

November 2021, NCJ 302051

# Medical Examiner and Coroner Offices, 2018

Connor Brooks, BJS Statistician

In 2018, over 2,000 medical examiner and coroner (ME/C) offices provided medicolegal death investigation services for more than 600,000 deaths in the United States. ME/C offices conduct death scene investigations, perform autopsies, and determine the cause and manner of death in situations where a person died as a result of violence, under unexpected or suspicious circumstances, without a physician in attendance, or other reasons.

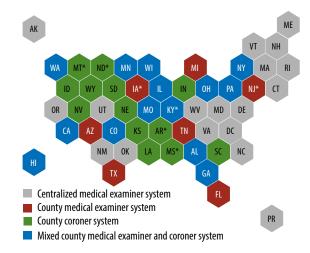
Data in this report come from BJS's 2018 Census of Medical Examiner and Coroner Offices (CMEC), which collected data on personnel, budget, workload, and policies of all ME/C offices in the United States. The 2018 CMEC is the second in a series that began in 2004.

## 16 states and the District of Columbia had a centralized medical examiner system

In 2018, 34 states had city, county, district, or regional medicolegal death investigation systems: 13 had coroner systems; 7 had medical examiner systems; and 14 had both coroners and medical

examiners (map 1).<sup>2</sup> Seven of the states with city, county, district, or regional systems also had statewide medical examiner offices. The remaining 16 states and the District of Columbia only had centralized or statewide medical examiner offices.

## MAP 1 Medical death investigation systems in the U.S.,



\*State has a state medical examiner office in addition to city, county, district, or regional medical examiner or coroner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### HIGHLIGHTS

- Nearly 2,040 medical examiner and coroner offices employed almost 11,000 full-time equivalent employees in 2018.
- Medical examiner and coroner offices employed about 890 autopsy pathologists in 2018.
- About 17% of medical examiner and coroner offices were accredited as of 2018.
- More than 1.3 million deaths were referred to medical examiner and coroner offices in 2018, and these offices accepted 605,000 referrals for further investigation.
- Medical examiner and coroner offices reported 11,380 unidentified remains on record as of 2018.
- Medical examiner and coroner offices reported a total budget of \$1.5 billion in 2018.



<sup>&</sup>lt;sup>1</sup>Massachusetts, which has a centralized medical examiner office, did not respond to the CMEC. National estimates are weighted to include Massachusetts. See *Methodology* for weighting.

<sup>&</sup>lt;sup>2</sup>Puerto Rico also had a centralized medical examiner system.

## Nearly 11,000 full-time equivalent personnel were employed across more than 2,000 ME/C offices

ME/C offices employed about 10,930 full-time equivalent (FTE) personnel (table 1).<sup>3</sup> Coroner offices employed more than half (55%) of these FTE personnel. About half (48%) of FTE personnel in coroner offices worked in offices serving populations of 25,000 to 249,999 people.

About 45% of FTE employees worked in medical examiner offices. Nine percent of FTE employees worked in state medical examiner offices, and 36% of FTE employees worked in city, county, district, or regional offices. About 9 in 10 (87%) employees in city, county, district, or regional medical examiner offices worked in offices serving populations of 250,000 or more.

## In 2018, ME/C offices employed about 890 autopsy pathologists and 2,210 non-physician coroners

ME/C offices employed about 890 autopsy pathologists, about three-quarters (74%) of whom worked in medical examiner offices. Autopsy pathologists (also referred to as forensic pathologists) are physicians who are specially trained in the examination of bodies of those who have

died suddenly, unexpectedly, or violently. More than three-quarters (78%) of all autopsy pathologists worked in ME/C offices serving jurisdictions with populations of 250,000 or more. Coroner offices employed about 26% of autopsy pathologists; city, county, district, or regional medical examiner offices about 59%; and state medical examiner offices about 15%.

ME/C offices employed about 2,210 non-physician coroners in 2018, with the vast majority working in coroner offices (97%). More than half (55%) of all non-physician coroners worked in offices serving jurisdictions with populations of 25,000 to 249,999.

Death investigators were the most common type of FTE employee (38%) in ME/C offices. Of those working in city, county, district, or regional medical examiner offices, more than three-quarters (79%) worked in offices serving jurisdictions with populations of 250,000 or more. Of those working in coroner offices, about half (51%) worked in offices serving jurisdictions with populations of 25,000 to 249,999.

In 2018, ME/C offices employed about 400 forensic analysts and 230 forensic toxicologists. About two-thirds of forensic analysts (65%) and forensic toxicologists (65%) worked in city, county, district, or regional medical examiner offices. ME/C offices also employed about 400 scientific or investigative support staff.

TABLE 1Number of medical examiner and coroner offices in the U.S., 2018

		of U.S.		Full-time equivalent employees <sup>a</sup>									
Type of office and population served	Total number of offices	population covered by	Total staff	Autopsy pathologists	Non- physician coroners	Death investigators		Forensic toxicologists	Scientific investigative support	Administration	Other <sup>b</sup>		
Total	2,036	100%	10,930	890	2,210	4,120	400	230	400	1,700	980		
Coroner office <sup>c</sup>	1,630	34.3%	6,040	230	2,140	2,590	40	50	90	650	250		
250,000 or more	94	16.2	1,420	90	100	680	30	20	70	260	160		
25,000 to 249,999	709	15.2	2,870	50	1,180	1,330	*	10	*	240	50		
Less than 25,000	827	2.9	1,750	90	860	580	10	20	10	150	30		
Medical examiner office <sup>d</sup>	384	44.5%	3,940	530	70	1,230	260	150	240	850	620		
250,000 or more	112	40.4	3,430	470	10	970	260	140	240	720	610		
25,000 to 249,999	156	3.7	380	40	40	180	0	0	*	100	10		
Less than 25,000	116	0.5	140	10	10	80	0	*	*	30	*		
State medical examiner office	22	21.2%	940	140	0	300	100	30	70	190	110		

Note: Counts rounded to the nearest 10. Details may not sum to totals due to rounding. See appendix table 1 for standard errors.

<sup>&</sup>lt;sup>3</sup>Full-time equivalent employees include both full-time and part-time employees, with part-time employees counted as the equivalent of 0.5 full-time employees.

<sup>\*</sup>Fewer than five employees in this category.

<sup>&</sup>lt;sup>a</sup>Full-time-equivalent employees include both full-time and part-time employees, with part-time employees counted as the equivalent of 0.5 full-time employees.

<sup>&</sup>lt;sup>b</sup>Includes other staff, e.g., drivers and photographers.

<sup>&</sup>lt;sup>C</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>d</sup>Includes city, county, district, and regional medical examiner offices.

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

The number of FTE autopsy pathologists, coroners, and other medical examiners employed by ME/C offices increased by about 5% between 2004 and 2018, from over 2,870 to 3,020 (figure 1). ME/C offices serving jurisdictions with populations less than 25,000 reported an increase of 97% of these types of personnel between 2004 and 2018. Offices serving jurisdictions of 25,000 to 249,999 and 250,000 or more reported decreases of 12% and 15%, respectively during the same timeframe. While offices serving populations of 250,000 or more employed 35% more autopsy pathologists in 2018 than in 2004, overall the number of autopsy pathologists decreased by about 13% (not shown in figure).

#### Fewer than 1 in 5 ME/C offices were accredited

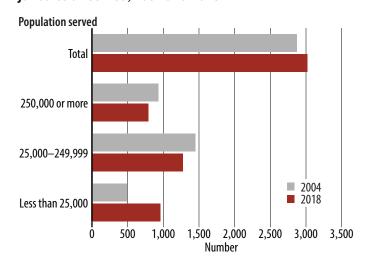
The International Association of Coroners and Medical Examiners (IACME) and the National Association of Medical Examiners (NAME) are the main accrediting bodies for ME/C offices in the United States. In 2018, about 17% of ME/C offices were accredited by either body (table 2). About 14% of coroner offices (14%) and 29% of city, county, district, or regional medical examiner offices were accredited by either body. More than half (52%) of state medical examiner offices were accredited.

Overall, about 91% of ME/C offices reported that at least some of their autopsy pathologists were certified by the American Board of Pathology (ABPath). About 86% of coroner offices, 98% of city, county, district or regional

medical examiner offices, and 100% of state medical examiner offices reported that at least some of their autopsy pathologists were ABPath certified.

