DRUG ENFORCEMENT ADMINISTRATION
DIVERSION CONTROL DIVISION

NFLIS
NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

2017 Medical Examiner/Coroner Office Survey Report

Highlights

The National Forensic Laboratory Information System (NFLIS) Medical Examiner/Coroner (MEC) Office Survey was administered from June through October 2017. The survey collected information on MEC caseloads, policies, and practices for calendar year 2016. Overall, a total of 971 out of 2,128 eligible MECs completed the full survey for an overall response rate of 46.5%. Further, 61.1% provided responses to the critical items related to caseload information.

During calendar year 2016, 785,923 human death cases were referred to responding MECs. Of these, 497,395 were accepted by MECs. On average, 888 human death cases were referred to MECs, and 395 cases on average were accepted.

As part of their accepted cases, an average of 84% of MECs performed death scene investigations, 58% performed external examinations, 55% reviewed medical records from health care providers, 46% performed toxicology analysis, and 35% performed autopsies.

Most MECs (66%) reported that they submitted cases involving novel psychoactive substances to a reference laboratory for testing.

The average turnaround time to complete a case among MECs was 31 days.

MECs reported "always" conducting toxicology testing for the following drugs or drug classes more than 75% of the time: alcohol, amphetamines, cocaine, and opiates or opioids other than heroin and fentanyl. For quantitative testing, alcohol was the only drug for which MECs reported "always" testing more than 75% of the time.

Approximately 32% of MECs reported having a computerized information management system, 31% reported having a manual record-keeping system, and 30% reported having a partially computerized system with some manual record-keeping.

Contents

Introduction

The National Forensic Laboratory Information System (NFLIS) is a program of the Drug Enforcement Administration's (DEA's) Diversion Control Division. The DEA's NFLIS-Drug data collection has involved systematically collecting drug identification results and associated information from drug cases submitted to and analyzed by participating Federal, State, and local forensic laboratories. These laboratories analyze controlled and noncontrolled substances secured in law enforcement operations across the country. NFLIS-Drug data are used to support drug scheduling decisions and to inform drug policy and drug enforcement initiatives nationally and in local communities around the country.

The DEA is expanding the NFLIS program to include two additional continuous drug surveillance components that collect death data from medical examiner and coroner offices (NFLIS-MEC) and drug testing results from toxicology laboratories (NFLIS-Tox) to supplement and complement the current NFLIS-Drug data. This NFLIS publication presents findings from the 2017 Medical Examiner/Coroner Office Survey, which was conducted to provide key information from calendar year 2016 about the Nation's medical examiner/coroner (MEC) offices. Similar to the Survey of Crime Laboratory Drug Chemistry Sections that the DEA has conducted for the NFLIS-Drug program, the MEC Office Survey data will be used to create profiles of the MECs eligible to participate in NFLIS. Overall, a total of 971 out of 2,128 eligible MECs completed the full survey for an overall response rate of 46.5%. Caseload was considered a critical item; thus, 314 nonresponding MECs were given the option to participate in the survey by providing only caseload data late in the data collection effort, yielding a critical item response rate of 61.1%. Administrative information is first presented, including operation and ownership, use of off-site and reference toxicology laboratories (TLs), and accreditation status. Then caseload (referred and accepted cases) is presented, followed by procedures performed for accepted cases, testing policies for novel psychoactive substance toxicology testing, average turnaround time, toxicology testing and quantitative analysis frequency across several drugs and drug categories, and information management systems. Appendix A contains details on the data collection methods used for the 2017 MEC Office Survey.

Operation and Ownership

Of the 954 MECs that identified the operation of their offices, most were operated by a county (92%) (***Table 1***). Approximately 4% were operated by a district or regional agency, 4% were operated by a State agency, and less than 1% were operated by a city. Nearly all (99%) coroner offices were operated by a county compared with less than three-quarters (73%) of medical examiner offices.

When examined by region, most MECs were operated by a county, including 97% in the West, 96% in the Midwest, 87% in the Northeast, and 86% in the South. In the South, 8% of MECs were operated by district or regional agency, as were 3% in the Midwest and 3% in the South. In the Northeast and South, 6% of MECs were operated by a State agency, as were 3% in the West and 2% in the Midwest. The Northeast was the only region to report that any MECs were operated by a city (3%).

Table 1 *Office Ownership of Responding Medical Examiners and Coroners*

	Total		Medical Examiners		Coroners	
Operational Unit	Number	Percentage	Number	Percentage	Number	Percentage
County	880	92.2	184	72.7	696	99.3
District/regional	37	3.9	32	12.6	5	0.7
State	34	3.6	34	13.4	0	0.0
City	3	0.3	3	1.2	0	0.0
Total[1]	**954**	**100.0**	**253**	**100.0**	**701**	**100.0**

[1] Percentages may not add to totals because of rounding.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Use of Off-Site and Reference Toxicology Laboratories

MECs were asked if their offices used an off-site TL, such as a State or local drug or health laboratory, and/or a reference TL. Of the 940 MECs that provided this information, nearly all (96%) indicated that they used an off-site and/or reference TL. There was little difference in the percentage that used an off-site and/or reference TL when examined by MEC type (94% medical examiners vs. 97% coroners) or jurisdiction size (94% large, 97% medium, and 96% small jurisdictions).

