's Office had requested funding from the 2018 Capital Improvements Budget to perform the modifications to the CME system. The 2018 Capital Improvements Budget forecasted the upgrade to the system to be funded in 2019. The 2019 Capital Improvements Budget pushed the forecasted upgrade to 2020.

Due to the numerous issues we found with the manual invoice system, we recommend that the Medical Examiner,

6. *Pursue the following items:*

- a) *Create a check monitoring system to track payments for services provided including creating an electronic record of all invoices and payments received and creating a numbering system for invoices.*
- b) *Attempt to verify if payment was received for the items identified by the Audit Services Division and recoup funds from any referral counties, if necessary.*
- c) *Include identifying information in the County's general ledger system when depositing payments from referral counties.*
- d) *Immediately request inclusion of an invoice function in the new ERP system for autopsies.*

Section 4: Existing Facility issues should be rectified while planning has begun on a potential new facility for the Medical Examiner.

The 2019 Adopted Capital Improvements Budget includes funding for the planning of a new Forensic Science Center for Milwaukee County, however, existing building issues should not be allowed to linger while staff continues to work in the existing facility.

As a part of the the accreditation process for NAME there are standards that are published regarding facility needs for conducting autopsies. These standards are included in the scope of review during the accreditation site visit. The NAME standards state, the forensic pathologist shall have access to:

- A histology laboratory
- A radiologist
- A forensic anthropologist
- A forensic odontologist
- Toxicology testing
- On-site radiographic equipment
- On-site body and organ scales
- A clinical chemistry lab

The NAME accreditation check list includes a review of the space and equipment provided along with the security, safety and maintenance of the facility. Specifically, the check list states, “Are the facilities and all work areas clean, structually sound and well maintained?”

The existing facility for the Medical Examiner was converted from an abandoned hospital in 1989. As a part of our review we conducted numerous tours and interviews at the Medical Examiner's Office facility. In addition, we also met with staff from the Department of Administrative Services Facilities Management and Architecture, Engineering and Environment Divisions.

Numerous facility concerns were raised including lack of functioning showers, climate control, air circulation, drainage of waste and basement flooding.

Numerous concerns were raised by staff of the Medical Examiner's Office to us and included:

- The lack of functioning showers in the locker room for all staff working on autopsies.
- Climate control within the office due to a need to keep the toxicology lab temperature cold enough for the machines to not overheat, resulting in areas of the office being too cold for staff.
- Air circulation that according to our interview with facilities management is probably not up to code.
- Drainage of waste from autopsies to the sewage system.
- Flooding in the basement.

The Medical Examiner testified that NAME may move the office from full accreditation to provisional accreditation based on the condition of the facility.

The Medical Examiner in testifying before the Finance and Audit Committee in October of 2018, said NAME will return in spring of 2019 and probably will not like the state of the basement of the Medical Examiner's Office which he said has flooded three times in recent years. He also stated that the office may move from full accreditation to provisional accreditation but that once they show that they are improving the facility, then they would move back to full accreditation.

We documented concerns with the state of repair of the office while on our tour. Photos included in Image 8, 9 and 10 demonstrate our concerns.

Image 8 – Dock area where bodies are received and collected by funeral homes and referral counties.



Source: Audit staff photograph.

Image 9 – Dock area.



Source: Audit staff photograph.

Image 10 – Photo of internal hallway just inside of dock area.



Source: Audit staff photograph.

A 2014 facility study found current facilities do not meet CDC requirements, lack space for contaminated bodies, embalming and defleshing. Office space is not conducive to the work of the Medical Examiner staff.

In 2014 Venture Architects released the Medical Examiner Facility Study prepared for the Department of Administrative Services – Economic Development Division. This report was requested after a meeting between the Medical Examiner and the Economic Development Director in hopes of finding a new facility for the Medical Examiner. The report found:

- That the current facilities do not meet the Center for Disease Controls requirements for autopsy facilities. Specifically, no restricted air circulation for the autopsy suite.
- No space or equipment for dealing with contaminated or infectious bodies.
- The current structure does not include space for additional remains processing such as embalming and defleshing.
- Deficiencies were noted for long term body storage.
- Shared office and work areas are not conducive for employee safety, morale or effective supervisory interaction with employees.

- The telephone investigation process requires environment acoustics improvements to protect family privacy and increase investigator efficiencies.

A review of the 2017 Facility Assessment Report, which was the latest assessment by the Department of Administrative Services Facilities Condition Assessment Program, found that of 92 items reviewed, five were found in poor condition, 37 were fair and 50 were good. The Department of Administrative Services staff stated in an interview, that generally it is a five year schedule for a review of each facility.

We did request from the Medical Examiner's Office a listing of any work orders they had submitted to fix any of the items that staff identified or that we noticed on our tour. They did not have any outstanding work orders on file at their office.

The Medical Examiner's Office requires space beyond the autopsy suite and office. This space includes a need for storage of organs as shown in Images 11 and 12. According to testimony provided to the County Board, the DNA specimen is usually saved for paternity reasons and sexual assault cases, and this specimen is saved for three to four years.