Nearly half (45%) of ME/C offices reported that at least some of their non-physician coroners or death investigators were certified by the American Board of

## FIGURE 1 Number of full-time equivalent autopsy pathologists, coroners, and other medical examiners by size of jurisdiction served, 2004 and 2018



Note: See appendix table 2 for estimates and standard errors. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2004 and 2018.

TABLE 2
Percent of offices accredited and selected personnel positions certified, by type of office and population served, 2018

Percentage of the certified of

		Personnei Certified								
Type of office and population served	Percent of offices accredited <sup>a</sup>	Autopsy pathologists <sup>b</sup>	Coroners/death investigators <sup>c</sup>	Forensic toxicologists <sup>d</sup>	Forensic analysts/ chemists <sup>d</sup>					
Total	17.2%	90.6%	45.2%	65.1%	55.7%					
Coroner office <sup>e</sup>	14.0%	86.1%	38.0%	62.9%	56.4%					
250,000 or more	27.5	97.2	75.3	78.7!	60.8!					
25,000 to 249,999	11.4	89.3	40.1	71.1	64.3					
Less than 25,000	14.8	78.1	26.1	53.9	51.3					
Medical examiner office <sup>f</sup>	28.8%	98.2%	67.0%	67.3%	47.6%					
250,000 or more	60.7	98.5	96.2	75.3	47.1!					
25,000 to 249,999	11.0	96.7	53.2	*	*					
Less than 25,000	20.5	100	43.0	*	*					
State medical examiner office	52.1%!	100%	100%	100%!	71.1%!					

Note: See appendix table 3 for standard errors.

<sup>\*</sup>Offices reported employing fewer than five FTEs in this category.

<sup>!</sup> Interpret with caution. Estimate is based on 10 or fewer cases or the coefficient of variation is greater than 0.5.

<sup>&</sup>lt;sup>a</sup>Offices accredited by the International Association of Coroners and Medical Examiners (IACME) or the National Association of Medical Examiners (NAME).

<sup>&</sup>lt;sup>b</sup>Autopsy pathologists certified by the American Board of Pathology (ABPath).

<sup>&</sup>lt;sup>C</sup>Coroners or death investigators certified by the American Board of Medicolegal Death Investigators (ABMDI).

dForensic toxicologists, analysts, or chemists certified by the American Board of Forensic Toxicology (ABFT).

<sup>&</sup>lt;sup>e</sup>Includes county, district, and regional coroner offices.

fincludes city, county, district, and regional medical examiner offices.

Medicolegal Death Investigators (ABMDI). Medical examiner and coroner offices serving larger jurisdictions reported higher proportions of non-physician coroners or death investigators being ABMDI certified than smaller jurisdictions did.

About two-thirds (65%) of ME/C offices reported that at least some of their forensic toxicologists were certified by the American Board of Forensic Toxicology (ABFT). About half of coroner offices (54%) reported that at least some of their forensic toxicologists were ABFT certified.

## Over 1.3 million cases were referred to ME/C offices and about 605,000 were accepted for further investigation

In 2018, more than 1.3 million cases were referred to ME/C offices, with about 605,000 (46%) of these cases accepted for further investigation (table 3). By comparison, in 2004, ME/C offices reported about 956,000 referred cases and accepted 487,000 (51%).<sup>4</sup> In 2018, coroner offices received about 588,000 cases and accepted 306,000 (52%). City, county, district, or regional medical examiner offices received about 594,000 cases and accepted 213,000 (36%). State medical examiner offices received 136,000 cases and accepted 85,000 (63%). Coroner offices in jurisdictions with smaller populations had a higher case acceptance rate than offices in larger jurisdictions.

In 2018, ME/C offices accepted an average of 80 cases per FTE autopsy pathologist, non-physician coroner, death investigator, and forensic toxicologist. Coroner offices accepted an average of 60 cases per FTE; city, county, district, or regional medical examiner offices accepted an average of 110 cases; and state medical examiner offices accepted an average of 180 cases per FTE.

Between 2004 and 2018, the number of cases accepted per FTE decreased 16% (figure 2). In 2004, ME/C offices accepted an average of 100 cases per FTE autopsy pathologist, non-physician coroner, death investigator, and forensic toxicologist. During this same period, the caseload per FTE increased 12% in ME/C offices serving populations of 250,000 or more. Between 2004 and 2018, the caseload per FTE decreased from 80 to 60 (25%) in ME/C offices serving populations of 25,000 to 249,999, and from 60 to 30 (50%) in ME/C offices serving populations of 10,000 to 49,999.

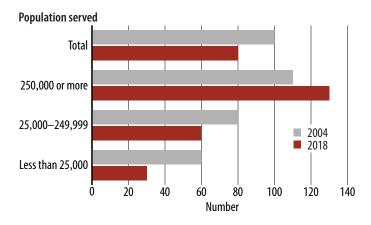
**TABLE 3**Cases referred to and accepted by ME/C offices, by type of office and population served, 2018

Average

Type of office and population served	Cases referred	Cases accepted	Percent total cases accepted	number of cases accepted per FTE <sup>a</sup>
Total	1,317,730	604,700	45.9%	80
Coroner office <sup>b</sup>	587,610	306,030	52.1%	60
250,000 or more	266,680	114,700	43.0	130
25,000 to 249,999	254,160	136,700	53.8	50
Less than 25,000	66,760	54,630	81.8	40
Medical examiner office <sup>c</sup>	593,910	213,370	35.9%	110
250,000 or more	504,770	175,380	34.7	110
25,000 to 249,999	63,050	33,680	53.4	130
Less than 25,000	26,090	4,320	16.5	40
State medical examiner office	136,220	85,300	62.6%	180

Note: 157 offices reported cases were referred to them, but they did not track the number. 119 offices reported that they had accepted cases but did not track the number. See appendix table 4 for standard errors.

## FIGURE 2 Accepted cases per full-time-equivalent employee by size of population served, 2004 and 2018



Note: 2018 data exclude offices in Louisiana for comparability because they were not included in the 2004 data. Data from 2004 differ from those in *Medical Examiners and Coroners' Offices*, 2004, because different personnel are included in the calculations for this figure. See appendix table 5 for estimates. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2004 and 2018.

<sup>&</sup>lt;sup>4</sup>See *Medical Examiners and Coroners' Offices, 2004* (NCJ 216756, BJS, June 2007).

<sup>&</sup>lt;sup>a</sup>FTEs include full-time and part-time autopsy pathologists, coroners or non-physicians, death investigators, and forensic toxicologists. Part-time employees were counted as 0.5. This excludes consultants and on-call employees.

blincludes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>C</sup>Includes city, county, district, and regional medical examiner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

## ME/C offices conducted 1 full autopsy for every 7 cases referred and every 3 cases accepted

In 2018, an average of 780 cases were referred to ME/C offices, 370 cases were accepted, and 110 full autopsies conducted by these offices (table 4). Coroner offices conducted an average of 50 full autopsies, about 1 for every 10 cases referred and 1 for every 5 cases accepted. Coroner offices serving jurisdictions with populations of 250,000 or more conducted full autopsies for about 30% of accepted cases. Coroner offices serving jurisdictions with populations of 25,000 to 249,000 conducted full autopsies for about 17% of accepted cases, and coroner offices in jurisdictions serving populations of less than 25,000 conducted full autopsies for about 15% of cases accepted.

City, county, district, or regional medical examiner offices conducted an average of 290 full autopsies performed in 2018. Full autopsies were performed for about 17% of cases referred and 45% of cases accepted. As with coroner offices, city, county, district, or regional medical examiner offices serving larger jurisdictions reported higher rates of full autopsies than those serving smaller jurisdictions. State medical examiner offices conducted an average of 1,490 full autopsies in 2018, or about 1 for every 5 cases referred and 1 for every 3 cases accepted.

## ME/C offices reported collecting DNA evidence from 46% of the 11,380 unidentified remains they had on record

As of 2018, ME/C offices reported having 11,380 cases of unidentified human decedents on record (table 5). From these 11,380 reported cases, 2,440 were reported by coroner offices; 7,820 were reported by city, county, district, or regional medical examiner offices; and 1,120 were reported by state medical examiner offices.