Accreditation

Of the 921 MECs that provided current accreditation status information, nearly three-quarters reported no accreditation (*Table 2*). Of the MECs that were accredited, the most commonly reported accreditations were a State accreditation (12%), accreditation by the National Association of Medical Examiners (NAME) (9%), and accreditation by the International Association of Coroners & Medical Examiners (IAC&ME) (6%). As expected, a higher percentage of medical examiner offices had NAME accreditation than coroner offices (25% vs. 3%). A higher percentage of coroner offices than medical examiner offices were accredited by a State (15% vs. 4%) or by IAC&ME (8% vs. 2%).

Table 2 *Accreditation Status of Responding Medical Examiners and Coroners*

Accreditation Status	Total[1]		Medical Examiners		Coroners	
	Number	Percentage	Number	Percentage	Number	Percentage
State accreditation	107	11.6	9	3.7	98	14.5
National Association of Medical Examiners (NAME)	81	8.8	62	25.3	19	2.8
International Association of Coroners & Medical Examiners (IAC&ME)	58	6.3	5	2.0	53	7.8
American Board of Medicolegal Death Investigators (ABMDI)	7	0.8	2	0.8	5	0.7
American Board of Forensic Toxicology (ABFT)	5	0.5	5	2.0	0	0.0
American Society of Crime Laboratory Directors (ASCLD)	4	0.4	3	1.2	1	0.1
Joint Commission on Accreditation of Healthcare Organizations (JCAHO)	2	0.2	2	0.8	0	0.0
Other accreditation	146	15.9	25	10.2	121	17.9
No accreditation	679	73.7	168	68.6	511	75.6

[1] Percentages may not add to totals because of rounding.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Caseload (Referred and Accepted Cases)

Caseload was determined by the number of human death cases referred to and accepted by MECs. Referred cases included those sent by medical and law enforcement personnel for which MECs investigated or documented referral of the case to their office. Accepted cases included human death cases for which the MECs accepted jurisdiction and conducted further investigations to determine cause and manner of death and completed the death certificate. More MECs provided accepted cases than referred cases. In total, 885 MECs provided information on the number of referred cases, and 1,258 MECs provided information on the number of accepted cases during calendar year 2016.

Overall, 785,923 human death cases were referred to and 497,395 human death cases were accepted by the MECs responding to the survey (*Table 3*). Medical examiners reported a higher number of referred cases than coroners (486,409 vs. 299,514), likely because a higher percentage of medical examiners than coroners served large jurisdictions; the number of accepted cases, however, was more similar (255,743 by medical examiners vs. 241,652 by coroners). On average, 888 human death cases were referred to MECs; 395 cases on average were accepted.

Table 3 *Caseload of Responding Medical Examiners and Coroners*

Office Type	Number of Death Cases Referred	Number of Death Cases Accepted	Average Number of Cases Referred	Average Number of Cases Accepted
Medical examiners	486,409	255,743	2,097	882
Coroners	299,514	241,652	459	250
Total	**785,923**	**497,395**	**888**	**395**

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Procedures Performed for Accepted Cases

MECs were asked to report on the procedures they performed as part of their accepted cases. A total of 885 MECs provided this information. As shown in ***Table 4***, an average of 84% of MECs reported performing death scene investigations as part of their accepted cases (as part of 235 cases on average during the year). More than half of MECs on average reported performing external examinations (58%; as part of 145 cases on average) and reviews of medical records from health care providers (55%; as part of 174 cases on average). Nearly half of MECs on average performed toxicology analysis (46%; as part of 200 cases on average), and slightly more than one-third of MECs on average performed autopsies (35%; as part of 163 cases on average). On average, a higher percentage of coroners than medical examiners reported performing death scene investigations, external examinations, and reviews of medical records, whereas a higher average percentage of medical examiners than coroners reported performing toxicology analyses.

When examined by jurisdiction size, a higher average percentage of MECs serving medium jurisdictions reported performing death scene investigations than MECs in small and large jurisdictions (97% of medium jurisdictions vs. 80% of small jurisdictions and 63% of large jurisdictions) (***Table 5***). A higher average percentage of MECs in large jurisdictions than in small or medium jurisdictions reported performing autopsies (52% of large jurisdictions vs. 35% of medium and 27% of small jurisdictions) and toxicology analysis (59% of large jurisdictions vs. 45% of medium and 42% of small jurisdictions), whereas a higher average percentage of MECs in small jurisdictions than medium or large jurisdictions reported performing external examinations (70% of small jurisdictions vs. 56% of medium and 32% of large jurisdictions). An average of more than half of MECs, regardless of jurisdiction size, reported performing reviews of medical records from health care providers.