Image 11 – samples of tissues and specimens to be stored.



Source: Audit staff photograph.

Image 12 – Storage area for tissues and specimens and X-ray table.



Source: Audit staff photograph.

Space is required for additional tasks as seen in Image 13.

Image 13 – Additional tasks require space beyond autopsy suites.



Source: Audit staff photograph.

In addition, a storage room is required to store files for each death including the death certificate. This storage room contains paper files that date back to 1970.

Center for Forensic Science and Protective Medicine

The 2019 Adopted Capital Improvements Budget states,

The Medical Examiner's Office is inadequate and requires replacement. Concerns include current location, non-compliant facilities that do not meet industry standards, inadequate space for current (infection control, embalming, defleshing, storage of remains) and future (pathology, tissue storage, toxicology) programs. CDC (autopsy) requirements are not met and the ME risks loss of certification without a plan to address facility deficiencies. Space is required due to expanded operations, workload, biohazard safety concerns, and ADA requirements. Funding of \$940,262 was included in the 2019 Adopted Capital

Funding of \$940,262 was included in the 2019 Adopted Budget for planning and design of a new facility for the Medical Examiner.

Improvements Budget for the planning and design phase to create a new Center for Forensic Science and Protective Medicine with a pending analysis from the Office of the Comptroller on the cost-benefit of leasing versus owning the building required prior to the release of all of the funding.

The new facility for the Medical Examiner is not projected to be completed until early 2022.

The planned development of a new Center for Forensic Science and Protective Medicine, should it be completed, will rectify many of the issues we noted, however, the center is not projected to be completed until early 2022. Therefore, we recommend that the Medical Examiner:

- 7. Work with the Department of Administrative Services to immediately repair portions of the Medical Examiner's Office to provide staff with a proper working environment while awaiting possible relocation to a new Center for Forensic Science and Protective Medicine.*

Audit Scope

The objectives of this audit were to review the Milwaukee County Medical Examiner's Office autopsy workload and assess the impact, if possible, due to the growth of drug related deaths and the increase in work for referral counties. The Chairman of the County Board expressed a concern over the workload of the Medical Examiner's office and its impact on the County's Budget. The audit scope included a review of the facility and its capacity and condition for conducting autopsies. The administrative function of the provision of referral autopsies was also reviewed.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We limited our review to the areas specified in this Scope Section. During the course of the audit, we:

- Reviewed relevant regulations, policies and administrative procedures, budgets, resolutions, and County Board and Committee minutes, and County Legislative Information Center pertaining to the Milwaukee County Medical Examiner's Office;
- Reviewed agreements, the two contracts, and fees with Milwaukee County Medical Examiner's Office and other counties that request autopsies to be performed;
- Conducted internet research on the background of the Medical Examiner's Office including various federal, state and local laws etc.;
- Reviewed the National Association of Medical Examiner standards (NAME) a professional organization for medical examiners, forensic pathologists and medicolegal affiliates and administrators;
- Analyzed existing revenue sources and cash receipts for autopsy services for other counties and private autopsies;
- Analyzed financial documents for the Medical Examiner's Office including cash receipts, invoice system, and check logs;
- Verified the accuracy of calculations, including a review of accounting documents and entries in the County's financial system to test that payments were made and accurately processed;
- Interviewed the Medical Examiners staff including all Pathologists, management and non-management staff, including individuals from other County Departments;

- Documented a flowchart of the autopsy process of services for both internal and external autopsies;
- Observed 18 autopsies performed by Pathologists and attended an on scene death investigation with a Forensic Investigator;
- Analyzed the number of autopsies performed for other counties compared to Milwaukee County from 2013 – 2018, NAME Standards, and referral revenue versus cost of staffing pathologists;
- Toured and took pictures of the Medical Examiner's Office facility condition including autopsy suites, toxicology lab, office areas, garage area, storage areas for tissues and specimens;
- Analyzed data and stored documents created in the Medical Examiner's Case Management and OnBase Systems and spreadsheets provided.
- Attended meetings of the City-County Heroin, Opioid, and Cocaine Task Force.