ME/C offices collected DNA evidence in about 46% of cases with unidentified human remains. DNA evidence from unidentified remains was collected in 33% of cases in coroner offices; 49% of cases in city, county, district, or regional medical examiner offices; and 53% of cases in state medical examiner offices.

**TABLE 4**Average number of cases referred, cases accepted, and full autopsies conducted, by population served, 2018

Type of office and population served	Referred cases	Accepted cases	Full autopsies conducted
Total	780	370	110
Coroner office <sup>a</sup>	440	240	50
250,000 or more	2,960	1,350	410
25,000 to 249,999	410	230	40
Less than 25,000	110	90	10
Medical examiner office <sup>b</sup>	1,730	640	290
250,000 or more	4,560	1,590	900
25,000 to 249,999	470	270	60
Less than 25,000	270	40	10
State medical examiner office	7,180	3,880	1,490

Note: See appendix table 6 for standard errors.

**TABLE 5**Unidentified remains on record, by type of office and population served, 2018

Type of office and population served	Cases on record	record that have had DNA evidence collected from them
Total	11,380	45.7%
Coroner office <sup>a</sup>	2,440	32.9%
250,000 or more	920	55.0
25,000 to 249,999	750	32.9
Less than 25,000	770!	6.9!
Medical examiner office <sup>b</sup>	7,820	48.7%
250,000 or more	7,620	48.1
25,000 to 249,999	190	69.8
Less than 25,000	10!	49.2!
State medical examiner office	1,120	52.5%

Percent of cases on

Note: See appendix table 7 for standard errors.

! Interpret with caution. Estimate is based on 10 or fewer cases or the coefficient of variation is greater than 0.5.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>b</sup>Includes city, county, district, and regional medical examiner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>b</sup>Includes city, county, district, and regional medical examiner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### Medicolegal death investigation on tribal lands

The 2018 Census of Medical Examiner and Coroner Offices asked respondents to report on the number of cases for death investigations referred to and accepted by their offices from authorities of tribal lands. About 150 medical examiner and coroner (ME/C) offices (7%) from 28 states reported receiving cases from tribal lands (map 2). This included 97 coroner offices; 41 city, county, district, or regional medical examiner offices; and 12 state medical examiner offices. About 140 ME/C offices reported that they had accepted cases from tribal lands, while about 70 offices said they had no way to separately track cases received and accepted from tribal lands.

In 2018, ME/C offices reported about 1,120 cases referred by tribal lands (table 6). Among the offices that reported both the numbers of cases referred and accepted from tribal lands, 92% of these cases were accepted. Coroner offices reported nearly 500 cases referred from tribal lands, about 44% of all cases referred from tribal lands. Of the cases referred to coroner offices, 85% were reported as accepted. City, county, district, or regional medical examiner offices reported 320 referred cases, and of those that reported both referred and accepted cases from tribal lands, 94% were reported as accepted. State medical examiner offices reported 310 referred cases (28% of all cases referred from tribal lands) and accepted 100% of them.

MAP 2 States that received cases for death investigations referred from tribal lands, 2018



Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

Cacac rafarrada

**TABLE 6**Cases referred from tribal lands and percent accepted, 2018

	Offices that received	Cases re	eterreaª	
Type of office and population served	cases from tribal lands	Number	Percent	Percent accepted <sup>b</sup>
Total	150	1,120	100%	92.1%
Coroner office <sup>c</sup>	100	490	43.8	85.4%
250,000 or more	10	10	0.9!	100!
25,000 to 249,999	50	230	20.5	97.4
Less than 25,000	40	250	22.3	76.2
Medical examiner office <sup>d</sup>	40	320	28.6%	94.4%
250,000 or more	20	110	9.8!	91.0!
25,000 to 249,999	20	70	6.3!	100!
Less than 25,000	*	130	11.6!	100!
State medical examiner office	10	310	27.7%	100%

Note: Counts of cases rounded to the nearest 10. Details may not sum to totals due to rounding. See appendix table 8 for standard errors.

<sup>\*</sup>Fewer than five offices reported receiving cases from tribal lands.

<sup>!</sup> Interpret with caution. Estimate is based on 10 or fewer cases or the coefficient of variation is greater than 0.5.

<sup>&</sup>lt;sup>a</sup>Cases referred are based on 83 offices that reported the number of cases reported to their office from tribal lands.

<sup>&</sup>lt;sup>b</sup>Percent accepted is based on the 73 offices that reported both cases referred and cases accepted.

<sup>&</sup>lt;sup>c</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>d</sup>Includes city, county, district, and regional medical examiner offices.

## More than half of ME/C offices used external organizations to conduct partial (55%) or complete (64%) autopsies

In 2018, about 13% of ME/C offices reported conducting partial autopsies in the office, and about 16% reported conducting complete autopsies internally (table 7). About 61% of coroner offices and 34% of city, county, district, or regional medical examiner offices reported that they used external organizations to conduct partial autopsies. About 70% of coroners and 41% of city, county, district, or regional medical examiner offices reported that they used external organizations for full autopsies. For both coroner offices and city, county, district, or regional medical examiner offices, those

serving larger jurisdictions were more likely to conduct both partial and complete autopsies internally. No state medical examiner offices indicated they used external organizations for either partial or complete autopsies. About 15% of ME/C offices reported that partial autopsy functions were not necessary for their offices, and 7% reported the same for complete autopsies (not shown in table).

More than 8 in 10 ME/C offices conducted internal death scene investigations (85%) and medical record reviews (83%). About 7 in 10 offices ME/C offices conducted or provided cremation waivers or authorization (72%), external examinations (72%), and death scene photography (71%) internally. Fewer than half (43%) of ME/C offices distributed death certificates internally.

**TABLE 7**Percent of ME/C offices that provide selected functions either internally or externally, by type of office and population served, 2018

Type of office and population served	Partial autopsy			Complete autopsy				emation wa thorization		Death certificate distribution		
	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally
Total	68.7%	13.4%	55.3%	79.9%	15.8%	64.1%	83.6%	72.2%	11.4%	71.0%	43.4%	27.6%
Coroner office <sup>a</sup>	69.5%	8.5%	61.1%	79.6%	9.3%	70.3%	83.1%	70.0%	13.1%	71.9%	43.6%	28.4%
250,000 or more	80.0	53.3	26.7	95.1	64.7	30.4	85.7	74.7	11.0	66.0	32.7	33.3
25,000 to 249,999	72.7	8.9	63.8	84.1	9.9	74.2	84.4	73.8	10.5	73.5	44.7	28.8
Less than 25,000	65.6	3.0	62.6	74.1	2.5	71.6	81.6	65.8	15.8	71.2	43.9	27.3
Medical examiner officeb	64.3%	30.3%	34.0%	79.7%	38.5%	41.2%	86.3%	81.7%	4.6%	67.9%	43.4%	24.5%
250,000 or more	74.3	70.3	4.0	100	95.0	5.0	76.1	71.3	4.8	63.4	30.9	32.5
25,000 to 249,999	60.5	18.4	42.1	75.1	22.6	52.5	92.7	91.0	1.7	68.4	47.2	21.2
Less than 25,000	59.7	7.6	52.1	66.3	5.4	60.9	87.9	79.2	8.7	72.2	51.7	20.5
State medical examiner office	86.4%	86.4%	0.0%	100%	100%	0.0%	76.6%	68.0%	8.6%	56.7%	28.3%	28.4%

	Death scene investigation			Death:	Death scene photography			nal examii	nations	Medical record review			
	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally	
Total	96.6%	85.4%	11.2%	92.5%	71.1%	21.5%	93.4%	72.2%	21.2%	94.1%	83.3%	10.8%	
Coroner office <sup>a</sup>	97.0%	85.8%	11.2%	92.5%	70.9%	21.7%	93.3%	70.2%	23.1%	93.6%	81.3%	12.3%	
250,000 or more	98.9	97.6	1.2	95.2	87.0	8.2	100	92.8	7.2	100	97.6	2.4	
25,000 to 249,999	98.0	88.3	9.8	92.6	70.7	21.9	96.9	73.8	23.1	95.8	85.0	10.8	
Less than 25,000	95.9	82.3	13.6	92.2	69.2	23.1	89.5	64.6	24.9	90.9	76.3	14.6	
Medical examiner officeb	95.1%	84.7%	10.4%	92.6%	72.6%	20.0%	93.1%	78.9%	14.2%	96.0%	91.5%	4.5%	
250,000 or more	97.1	92.2	4.9	97.1	88.2	9.0	100	96.0	4.0	100	99.0	1.0	
25,000 to 249,999	94.3	80.2	14.1	91.9	68.4	23.5	94.4	78.4	16.0	98.3	95.1	3.3	
Less than 25,000	94.4	83.7	10.8	89.1	63.3	25.9	84.9	63.2	21.7	89.2	79.5	9.6	
State medical examiner office	90.9%	68.2%	22.7%	90.9%	59.1%	31.8%	100%	95.5%	4.5%	100%	90.9%	9.1%	

Note: See appendix table 9 for standard errors.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

blncludes city, county, district, and regional medical examiner offices.