Table 4 *Accepted Cases of Responding Medical Examiners and Coroners, by Type of Inquiry*

Type of Inquiry[1]	Total		Medical Examiners		Coroners	
	Average Number Performed	Average Percentage	Average Number Performed	Average Percentage	Average Number Performed	Average Percentage
Death scene investigation	235	84.2	396	66.1	177	90.7
External examination	145	57.5	266	46.5	99	61.6
Review medical records from health care providers	174	54.6	313	49.9	124	56.3
Toxicology analysis	200	45.7	571	52.0	87	43.7
Autopsy performed	163	34.7	416	43.4	70	31.5

[1] Categories for type of inquiry are not mutually exclusive; percentages will not add to 100%.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Table 5 *Accepted Cases of Responding Medical Examiners and Coroners, by Type of Inquiry and Jurisdiction Size*

Type of Inquiry[1]	Total		Large Jurisdiction (250,000 or More)		Medium Jurisdiction (25,000 to 249,999)		Small Jurisdiction (Fewer Than 25,000)	
	Average Number Performed	Average Percentage	Average Number Performed	Average Percentage	Average Number Performed	Average Percentage	Average Number Performed	Average Percentage
Death scene investigation	235	84.2	809	63.0	159	96.6	51	80.4
External examination	145	57.5	363	32.0	108	56.3	56	70.4
Review medical records from health care providers	174	54.6	591	50.6	126	58.4	25	52.3
Toxicology analysis	200	45.7	802	59.3	68	44.9	107	42.3
Autopsy performed	163	34.7	711	52.2	47	34.6	33	26.7

[1] Categories for type of inquiry are not mutually exclusive; percentages will not add to 100%.

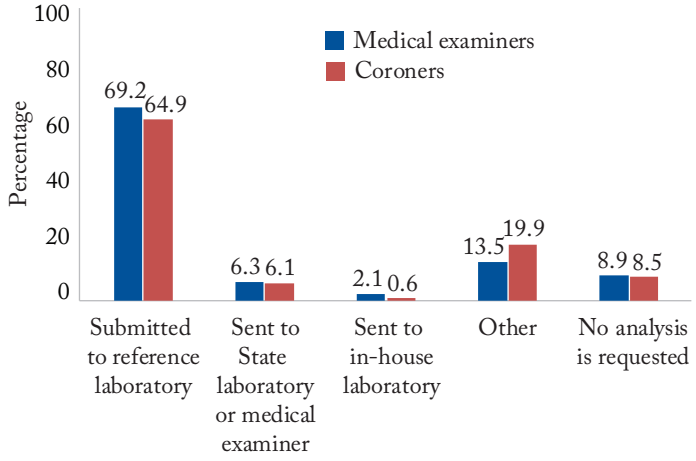
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Novel Psychoactive Substance Toxicology Testing

MECs were asked to indicate their normal course of action for requesting toxicology analysis of novel psychoactive substances (NPS), such as synthetic cannabinoids. Of the 906 MECs that provided information on their toxicology testing practices, two-thirds (66%) reported that they submitted cases involving NPS to a reference laboratory for testing, and 9% reported that they do not request analysis of NPS. Of the remaining MECs, 6% reported that they send the cases to a State laboratory or medical examiner, 1% reported that the cases are sent to an in-house laboratory, and 18% reported that the cases are handled in another way. There was little difference between medical examiners and coroners (*Figure 1*). A slightly higher percentage of medical examiners than coroners reported that they send NPS cases to a reference laboratory for testing (69% vs. 65%).

More variations occurred when examined by jurisdiction size. The percentage of MECs that reported toxicology testing for NPS increased with jurisdiction size, from 55% of small jurisdictions, to 72% of medium and 78% of large jurisdictions. A higher percentage of MECs in small jurisdictions than in medium or large jurisdictions reported that no analysis for NPS was requested (12% of small, 7% of medium, and 4% of large jurisdictions). Similarly, a higher percentage of MECs in small jurisdictions than in medium or large jurisdictions reported that these cases were sent to a State laboratory or medical examiner (9% of small, 5% of medium, and 3% of large jurisdictions).

Figure 1 Toxicology Testing Practices for Novel Psychoactive Substances of Responding Medical Examiners and Coroners



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Average Turnaround Time to Complete Cases

Case completion was defined as completion of a death certificate. Of the 883 MECs that provided case completion information, the average turnaround time to complete a case was 31 days. The average turnaround time to complete a case was slightly longer for medical examiners (35 days) than coroners (29 days). The average turnaround time to complete a case increased with jurisdiction size, from 22 days for small jurisdictions, to 34 days for medium jurisdictions, to 43 days for large jurisdictions. Note that some states have laws that contribute to shorter reported turnaround times because they require MECs to render preliminary manners or causes of death within a certain number of days.

Toxicology Testing and Quantitative Analysis Frequency, by Drug and Drug Class

The MEC Office Survey also gathered information on testing frequency (always, sometimes, never) of specific drugs and drug classes and their frequency (always, sometimes, never) of quantitating these analytes. The number of MECs responding to these survey items ranged from 710 to 810 across the drug or drug class testing frequency and ranged from 634 to 784 across the drug or drug class quantitation frequency.