Sample description of Daily caseload in the Medical Examiner's Office				
Autopsy Station 1	Autopsy Station 2	Autopsy Station 3	Autopsy Station 4	Autopsy Station 5
Case #1 - 8:30 AM - 63-year-old male had a history of heroin use and was found deceased in his bed face down with a needle in his hand.	Case #2 - 8:30 AM - 55 year-old male deceased went unresponsive had a medical history of stroke, diabetes, obesity (weight 442 lbs.) and crack cocaine use.	Case #3 - 8:30 AM - 43 year-old male was found deceased in his residence. Waupaca County called and is requesting an autopsy. Autopsy completed at 9:50 AM.	Case #4 - 8:30 AM - 60 year-old female had a history of suicidal ideation and was found deceased in her bathtub. A note found suggested a suicide. Autopsy completed at 10:05 AM.	Case #5 - 8:30 AM - 59 year-old male decedent found decomposing in his apartment, has a history of seizures. He was last seen on September 15, 2018.
Case #6 - 9:30 AM - 42 year-old male with a history of illicit drug use who was found deceased. Autopsy completed at 10:10 AM	Case #7 - 9:30 AM - 58 year-old male went unresponsive at his residence he weighed 354 lbs. and was reported to have a history of illicit drug abuse. Autopsy completed by 10:31 AM.	Case #8 - 10:30 AM - 39 year-old male with a history of alcoholism was found deceased in his residence. Prescription Medications appeared out of order. Waupaca County called and requested an autopsy.	Case #9 - 11:00 AM - 36 year-old male found unresponsive. The deceased had been drinking and taking prescription Vicodin and possibly oxycodone. Winnebago County called and is requesting an autopsy.	Case #10 - 9:30 AM - 55 year-old female found in apartment with heat of 139 degrees her body temperature was 115, decedent complained of being cold. Started autopsy at 9:40 AM with vitreous fluid, Iliac vein for blood. There is a dryer to dry DNA test card in suite 5.
Case #11 - 10:40 AM - 61 year-old female found unresponsive after recent complaints of abdominal pain.	N/A	Case #12 - 11:30 AM - 39 year-old female with a history of congestive heart failure and drug abuse.	N/A	Case #13 - 10:30 AM - 45 year-old male with history of alcohol and polysubstance abuse was found unresponsive in his residence.
All stations are finished with autopsies and cleaned by 12:42 PM.				

COUNTY OF MILWAUKEE
Inter-Office Communication

Date: March 19, 2019

To: Jennifer L. Folliard, Director of Audits

From: Brian L. Peterson, M.D., Medical Examiner

Subject: Audit of Medical Examiner's Office Autopsy Workload - Response

The Milwaukee County Medical Examiner's Office (MCMEO) appreciates the extensive effort expended by your division evaluating the MCMEO's autopsy workload, and the assessment of the impact due to the growth of drug related deaths and the increase in work for referral counties.

Please see our responses in bold to each of the recommendations contained in the audit below:

1. *Present to policymakers a revised mission statement that includes guidance on the magnitude of referral autopsies to be performed by the Medical Examiner's Office.*

MCMEO will review and update its mission statement for inclusion in its 2020 operating budget request.

2. *Present to the County Board a plan to help ensure that the office will not exceed the parameters established under NAME standard B4.5 of a recommended maximum of 250 with loss of accreditation if the amount increases to 325 autopsies per pathologists.*

MCMEO will review and update policies and procedures related to autopsy numbers per pathologist and put in place an improvement plan should our office exceed the number of autopsies. This improvement plan will be guided by NAME standards regarding Phase I or Phase II violations.

3. *Use the Employee Engagement data in an attempt to assess if any segment of employees is more affected by the increase in autopsies resulting in declining employee engagement on the survey.*

Employee Engagement data is presented to our office as an aggregate of employee responses and is designed to not be identifiable by segment.

4. *Immediately execute contracts or other formal agreements such as letters of engagement with any outside entity for which they are performing autopsy services, brain or other organ extractions or other professional services.*

MCMEO will attempt to enter into letters of agreement with outside entities requesting professional services.

5. *Conduct an analysis to determine the approximate cost to conduct an autopsy and establish fees at that amount and seek County Board approval of the fee schedule once complete.*

Under the guidance of Department of Administrative Services, MCMEO will conduct an analysis to determine the approximate cost to conduct an autopsy and establish fees. These fees will be presented to the County Board during approval of MCMEO's 2020 operating budget.

6. *Pursue the following items:*

- a. *Create a check monitoring system to track payments for services provided including creating an electronic record of all invoices and payments received and creating a numbering system for invoices.*

A check monitoring system has already been implemented in the current system of tracking autopsies performed. Additional fields indicating the service was invoiced, and that the payment was received were added in January 2019.

- b. *Attempt to verify if payment was received for the items identified by the Audit Services Division and recoup funds from any referral counties, if necessary.*

MCMEO staff will pull hard files to determine the status of unpaid invoices.

- c. *Include identifying information in the County's general ledger system when depositing payments from referral counties.*

MCMEO staff will consult with the Comptroller's office for guidance on how to include this information in the general ledger system.

- d. *Immediately request inclusion of an invoice function in the new ERP system for autopsies.*

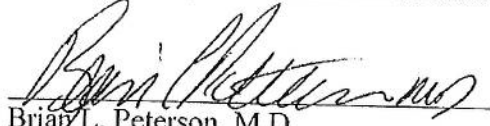
MCMEO has requested inclusion of an invoice function in the new ERP system and has participated in numerous meetings to determine the feasibility of such a process.

7. *Work with the Department of Administrative Services to immediately repair portions of the Medical Examiner's Office to provide staff with a proper working environment while awaiting possible relocation to a new Center for Forensic Science and Protective Medicine.*

MCMEO management continues to work with Department of Administrative Services to improve its aging facilities. Plans regarding the relocation of its facilities continue.

Medical Examiner Audit
Page 3
March 19, 2019

Thank you for your recommendations and support.

A handwritten signature in cursive script, appearing to read "Brian L. Peterson", written over a horizontal line.

Brian L. Peterson, M.D.
Medical Examiner