#### The average ME/C office budget in 2018 was \$775,000

The total budget reported by ME/C offices in 2018 was about \$1.5 billion (table 8). Coroner offices reported an average budget of \$470,000. City, county, district, or regional medical examiner offices reported an average budget of \$1.8 million, and state medical examiner offices reported an average budget of \$5.8 million. In jurisdictions serving populations of 250,000 or more, coroner offices had an average budget of \$2.2 million, and city, county, district, or regional medical examiner offices had an average budget of \$5.2 million.

Overall, the average budget per case accepted by an ME/C office was about \$3,000. The average budget per accepted case in coroner offices and in city, county, district, or regional medical examiner offices was \$3,000. State medical examiner offices had an average budget of \$2,000 per case accepted.

## The minimum starting salary for an autopsy pathologist was \$163,000 on average

In 2018, ME/C offices reported a minimum starting salary for autopsy pathologists of \$163,000 on average, and a maximum starting salary of \$204,000 on average (table 9). Coroner offices reported that autopsy pathologists' average starting salary ranged

from \$143,000 to \$165,000, and city, county, district, or regional medical examiner offices reported an average starting salary range of \$172,000 to \$224,000. State medical examiner offices reported an average starting salary for autopsy pathologists ranging from \$181,000 to \$223,000.

**TABLE 8**Average budget of ME/C offices, by type of office and population served, 2018

Type of office and population served	Total	Average per office	Average per case accepted
Total	\$1,478,293,000	\$775,000	\$3,000
Coroner officea	\$728,638,000	\$470,000	\$3,000
250,000 or more	\$199,662,000	\$2,165,000	\$2,000
25,000 to 249,999	\$311,417,000	\$458,000	\$2,000
Less than 25,000	\$217,559,000	\$280,000	\$5,000
Medical examiner officeb	\$621,674,000	\$1,842,000	\$3,000
250,000 or more	\$577,091,000	\$5,162,000	\$3,000
25,000 to 249,999	\$39,371,000	\$284,000	\$1,000
Less than 25,000	\$5,211,000	\$60,000	\$1,000
State medical examiner office	\$127,980,000	\$5,827,000	\$2,000

Note: See appendix table 10 for standard errors.

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

**TABLE 9**Minimum and maximum starting salaries on average in ME/C offices, by type of office and population served, 2018

Type of office and	Autopsy p	athologist	thologist Coroners/non-physicia		Death inv	estigators	Forensic toxicologists		
population served	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Total	\$163,000	\$204,000	\$35,000	\$38,000	\$29,000	\$39,000	\$61,000	\$91,000	
Coroner office <sup>a</sup>	\$143,000	\$165,000	\$34,000	\$38,000	\$26,000	\$33,000	\$50,000	\$60,000	
250,000 or more	\$182,000	\$207,000	\$98,000	\$105,000	\$46,000	\$63,000	\$78,000	\$92,000	
25,000 to 249,999	\$116,000	\$140,000	\$39,000	\$43,000	\$27,000	\$35,000	**	**	
Less than 25,000	*	*	\$17,000	\$19,000	\$10,000	\$12,000	*	*	
Medical examiner office <sup>b</sup>	\$172,000	\$224,000	\$49,000	\$59,000	\$39,000	\$54,000	\$63,000	\$107,000	
250,000 or more	\$177,000	\$236,000	**	**	\$47,000	\$66,000	\$63,000	\$107,000	
25,000 to 249,999	\$152,000	\$160,000	\$53,000	\$61,000	\$29,000	\$38,000	~	~	
Less than 25,000	**	**	**	**	*	*	***	***	
State medical examiner office	\$181,000	\$223,000	~	~	\$41,000	\$56,000	*	*	

Note: Salaries rounded to the nearest \$1,000. See appendix table 11 for standard errors.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

blncludes city, county, district, and regional medical examiner offices.

<sup>~</sup>Not applicable. Offices reported having no personnel in this category.

<sup>\*</sup>Fewer than 10 offices in this category reported salary data.

<sup>\*\*</sup>Fewer than 5 offices in this category reported salary data.

<sup>\*\*\*</sup>Although one office reported having forensic toxicologists, they did not report minimum and maximum starting salaries.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

blincludes city, county, district, and regional medical examiner offices.

ME/C offices reported an average salary range of \$35,000 to \$38,000 for non-physician coroners. In coroner offices, the minimum starting salary was \$34,000 and the maximum was \$38,000 on average. In city, county, district, or regional medical examiner offices, the average starting salary range for non-physician coroners was \$49,000 to \$59,000.

## About 43% of ME/C offices had a computerized information management system, an increase from the 31% reported in 2004

A larger percentage of ME/C offices had computerized information management system in 2018 than in 2004 (figure 3). Compared to 2004, the percentage of ME/C offices serving populations of 25,000 to 249,999 with computerized information management increased from 33% to 49% in 2018. About 87% of ME/C offices serving jurisdictions with populations of 250,000 or more had computerized information management systems, compared to about 28% of ME/C offices in serving jurisdictions of less than 25,000.

### Three-quarters of ME/C offices had access to the internet separately from a personal device

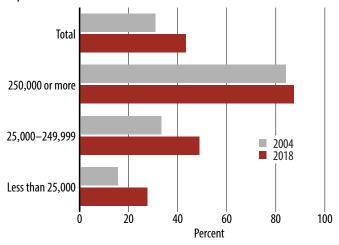
Fewer than half (40%) of coroner offices and about half (54%) of city, county, district, or regional medical examiner offices had a computerized information management system (table 10). The majority (91%) of state medical examiner offices had a computerized information management system. Offices serving larger populations were more likely to have a computerized information management system than those serving jurisdictions with smaller populations.

About 74% of coroner offices and 80% of city, county, district, or regional medical examiner offices had access to the internet separate from a personal device in 2018. All state medical examiner offices reported that they had such access. About 64% of coroner offices and 70% of city, county, district, or regional medical examiner offices serving populations of less than 25,000 had access to the internet separately from a personal device. Almost all (98%) offices serving jurisdictions with populations of 250,000 or more had access to the internet separately from a personal device compared to fewer than three-quarters (72%) of offices serving jurisdictions with populations of less than 250,000 (not shown in table).

#### FIGURE 3

Percent of ME/C offices with a computerized information management system, by size of population served, 2004 and 2018

#### **Population served**



Note: See appendix table 12 for estimates.

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2004 and 2018.

#### **TABLE 10**

Percent of offices with computerized record management systems and access to internet separate from a personal device, by type of office and size of population served, 2018

Offices with a

Type of office and population served	computerized information management system	Offices with internet separate from a personal device
Total	43.3%	75.0%
Coroner office <sup>a</sup>	40.0%	73.6%
250,000 or more	81.4	97.6
25,000 to 249,999	49.1	80.2
Less than 25,000	27.6	64.0
Medical examiner office <sup>b</sup>	54.2%	79.8%
250,000 or more	92.2	97.3
25,000 to 249,999	46.4	73.2
Less than 25,000	28.3	70.4
State medical examiner office	90.9%	100%

Note: See appendix table 13 for standard errors.