Testing results are presented based on the percentage (≤ 50%, 51%–75%, and > 75%) of MECs that "always" tested for specific drugs or drug classes. ***Table 6*** summarizes the percentage of MECs "always" requesting toxicology testing on specific drugs or drug classes.

Anticonvulsants, gabapentin, inhalants or volatiles, ketamine, over-the-counter medications, phenethylamines, piperazines, synthetic cannabinoids, synthetic cathinones, and Z-drugs (e.g., zolpidem, zopiclone) were the least frequent (≤ 50%) drugs or drug classes for which MECs "always" requested toxicology testing. The most frequent (> 75%) drugs or drug classes for which MECs "always" requested toxicology testing included alcohol, amphetamines, cocaine, and opiates or opioids other than heroin and fentanyl.

Table 6 *Percentage of Responding Medical Examiners and Coroners Reporting "Always" Conducting Toxicology Testing, by Drug and Drug Classes*

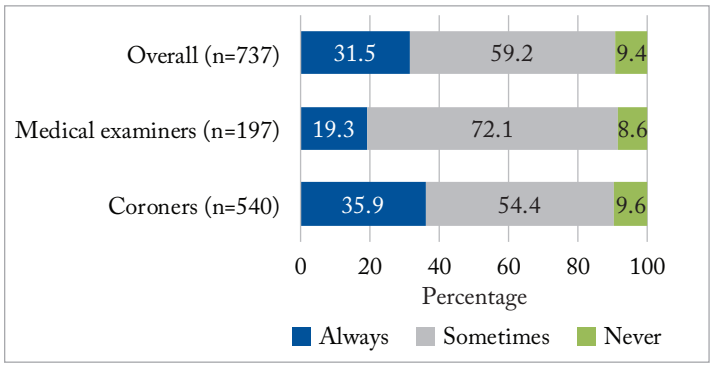
≤ 50%	51%–75%	> 75%
Anticonvulsants	Antidepressants	Alcohol
Gabapentin	Antipsychotics	Amphetamines
Inhalants or volatiles	Barbiturates	Cocaine
Ketamine	Benzodiazepines	Opiates or opioids (other than heroin and fentanyl)
Over-the-counter medications	Buprenorphine	
Phenethylamines	Carisoprodol	
Piperazines	Fentanyl	
Synthetic cannabinoids	Fentanyl-related substances	
Synthetic cathinones	Heroin	
Z-drugs	Marijuana/THC	
	Muscle relaxants	
	Phencyclidine (PCP)	

THC = tetrahydrocannabinol.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

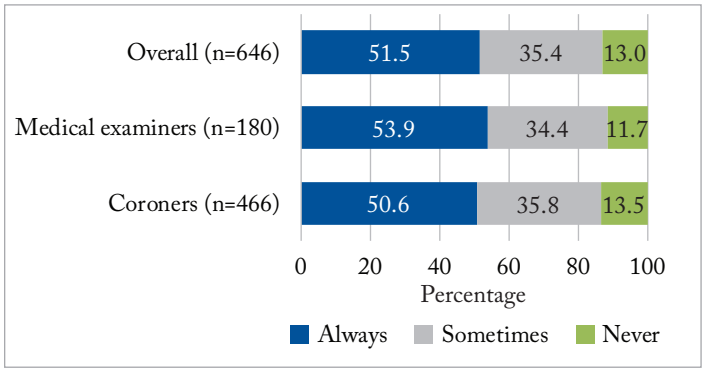
A higher percentage of medical examiners than coroners responded that they "always" or "sometimes" conduct toxicology testing for all drugs and drug classes except amphetamines, anticonvulsants, barbiturates, fentanyl-related substances, gabapentin, ketamine, marijuana/THC, muscle relaxants, and phenethylamines. *Figures 2* through *7* show the frequency of toxicology testing and quantitative analysis testing of NPS including synthetic cannabinoids, synthetic cathinones, and fentanyl-related substances overall and by office type.

Figure 2 Toxicology Testing Frequency for Synthetic Cannabinoids



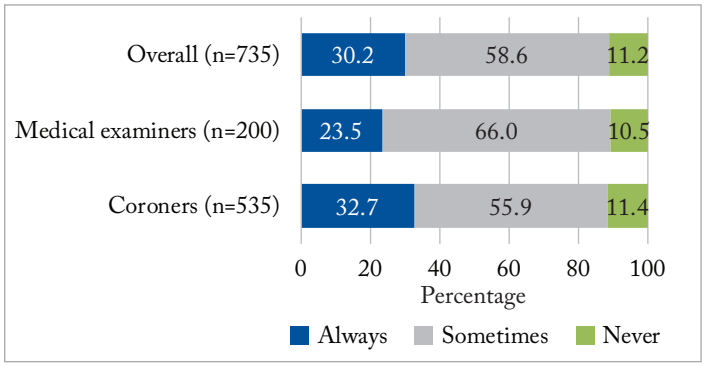
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure 3 Quantitative Analysis Frequency for Synthetic Cannabinoids