<sup>b</sup>Includes city, county, district, and regional medical examiner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

## About 6 in 10 ME/C offices had access to prescription drug monitoring programs

Sixty-one percent of ME/C offices had access to a prescription drug monitoring program, either directly (29%) or through a partner agency (32%) (table 11). About a quarter of coroner offices (24%) and half of city, county, district, or regional medical examiner offices (49%) had direct access to prescription drug monitoring programs. Almost all state medical examiner offices (95%) had access, with about three-quarters (73%) having direct access and the remainder (23%) having access through a partner agency.

About 7 in 10 ME/C offices had access to criminal history (71%) and fingerprint (69%) databases. A larger percentage of coroner offices had some form of access to criminal history (73%) and fingerprint (71%) databases than city, county, district, or regional medical examiner offices (62% and 61%, respectively). About 77% of state medical examiner offices had access to criminal history databases, and 91% had access to fingerprint databases.

Half (50%) of ME/C offices had access to computerized axial tomography; 3% had direct access and 47% had access through a partner agency. Forty-four percent of ME/C offices had access to magnetic resonance imaging. Almost all of those that did maintained access through a partner agency.

 TABLE 11

 Percent of ME/C offices with access to selected technologies, by type of office and population served, 2018

		puterize graphy		-	minal hi abases	story		ingerpi databas			Magnetic resonance imaging			Prescription drug monitoring programs		
Type of office and population served	Total	Direct access	Access through partner agency	Total			Total		Access through partner agency	Total		Access through partner agency	Total		Access through partner agency	
Total	50.3%	3.4%	46.9%	71.2%	15.0%	56.3%	69.3%	7.6%	61.6 %	44.0%	1.8%	42.2%	60.6%	28.8%	31.8%	
Coroner office <sup>a</sup>	50.1%	2.2%	47.8%	73.4%	15.7%	57.7%	70.9%	7.8%	63.1%	45.5%	1.4%	44.1%	56.6%	23.5%	33.1%	
250,000 or more	53.2	2.4!	50.8	82.0	40.4	41.6	82.2	28.9	53.3	45.9	1.1!	44.8	64.5	45.9	18.5	
25,000 to 249,999	55.2	1.4!	53.8	74.2	13.0	61.2	71.8	6.3	65.5	51.0	1.4!	49.6	63.2	28.9	34.3	
Less than 25,000	44.8	3.0	41.7	71.7	15.3	56.4	68.9	6.8	62.2	40.1	1.4!	38.7	50.1	16.4	33.7	
Medical examiner office <sup>b</sup>	50.8%	7.5%	43.3%	61.7%	12.1%	49.6%	60.8%	6.0%	54.8%	39.1%	3.6%!	35.5%	75.4%	48.8%	26.6%	
250,000 or more	33.0	10.1!	23.0	82.9	22.8	60.1	84.8	10.4	74.4	19.6	1.3!	18.3	79.1	50.0	29.1	
25,000 to 249,999	57.6	6.8!	50.8	56.5	7.7!	48.8	58.0	3.9!	54.1	47.3	5.8!	41.6	69.0	40.6	28.5	
Less than 25,000	60.4	5.8!	54.6	48.1	7.6!	40.5	41.4	4.4!	37.0	48.3	2.9!	45.4	80.3	58.7	21.6	
State medical examine office		17.1%	38.9%!	77.3%	9.1%!	68.2%	90.9%	18.2%!	72.7%	22.6%	4.4%!	18.1%!	95.5%	72.7%	22.7%!	

Note: Details may not sum to totals due to rounding. See appendix table 14 for standard errors.

! Interpret with caution. Based on 10 or fewer cases or the coefficient of variation is greater than 0.5.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>b</sup>Includes city, county, district, and regional medical examiner offices.

## About 9 in 10 ME/C offices had access to mass fatality investigation and disaster planning training

In 2018, 90% of coroner offices and 83% of city, county, district, or regional medical examiner offices had access to disaster planning training (table 12). Similarly, 88% of coroner offices and 85% of city, county, district, or regional medical examiner offices had access to mass fatality investigation training. All state medical examiner offices had access to both disaster planning and mass fatality investigation training curricula.

About 8 in 10 coroner offices (82%) and city, county, district, or regional medical examiner offices (78%) had access to bloodborne pathogen training. Offices serving larger populations were more likely to report having access to this training than those serving smaller populations. All state medical examiner offices reported having access to bloodborne pathogen training.

More than 7 in 10 coroner offices (70%) and city, county, district, or regional medical examiner offices (72%), and nearly all state medical examiner offices (96%) had access to stress management training. As with bloodborne pathogen training, offices serving larger populations were more likely to have access to this type of training.

**TABLE 12**ME/C office access to selected trainings, by type of office and population served, 2018

	Bloodk	oorne pa	athogens	Disaster planning				ass fata vestiga			oper lif			ess management	
Type of office and population served	Total	Direct access	Access through partner agency	Total		Access through partner agency	Total		Access through partner agency	Total		Access through partner agency	Total	Direct access	Access through partner agency
Total	81.0%	31.6%	49.5%	88.6%	28.5%	60.0%	87.9%	31.0%	56.9%	73.4%	32.4%	40.9%	70.9%	26.7%	44.2%
Coroner officea	81.6%	28.6%	52.9%	89.8%	28.6%	61.2%	88.3%	30.0%	58.3%	74.0%	30.5%	43.5%	70.4%	25.8%	44.6%
250,000 or more	94.5	57.0	37.5	95.9	48.8	47.1	98.6	52.6	45.9	89.2	51.5	37.7	87.4	47.3	40.1
25,000 to 249,999	85.4	31.9	53.5	92.4	31.4	61.1	91.2	34.0	57.2	75.7	35.2	40.4	71.5	29.3	42.2
Less than 25,000	76.1	21.7	54.4	86.5	23.3	63.2	84.2	23.1	61.1	70.3	23.1	47.2	67.1	19.6	47.5
Medical examiner office <sup>b</sup>	77.8%	41.8%	36.0%	82.5%	27.0%	55.5%	85.3%	33.9%	51.4%	69.2%	38.6%	30.6%	71.6%	29.2%	42.5%
250,000 or more	95.8	74.0	21.8	94.8	46.7	48.0	98.0	58.9	39.1	84.5	64.9	19.6	87.4	46.4	41.0
25,000 to 249,999	75.3	31.1	44.2	83.2	18.7	64.5	86.5	25.0	61.6	65.1	28.3	36.8	66.8	21.1	45.7
Less than 25,000	61.5	22.1	39.3	67.6	17.7	49.9	69.1	19.4	49.6	58.4	25.2	33.2	61.4	22.3	39.1
State medical examiner office	100%	70.6%	29.4%	100%	47.4%	52.6%	100%	52.7%	47.3%	100%	68.8%	31.2%	95.8%	49.3%	46.5%

Note: Details may not sum to totals due to rounding. See appendix table 15 for standard errors.

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

blncludes city, county, district, and regional medical examiner offices.

#### Methodology

The 2018 Census of Medical Examiner and Coroner Offices (CMEC) follows the 2004 CMEC. RTI International (RTI) was the data collection agent for the project on behalf of BJS under cooperative agreement 2017-MU-CX-K052.

The 2004 questionnaire was revised to ensure questions were up to date and relevant to the field. A subject matter expert panel composed of medical examiners, coroners, and medicolegal death investigators was convened to review the draft questionnaire and to provide feedback on specific items.

The initial universe of ME/C offices was based on the 2004 CMEC and the 2017 National Forensic Laboratory Information Management System (NFLIS) Medical Examiner/Coroner Office Survey, funded by the Drug Enforcement Administration. The project team conducted web searches to identify offices that may not have been included in previous data-collection efforts. Additionally, the project team conducted an outreach effort to offices that did not participate in the 2017 NFLIS survey to verify contact information. In Texas, justices of the peace are not death investigators or coroners. They may make cause and manner of death determinations but were out of scope for this census.

A mixed-mode method of data collection was used for the CMEC. Offices were initially contacted and encouraged to respond via web survey. In follow-up efforts, non-responding offices were provided paper copies of the survey with a prepaid return envelope. To encourage participation, a critical-item questionnaire was created both in paper and web form for respondents who did not complete the full questionnaire. Replacement mail-out packages with the critical-items form was sent to non-respondents. Follow-up efforts also included prompting phone calls and Computer Assisted Telephone Interviewing if an office was willing to participate over the phone.

#### Unit response rate

A total of 2,112 offices were enumerated for the CMEC. Upon receiving responses, 44 offices (2%) were determined to be ineligible for participation and information for 31 offices (1.5%) was compiled with another office. Of the remaining 2,037 unique and eligible offices, 1,648 responded, for an overall response rate of 80.9% (table 13). About 80% of coroner offices responded; 84% of city, county, district, and regional medical examiner offices responded; and 96% of state medical examiner offices responded.

Of the respondents, a total of 1,341 offices (81.4%) responded to the long-form version of the survey, and 307 (18.6%) responded to the critical-item version.

#### Item response rate

Items on the short-form version of the questionnaire were considered critical items. For a submission to be considered complete, all questions had to be answered. On the long-form questionnaire, item non-response ranged from 0% to 18%. To account for item non-response, BJS used a random hot deck imputation procedure. Respondents were grouped into pools based on office type, the level of government at which the office was administered (e.g., county, district, state, etc.), and the state in which offices were located. Missing values were replaced with values from a random respondent in the same pool who answered the question.

#### Non-response and weighting

To produce national estimates, a weight based on the long-form questionnaire and a weight based on the critical-item questionnaire were calculated. These weights were calculated using a propensity weighting method.<sup>6</sup> A logistic regression model is used to calculate offices' probability of responding to the survey based on 1) office type, 2) jurisdiction size, 3) region of the country, 4) level of government, and 5) the interaction of office type and jurisdiction size.

TABLE 13
Response rates by office type and population served, 2018

Type of office and population served		Total	
population served	Respondents	enumerated	Response rate
Total	1,648	2,037	80.9%
Coroner office <sup>a</sup>	1,302	1,630	79.9%
250,000 or more	86	94	91.1
25,000 to 249,999	562	709	79.3
Less than 25,000	654	827	79.0
Medical examiner officeb	323	384	84.2%
250,000 or more	105	112	93.9
25,000 to 249,999	126	156	80.8
Less than 25,000	92	116	79.3
State medical examiner			
office	23	24	96.0%

<sup>&</sup>lt;sup>a</sup>Includes county, district, and regional coroner offices.

<sup>&</sup>lt;sup>5</sup>Dieter William Joenssen and Udo Bankhofer, "Machine Learning and Data Mining in Pattern Recognition," in *Data Mining in Pattern Recognition*, ed. Petra Perner, Springer, 2012, 63-75.

<sup>&</sup>lt;sup>6</sup>Haiyan Bai and M.H. Clark, *Propensity Score Methods and Applications*, SAGE Publications, 2018.

<sup>&</sup>lt;sup>b</sup>Includes city, county, district, and regional medical examiner offices. Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

In this application, the probability of responding to the CMEC is a function of jurisdiction size, office type, region, and level of government.

$$= \frac{1}{1 + e^{-(\beta_0 + \beta_1 * Jurisdiction Size + \beta_2 * Office Type + \beta_3 * Region + \beta_4 * Level Government)}}$$

The logistic regression model produces predicted probabilities of responding to the survey. The inverse of each predicted probability for each respondent is the nonresponse weighting adjustment.

The final adjustment weight was calculated using the formula:

$$FW_{hi} = W_{hi} \times F_h \times MECR_{hi}$$

where

 $w_{hi}$  = design weight for office type i in weighting class h;  $F_h$  = nonresponse weighting adjustment for weighting class h;

 $MECR_{hi} = 0$  if office type i in weighting class h is a non-respondent and 1 if the office type is a respondent.

 $F_h$  was calculated as follows:

where

$$\frac{\sum_{i=1}^{nh} w_{hi} \times MECA_{hi}}{\sum_{i=1}^{nh} w_{hi} \times MECR_{hi}}$$

 $n_h$  = number of types in weighting class h;  $w_{hi}$  = design weight for office type i in weighting class h;  $MECA_{hi}$  = 0 if office type i in weighting class h is not eligible, and 1 if the jurisdiction type is eligible.  $MECR_{hi}$  = 0 if office type i in weighting class h is a non-respondent, and 1 if the office type is a respondent.

#### **Accuracy of Estimates**

Although sampling error was not present because CMEC was a complete enumeration, some error may be present in the estimates due to weighting for non-response. The Taylor Series Linearization method for a "stratified without replacement" design was used for these calculations. Standard errors were calculated using the IBM SPSS statistical software package. See the appendix tables for standard error estimates.

#### Standard errors for table 1: Number of medical examiner and coroner offices in the U.S., 2018

Percent of U.S. population covered by office type	Autopsy pathologists	Non- physician coroners	Death investigators	Forensic analysts	Forensic toxicologists			Other	coroners, death investigators, and forensic	errors for sum of forensic analysts, scientific investigative support, administration, and other
~	33	110	129	60	15	39	62	126	236	185
0.75%	25	110	120	8	6	20	30	42	224	68
0.75	8	7	36	7	3	20	25	39	46	63
0.29	10	110	115	1	2	1	13	14	221	21
0.05	21	17	19	4	5	4	12	6	38	20
1.93%	21	5	41	57	13	31	52	118	67	170
1.97	21	3	41	57	13	31	52	118	69	171
0.14	6	4	12	0	0	2	13	4	17	14
0.02	3	2	11	0	1	1	5	0	13	5
I 0.82%	4	0	26	19	3	11	16	9	28	31
	of U.S. population covered by office type	of U.S. population covered by office type	of U.S. population covered by office type         Autopsy pathologists         Non-physician coroners           ~         33         110           0.75%         25         110           0.75         8         7           0.29         10         110           0.05         21         17           1.93%         21         5           1.97         21         3           0.14         6         4           0.02         3         2	of U.S. population covered by office type         Autopsy pathologists         Non-physician coroners         Death investigators           ~         33         110         129           0.75%         25         110         120           0.75         8         7         36           0.29         10         110         115           0.05         21         17         19           1.93%         21         5         41           1.97         21         3         41           0.14         6         4         12           0.02         3         2         11	of U.S. population covered by office type         Autopsy pathologists         Non-physician physician coroners         Death investigators         Forensic analysts           ~         33         110         129         60           0.75%         25         110         120         8           0.75         8         7         36         7           0.29         10         110         115         1           0.05         21         17         19         4           1.93%         21         5         41         57           1.97         21         3         41         57           0.14         6         4         12         0           0.02         3         2         11         0	of U.S. population covered by office type         Autopsy pathologists coroners coroners investigators         Forensic toxicologists coroners investigators         Forensic toxicologists           ~         33         110         129         60         15           0.75%         25         110         120         8         6           0.75         8         7         36         7         3           0.29         10         110         115         1         2           0.05         21         17         19         4         5           1.93%         21         5         41         57         13           1.97         21         3         41         57         13           0.14         6         4         12         0         0           0.02         3         2         11         0         1	of U.S. population covered by office type         Autopsy pathologists         Non-physician coroners         Death investigators         Forensic analysts         Forensic toxicologists         Scientific investigative support           ~         33         110         129         60         15         39           0.75%         25         110         120         8         6         20           0.75         8         7         36         7         3         20           0.29         10         110         115         1         2         1           0.05         21         17         19         4         5         4           1.93%         21         5         41         57         13         31           1.97         21         3         41         57         13         31           0.14         6         4         12         0         0         2           0.02         3         2         11         0         1         1	of U.S. population covered by office type         Autopsy pathologists         Non-physician coroners investigators         Forensic analysts         Forensic toxicologists         Scientific investigative support         Administration           ~         33         110         129         60         15         39         62           0.75%         25         110         120         8         6         20         30           0.75         8         7         36         7         3         20         25           0.29         10         110         115         1         2         1         13           0.05         21         17         19         4         5         4         12           1.93%         21         5         41         57         13         31         52           1.97         21         3         41         57         13         31         52           0.14         6         4         12         0         0         2         13           0.02         3         2         11         0         1         1         5	of U.S. population covered by office type         Autopsy pathologists         Non-physician physician physician physician investigators         Forensic snalysts         Forensic stoxicologists         Scientific investigative support         Administration         Other           ~         33         110         129         60         15         39         62         126           0.75%         25         110         120         8         6         20         30         42           0.75         8         7         36         7         3         20         25         39           0.29         10         110         115         1         2         1         13         14           0.05         21         17         19         4         5         4         12         6           1.93%         21         5         41         57         13         31         52         118           1.97         21         3         41         57         13         31         52         118           0.14         6         4         12         0         0         2         13         4           0.02         3         2	Percent of U.S. population o

Standard

of autonov

errors for sum Standard

arrors for sum

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 2**

Estimates and standard errors for figure 1: Number of full-time equivalent autopsy pathologists, coroners, and other medical examiners by size of jurisdiction served, 2004 and 2018

	2004	2	2018
Population served	Estimate	Estimate	Standard error
Total	2,870	3,020	120
250,000 or more	930	790	20
25,000 to 249,999	1,450	1,270	120
Less than 25,000	490	960	30

Note: The table and figure do not include Louisiana (which did not participate in the 2004 collection) and Massachusetts (which did not participate in the 2018 data collection). In 2018, Louisiana reported 83 personnel in these categories. In 2004, Massachusetts reported 6 personnel in these categories.