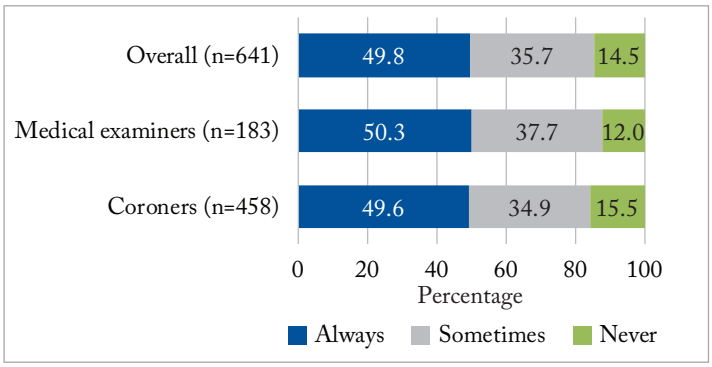
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure 4 Toxicology Testing Frequency for Synthetic Cathinones



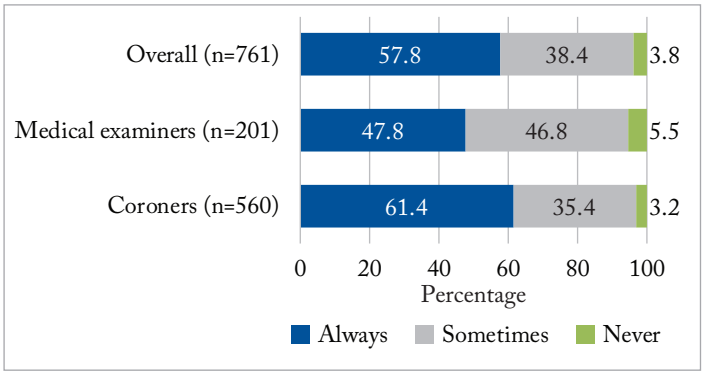
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure 5 Quantitative Analysis Frequency for Synthetic Cathinones



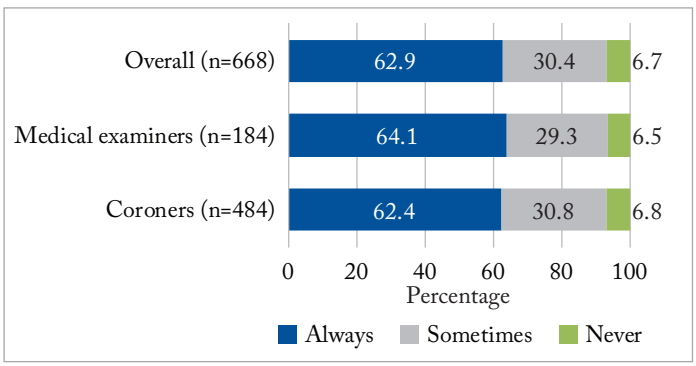
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure 6 Toxicology Testing Frequency for Fentanyl-Related Substances



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure 7 Quantitative Analysis Frequency for Fentanyl-Related Substances



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

For quantitative testing, inhalants or volatiles, over-the-counter medications, piperazines, and synthetic cathinones were the least frequent (≤ 50%) drugs or drug classes for which MECs "always" requested quantitative testing. Alcohol was the substance for which MECs most frequently (> 75%) "always" conducted quantitative testing (*Table 7*). A higher percentage of medical examiners than coroners responded that they "always" conduct quantitative testing for all drugs or drug classes except for anticonvulsants, antidepressants, antipsychotics, fentanyl, inhalants or volatiles, marijuana/THC, over-the-counter medications, and phencyclidine (PCP).

Table 7 *Percentage of Responding Medical Examiners and Coroners Reporting "Always" Conducting Quantitative Testing, by Drug and Drug Classes*

≤ 50%	51%–75%			> 75%
Inhalants or volatiles	Amphetamines	Carisoprodol	Marijuana/THC	Alcohol
Over-the-counter medications	Anticonvulsants	Cocaine	Muscle relaxants	
Piperazines	Antidepressants	Fentanyl	Opiates or opioids other than heroin and fentanyl	
Synthetic cathinones	Antipsychotics	Fentanyl-related substances	Phencyclidine (PCP)	
	Barbiturates	Gabapentin	Phenethylamines	
	Benzodiazepines	Heroin	Synthetic cannabinoids	
	Buprenorphine	Ketamine	Z-drugs	

THC = tetrahydrocannabinol.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Information Management Systems

Data on the type of information management systems MECs used were also collected as part of the MEC Office Survey. Of the 898 MECs that provided this information, nearly equal percentages of MECs reported having a computerized, networked system (32%), using a manual record-keeping system (31%), or using a partially computerized system with some manual record-keeping (30%) (*Table 8*). Approximately 7% of responding MECs said their offices used a computerized, non-networked system. A higher percentage of medical examiners than coroners reported having computerized, networked information management systems (45% vs. 27%), whereas a higher percentage of coroners than medical examiners reported using a manual record-keeping system (33% vs. 26%) or a partially computerized system with some manual record-keeping (32% vs. 25%).

Table 8 *Type of Record Management Systems Used by Responding Medical Examiners and Coroners*

Type of Record Management System	Total		Medical Examiners		Coroners	
	Number	Percentage	Number	Percentage	Number	Percentage
Computerized, networked system	285	31.7	108	45.0	177	26.9
Manual record-keeping system	282	31.4	62	25.8	220	33.4
Partially computerized system, some manual record-keeping	269	30.0	60	25.0	209	31.8
Computerized, non-networked system	59	6.6	10	4.2	49	7.4
Other	3	0.3	0	0.0	3	0.5
Total	**898**	**100.0**	**240**	**100.0**	**658**	**100.0**

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

The percentage of MECs with computerized, networked systems increased with size, from 13% of MECS serving small jurisdictions, to 32% serving medium jurisdictions, to 74% serving large jurisdictions, whereas the percentage of MECs reporting a manual record-keeping system decreased with size, from 49% of MECs serving small jurisdictions, to 27% serving medium jurisdictions, to just 3% serving large jurisdictions. Overall, most MECs serving small and medium jurisdictions reported manual record-keeping—as the only type of record-keeping system or in conjunction with a computerized system (***Table 9***).

Of the 170 MECs that reported having a manual record-keeping system and provided information on plans to upgrade to computerized systems in the next three years, less than one-quarter (22%) reported that they had plans to upgrade, including 16% of medical examiners and 23% of coroners. When examined by jurisdiction size, a higher percentage of MECs with manual record-keeping systems serving medium jurisdictions had plans to upgrade to a computerized system in three years compared with MECs with manual record-keeping systems serving large and small jurisdictions (29% of MECs serving medium jurisdictions vs. 20% of MECs serving large jurisdictions and 18% of MECs serving small jurisdictions).

MECs that reported using a computerized information management system, alone or in conjunction with manual record-keeping, were also asked to name the information management system they used. Of the 556 MECs that answered this question, approximately 16% reported using an in-house system, 8% used CoronerME, 6% used MDI or MDILog, 6% used VertiQ, and 5% used Forensic Filer (***Table 10***). The information management system most frequently reported by medical examiners and coroners was an in-house system (22% and 13%, respectively). For medical examiners, other more frequently reported information management systems included VertiQ (13%), MDI or MDILog (9%), and JusticeTrax (5%). Among coroners, other more commonly used information management systems were CoronerME (11%), Forensic Filer (6%), and MDI or MDILog (5%).

The type of information management systems MECs used varied widely by jurisdiction size. Among MECs that served large and medium jurisdictions, the most commonly reported information management systems were in-house systems (27% and 15%, respectively), whereas the most commonly reported system among MECs serving small jurisdictions was CoronerME (11%). Although 18% of MECs serving large jurisdictions used VertiQ, only 2% of small and less than 1% of medium jurisdictions used this system. CoronerME was reported more frequently by MECs in small (11%) and medium (10%) jurisdictions than by MECs in large jurisdictions (1%).

Table 9 *Type of Record Management Systems Used by Responding Medical Examiners and Coroners, by Jurisdiction Size*

Type of Record Management System	Large Jurisdiction (250,000 or More)		Medium Jurisdiction (25,000 to 249,999)		Small Jurisdiction (Fewer Than 25,000)	
	Number	Percentage	Number	Percentage	Number	Percentage
Computerized, networked system	116	74.4	123	31.9	45	13.2
Partially computerized system, some manual record-keeping	31	19.9	127	32.9	105	30.7
Manual record-keeping system	5	3.2	104	26.9	167	48.8
Computerized, non-networked system	4	2.6	31	8.0	23	6.7
Other	0	0.0	1	0.3	2	0.6
Total[1]	**156**	**100.0**	**386**	**100.0**	**342**	**100.0**

[1] Percentages may not add to totals because of rounding.

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Table 10 *Type of Information Management System Used by Responding Medical Examiners and Coroners*

Type of Information Management System	Total		Medical Examiners		Coroners	
	Number	Percentage	Number	Percentage	Number	Percentage
In-house information management system	87	15.6	36	22.0	51	13.0
CoronerME	43	7.7	2	1.2	41	10.5
MDI or MDILog	34	6.1	14	8.5	20	5.1
VertiQ	31	5.6	21	12.8	10	2.6
Forensic Filer	25	4.5	3	1.8	22	5.6
JusticeTrax	16	2.9	8	4.9	8	2.0
State-based laboratory information management system	15	2.7	2	1.2	13	3.3
Don't know	51	9.2	7	4.3	44	11.2
Other system	127	22.8	45	27.4	82	20.9
Not applicable	127	22.8	26	15.9	101	25.8

Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Appendix A

The 2017 National Forensic Laboratory Information System (NFLIS) Medical Examiner/Coroner Office Survey gathered information from all State and local medical examiner and coroner offices (MECs) in the United States. RTI International[1] initially identified 2,156 MECs that were responsible for medicolegal death investigations. After the review of survey data, 2,128 were determined to be eligible for the NFLIS-MEC program. This number includes offices that are owned by State, county, and municipal governments, as well as owned and operated by regional entities. Following is a description of the data collection and methodology used to collect survey data from these offices.