<sup>~</sup>Not applicable.

Standard errors for table 2: Percent of offices accredited and selected personnel positions certified, by type of office and population served, 2018

		Personnel certified								
Type of office and population served	Percent of offices accredited	Autopsy pathologists	Coroners/death investigators	Forensic toxicologists	Forensic analysts/ chemists					
Total	0.59%	0.96%	0.96%	2.25%	2.66%					
Coroner office	0.65%	1.45%	1.13%	2.74%	3.13%					
250,000 or more	3.08	1.69	2.74	6.72	9.41					
25,000 to 249,999	0.89	1.95	1.62	4.13	5.29					
Less than 25,000	0.97	2.75	1.62	3.95	4.16					
Medical examiner office	1.50%	0.71%	1.77%	4.15%	5.69%					
250,000 or more	2.86	0.85	1.20	4.35	6.24					
25,000 to 249,999	1.61	1.73	3.06	~	~					
Less than 25,000	2.64	0.00	3.93	~	~					
State medical examiner office	4.21%	0.00%	0.00%	0.00%	6.35%					

<sup>~</sup>Not applicable.

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 4**

Standard errors for table 3: Cases referred to and accepted by ME/C offices, by type of office and population served, 2018

Type of office and population served	Cases referred	Cases accepted	Percent total cases accepted	Average number of cases accepted per FTE
Total	40,144	17,319	1.3%	2
Coroner office	24,170	12,882	2.2%	3
250,000 or more	20,457	11,024	4.1	12
25,000 to 249,999	10,046	5,462	2.1	2
Less than 25,000	11,339	5,940	8.9	4
Medical examiner office	28,615	10,487	1.8%	5
250,000 or more	27,650	10,105	2.0	6
25,000 to 249,999	4,759	4,413	7.0	17
Less than 25,000	10,395	523	2.0	5
State medical examiner office	14,442	4,902	3.6%	11

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 5**

Estimates and standard errors for figure 2: Accepted cases per full-time-equivalent employee by size of population served, 2004 and 2018

	2004	2018			
Population served	Estimate	Estimate	Standard error		
Total	100	80	2		
250,000 or more	110	130	5		
25,000 to 249,999	80	60	2		
Less than 25,000	60	30	4		

Standard errors for table 4: Average number of cases referred, cases accepted, and full autopsies conducted, by population served, 2018

Type of office and population served	Referred cases	Accepted cases	Full autopsies conducted
Total	24	11	3
Coroner office	18	10	2
250,000 or more	140	96	20
25,000 to 249,999	14	8	1
Less than 25,000	19	10	2
Medical examiner office	86	32	12
250,000 or more	195	71	30
25,000 to 249,999	31	33	4
Less than 25,000	105	5	2
State medical examiner office	761	223	61

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 7**

Standard errors for table 5: Unidentified remains on record, by type of office and population served, 2018

Type of office and population served	Cases on record	Percent of cases on record that have had DNA evidence collected from them
Total	1,899	9.1%
Coroner office	787	8.7%
250,000 or more	283	21.2
25,000 to 249,999	372	13.7
Less than 25,000	650	1.1
Medical examiner office	1,720	12.9%
250,000 or more	1,723	13.3
25,000 to 249,999	68	27.6
Less than 25,000	3	30.9
State medical examiner office	168	9.6%

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 8**

Standard errors for table 6: Cases referred from tribal lands and percent accepted, 2018

Type of office and	Offices that received	Cases r	eferred	
population served	cases from tribal lands	Number	Percent	Percent accepted
Total	7	200	~	5.82%
Coroner office	6	105	9.34%	11.56%
250,000 or more	3	4	0.37	0.00
25,000 to 249,999	4	59	5.22	1.65
Less than 25,000	4	103	9.21	19.02
Medical examiner office	4	127	11.34%	3.74%
250,000 or more	3	45	3.98	4.57
25,000 to 249,999	2	49	4.33	0.00
Less than 25,000	~	120	10.65	0.00
State medical examiner office	1	114	10.11%	0.00%

<sup>~</sup>Not applicable.

## Standard errors for table 7: Percent of ME/C offices that provide selected functions either internally or externally, by type of office and population served, 2018

Type of office and population served	Partial autopsy		Co	Complete autopsy			Cremation waivers/ authorization			Death certificate distribution		
	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally	Total	Internally	Externally
Total	0.51%	0.32%	0.53%	0.44%	0.33%	0.50%	0.59%	0.71%	0.50%	0.73%	0.81%	0.72%
Coroner office	0.58%	0.33%	0.61%	0.51%	0.34%	0.57%	0.69%	0.83%	0.60%	0.84%	0.93%	0.83%
250,000 or more	1.90	2.37	2.22	1.12	2.35	2.29	2.27	2.74	1.78	3.23	3.21	3.12
25,000 to 249,999	0.87	0.54	0.93	0.72	0.56	0.85	0.98	1.20	0.83	1.25	1.41	1.28
Less than 25,000	0.84	0.29	0.85	0.77	0.28	0.80	1.04	1.26	0.94	1.21	1.34	1.17
Medical examiner office	1.08%	0.98%	1.04%	0.91%	0.99%	1.07%	1.10%	1.23%	0.67%	1.56%	1.67%	1.40%
250,000 or more	1.72	1.80	0.78	0.00	0.87	0.87	2.27	2.39	1.12	2.83	2.87	2.59
25,000 to 249,999	1.75	1.37	1.76	1.55	1.48	1.78	1.34	1.47	0.66	2.42	2.59	2.12
Less than 25,000	2.05	1.11	2.09	1.97	0.95	2.04	2.16	2.66	1.83	2.92	3.26	2.64
State medical examiner office	1.56%	1.56%	0.00%	0.00%	0.00%	0.00%	3.46%	3.82%	2.18%	4.22%	3.71%	3.76%

	Death scene investigation			Death s	cene pho	tography	<b>External examinations</b>			Medical record review		
	Total I	nternally	Externally	Total I	nternally	Externally	Total	Internally	Externally	Total	Internally	Externally
Total	0.20%	0.39%	0.34%	0.29%	0.50%	0.45%	0.28%	0.49%	0.44%	0.26%	0.40%	0.34%
Coroner office	0.22%	0.44%	0.40%	0.33%	0.58%	0.53%	0.32%	0.57%	0.52%	0.30%	0.48%	0.40%
250,000 or more	0.53	0.77	0.56	1.09	1.66	1.34	0.00	1.31	1.31	0.00	0.77	0.77
25,000 to 249,999	0.27	0.63	0.58	0.51	0.89	0.81	0.35	0.85	0.81	0.40	0.69	0.59
Less than 25,000	0.35	0.67	0.60	0.48	0.82	0.75	0.54	0.83	0.74	0.48	0.73	0.60
Medical examiner office	0.49%	0.81%	0.69%	0.60%	1.01%	0.90%	0.58%	0.91%	0.79%	0.45%	0.63%	0.47%
250,000 or more	0.67	1.05	0.87	0.67	1.28	1.16	0.00	0.78	0.78	0.00	0.38	0.38
25,000 to 249,999	0.84	1.42	1.24	0.98	1.66	1.51	0.83	1.47	1.31	0.47	0.79	0.64
Less than 25,000	0.97	1.54	1.29	1.30	2.01	1.82	1.49	2.01	1.72	1.30	1.68	1.22
State medical examiner office	1.31%	2.12%	1.91%	1.31%	2.24%	2.12%	0.00%	0.95%	0.95%	0.00%	1.31%	1.31%