Instrumentation

The 2017 NFLIS MEC Office Survey was designed based on the findings from the NFLIS Feasibility Study RTI conducted in 2016 across nine pilot site MECs. The draft survey was revised following comments from the DEA and refined following the guidance of medical examiners and coroners, who pilot-tested the instrument to identify problems with wording, content, or format.

Data Collection Strategy

A multimode approach was implemented that allowed for web, hard copy, and telephone options for MECs responding to the survey. Each survey had a unique identifier that linked it to the appropriate responding office. To access the web version of the survey, login credentials and passwords were created and included in the lead and follow-up letters sent to the MEC primary contacts.

Data collection began in late April 2017 with the initiation of the verification calling effort to ensure that appropriate contacts were documented before the June mailing and were eligible for the survey. The active survey data collection period lasted from June 1, 2017, through October 6, 2017. Surveys received through the survey website or via mail through November 6, 2017, were included in the final report data set.

The initial survey packet included lead letters from the DEA and RTI to primary contacts identified after the verification call effort. The DEA letter included information about the NFLIS program and encouraged respondents to complete the survey. The RTI letter contained information about the NFLIS program, the DEA's plans to expand NFLIS to include the NFLIS-MEC continuous data collection, directions for survey completion (including the username and login ID), and whom to contact with questions. The two lead letters, along with the hard copy survey, addressed and stamped return envelope, and directions for using the web survey were mailed together. Included in the initial mailing was a token of appreciation to all MECs. For this data collection, the token of appreciation was the fourth edition of Dr. Barry Levine's *Principles of Forensic Toxicology* reference book. Each packet was mailed via next-day parcel delivery.

Six weeks after mailing the lead materials, RTI mailed reminder letters to nonresponding MECs' primary points of contact to encourage survey response. About a week and a half after the reminder letters were mailed, prompting calls to nonresponding MECs were made. About one week after the prompting calls were completed, replacement packages, including the lead letters, the hard copy survey, and the NFLIS MEC Office Survey flyer, were sent to nonresponding MECs. About four weeks after the replacement mailing, and about one month before the conclusion of data collection, nonresponding MECs were called to obtain data identified as critical (i.e., number of accepted cases in 2016 and, of the accepted cases for calendar year 2016, the number of cases that included a request for toxicology analysis). Successful efforts to obtain the critical item data were coded as survey critical item completes.

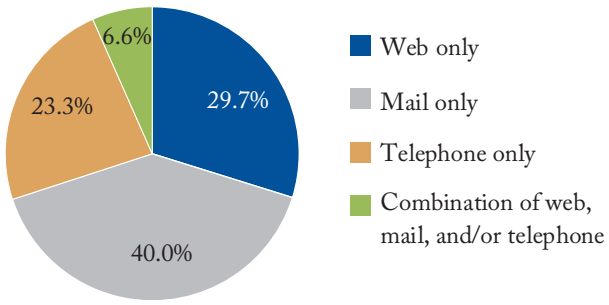
On August 25, 2017, Hurricane Harvey made landfall in the Houston, Texas, metropolitan area and in neighboring Louisiana. Because of widespread devastation, RTI determined that 13 MECs in Texas and Louisiana were affected by the storm devastation. Those cases were placed on hold in RTI's case management system, so they would not be placed in the queue for nonresponse calls. In late September, RTI sent an e-mail to each of the 13 MEC contacts that requested the two critical items but acknowledged that the DEA understood if they could not provide this information given the hurricane damage and lasting effects. By the end of data collection, none of the 13 MECs had responded with complete surveys, but five MECs responded with the critical items.

Response Rates and Survey Mode

Of the 2,128 MECs that were ultimately determined to be eligible for the MEC Office Survey, 46.5% provided complete surveys. By the last few weeks of data collection, the response rate increased to 61.1% based on progress made during nonresponse follow-up calls to obtain critical items.

Figure A.1 presents the MEC response rates by survey mode (i.e., web only, mail only, telephone only, or some combination of survey mode). As shown, 40% of all responding MECs provided mail-only responses, followed by about 30% providing web-only responses. Notably, 23% of MECs provided a telephone-only response, which reflects respondents participating in the survey by providing only responses to critical items.

Figure A.1 Response Rates, by Survey Mode



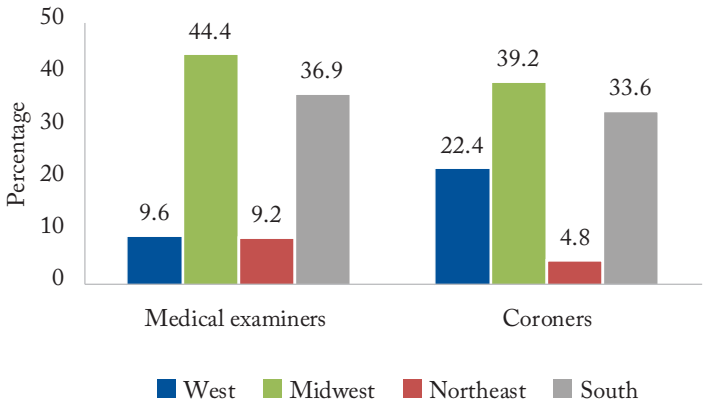
Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

[1]RTI International is a registered trademark and a trade name of Research Triangle Institute. RTI is the DEA contractor for NFLIS.

Administrative Information Results

The regional distribution of the MECs that responded to the MEC Office Survey is presented in ***Figure A.2***. The 1,287 MEC respondents that provided responses to core items were in all four of the country's census regions and in 47 of the 50 States. The regional distribution of MECs was similar in the Midwest (44% medical examiners vs. 39% coroners) and South (37% medical examiners vs. 34% coroners) (***Figure A.2***). A higher percentage of coroner offices than medical examiner offices were in the West (22% vs. 10%). Overall, few MECs were in the Northeast, although a higher percentage of medical examiner offices than coroner offices were located there (9% vs. 5%).

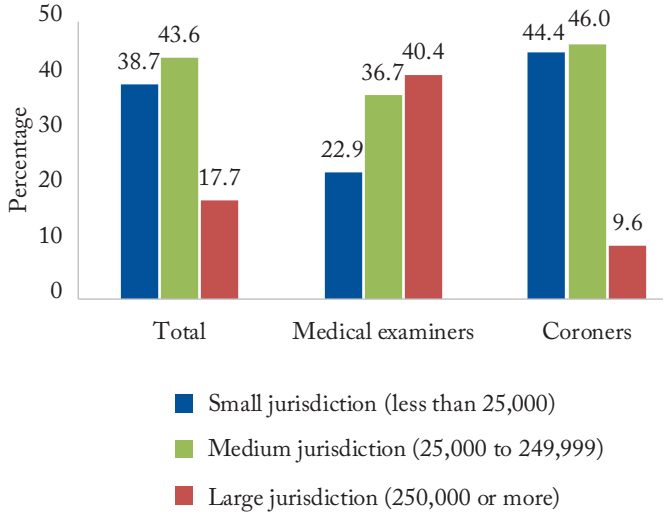
Figure A.2 Regional Distribution of Responding Medical Examiners and Coroners



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

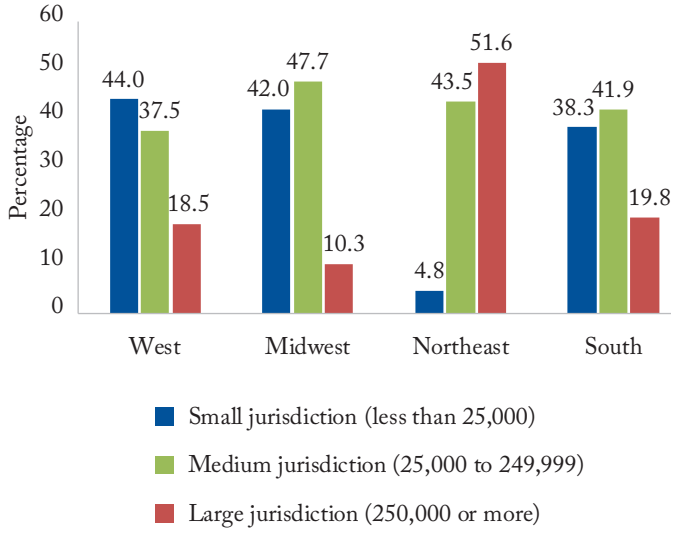
MECs were asked to provide the total population of the jurisdictions their offices served. Of the 932 eligible MECs that provided jurisdiction size information, 39% served small jurisdictions, 44% served medium jurisdictions, and 18% served large jurisdictions (***Figure A.3***). Jurisdiction size was determined by the total population residing in the area MECs served. Small MECs served jurisdictions with a population of fewer than 25,000. Medium MECs served jurisdictions with a population between 25,000 and 249,999. Large MECs served jurisdictions with a population of 250,000 or more. Overall, medical examiners tended to serve larger jurisdictions than coroners. A higher percentage of coroners than medical examiners served small jurisdictions (44% vs. 23%), whereas a higher percentage of medical examiners than coroners served large jurisdictions (40% vs. 10%). Jurisdiction size varied by region. As shown in ***Figure A.4***, MECs in the Northeast served a higher percentage of large jurisdictions than MECs in the other census regions. More than half of MECs in the Northeast served large jurisdictions compared with 20% or less of MECs in the remaining census regions.

Figure A.3 Jurisdiction Size of Responding Medical Examiners and Coroners



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

Figure A.4 Jurisdiction Size of Responding Medical Examiners and Coroners, by Census Region



Source: 2017 NFLIS Medical Examiner/Coroner Office Survey.

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2017 Medical Examiner/Coroner Office Survey Report

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