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 10**

Standard errors for table 8: Average budget of ME/C offices, by type of office and population served, 2018

Type of office and population served	Total	Average per office	Average per case accepted
Total	\$56,161,058	\$29,604	\$95
Coroner office	\$41,013,020	\$26,522	\$141
250,000 or more	\$13,049,392	\$97,643	\$114
25,000 to 249,999	\$22,096,053	\$31,964	\$171
Less than 25,000	\$33,015,710	\$42,372	\$704
Medical examiner office	\$38,083,905	\$115,478	\$179
250,000 or more	\$38,384,323	\$299,496	\$219
25,000 to 249,999	\$3,700,101	\$24,583	\$112
Less than 25,000	\$1,007,881	\$11,118	\$261
State medical examiner office	\$4,648,962	\$211,678	\$55

## Standard errors for table 9: Minimum and maximum starting salaries on average in ME/C offices, by type of office and population served, 2018

Type of office and	Autopsy p	athologist	Coroners/no	n-physicians	Death inv	estigators	Forensic toxicologists		
population served	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Total	\$4,773	\$5,906	\$1,029	\$1,106	\$884	\$1,382	\$5,214	\$7,424	
Coroner office	\$11,208	\$12,961	\$1,023	\$1,086	\$1,063	\$1,704	\$12,557	\$15,038	
250,000 or more	\$8,234	\$9,617	\$5,154	\$5,213	\$1,910	\$2,746	\$13,882	\$17,605	
25,000 to 249,999	\$20,263	\$24,854	\$1,285	\$1,341	\$1,415	\$2,504	~	~	
Less than 25,000	~	~	\$841	\$960	\$1,390	\$1,704	~	~	
Medical examiner office	\$5,097	\$6,970	\$8,612	\$10,663	\$1,704	\$2,423	\$4,926	\$9,502	
250,000 or more	\$4,369	\$5,815	~	~	\$1,641	\$2,390	\$4,926	\$9,502	
25,000 to 249,999	\$20,345	\$24,004	\$10,035	\$11,860	\$3,253	\$4,476	~	~	
Less than 25,000	~	~	~	~	~	~	~	~	
State medical examiner office	\$2,892	\$4,232	~	~	\$1,405	\$2,264	~	~	

<sup>~</sup>Not applicable.

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

#### **APPENDIX TABLE 12**

Estimates and standard errors for figure 3: Percent of ME/C offices with a computerized information management system, by size of population served, 2004 and 2018

	2004	2018				
Population served	Estimate	Estimate	Standard error			
Total	30.9%	43.3%	0.57%			
250,000 or more	84.0	87.3	0.99			
25,000 to 249,999	33.4	48.9	0.92			
Less than 25,000	15.5	27.6	0.75			

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2004 and 2018.

#### **APPENDIX TABLE 13**

Standard errors for table 10: Percent of offices with computerized record management systems and access to internet separate from a personal device, by type of office and size of population served, 2018

Type of office and population served	Offices with a computerized information management system	Offices with internet separate from a personal device
Total	0.53%	0.72%
Coroner office	0.61%	0.84%
250,000 or more	1.82	0.97
25,000 to 249,999	0.96	1.14
Less than 25,000	0.76	1.30
Medical examiner office	1.11%	1.35%
250,000 or more	1.08	0.84
25,000 to 249,999	1.78	2.32
Less than 25,000	1.88	2.99
State medical examiner office	1.31%	0.00%

**APPENDIX TABLE 14** 

## Standard errors for table 11: Percent of ME/C offices with access to selected technologies, by type of office and population served, 2018

		puterize ography	ed axial	Criminal history databases			Fingerprint databases		Magnetic resonance imaging			Prescription drug monitoring programs			
Type of office and population served	Total		Access through partner agency	Total		Access through partner agency	Total		Access through partner agency	Total		Access through partner agency	Total		Access through partner agency
Total	0.81%	0.27%	0.81%	0.50%	0.33%	0.53%	0.51%	0.24%	0.53%	0.80%	0.21%	0.80%	0.53%	0.48%	0.51%
Coroner office	0.94%	0.27%	0.94%	0.57%	0.38%	0.61%	0.58%	0.27%	0.60%	0.93%	0.21%	0.93%	0.62%	0.53%	0.59%
250,000 or more	3.38	0.90	3.38	1.92	2.19	2.38	1.91	1.84	2.30	3.37	0.48	3.36	2.20	2.34	1.78
25,000 to 249,999	1.41	0.31	1.42	0.86	0.57	0.94	0.88	0.39	0.92	1.42	0.31	1.42	0.93	0.88	0.92
Less than 25,000	1.33	0.46	1.32	0.81	0.52	0.86	0.83	0.37	0.86	1.31	0.30	1.30	0.88	0.65	0.83
Medical examiner office	1.59%	0.86%	1.58%	1.09%	0.70%	1.11%	1.09%	0.50%	1.11%	1.58%	0.64%	1.54%	0.97%	1.11%	0.98%
250,000 or more	2.49	1.66	2.20	1.48	1.60	1.89	1.40	1.11	1.66	2.17	0.72	2.06	1.58	1.88	1.75
25,000 to 249,999	2.56	1.33	2.59	1.78	0.94	1.79	1.77	0.69	1.79	2.59	1.23	2.55	1.65	1.76	1.61
Less than 25,000	3.19	1.50	3.25	2.09	1.11	2.05	2.06	0.86	2.02	3.26	1.08	3.25	1.66	2.05	1.71
State medical examiner office	4.17%	2.94%	4.19%	1.91%	1.31%	2.12%	1.31%	1.75%	2.03%	3.67%	1.61%	3.48%	0.95%	2.03%	1.91%

Source: Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2018.

**APPENDIX TABLE 15** 

#### Standard errors for table 12: ME/C office access to selected trainings, by type of office and population served, 2018

	Bloodborne p	athogens	Disaster planning		Mass fatality investigation		Proper lif procedur		Stress management		
Type of office and population served	Direct Total access		Direct Total access	Access through partner agency	Direct Total access	Access through partner agency	Direct Total access	Access through partner agency	Direct Total access	Access through partner agency	
Total	0.65% 0.74%	0.81%	0.52% 0.73%	0.80%	0.53% 0.75%	0.80%	0.73% 0.74%	0.80%	0.75% 0.70%	0.80%	
Coroner office	0.74% 0.84%	0.94%	0.57% 0.84%	0.91%	0.61% 0.86%	0.93%	0.84% 0.84%	0.93%	0.87% 0.80%	0.92%	
250,000 or more	1.62 3.38	3.33	1.40 3.36	3.39	0.87 3.39	3.39	2.19 3.38	3.34	2.52 3.34	3.33	
25,000 to 249,999	1.03 1.31	1.41	0.74 1.31	1.38	0.78 1.34	1.40	1.23 1.32	1.39	1.30 1.27	1.38	
Less than 25,000	1.16 1.10	1.34	0.94 1.12	1.30	1.00 1.14	1.32	1.25 1.11	1.34	1.28 1.04	1.34	
Medical examiner office	1.38% 1.60%	1.59%	1.27% 1.47%	1.67%	1.19% 1.53%	1.65%	1.53% 1.58%	1.53%	1.50% 1.50%	1.67%	
250,000 or more	1.10 2.48	2.33	1.25 2.96	2.99	0.75 2.74	2.71	1.99 2.65	2.20	1.85 2.96	2.96	
25,000 to 249,999	2.26 2.39	2.57	1.95 2.05	2.50	1.80 2.26	2.54	2.49 2.34	2.50	2.46 2.12	2.58	
Less than 25,000	3.18 2.71	3.19	3.06 2.49	3.27	3.02 2.61	3.27	3.22 2.85	3.06	3.18 2.74	3.18	
State medical examiner office	0.00% 4.02%	4.02%	0.00% 4.20%	4.20%	0.00% 4.22%	4.22%	0.00% 3.96%	3.96%	1.53% 4.22%	4.22%	



The Bureau of Justice Statistics of the U.S. Department of Justice is the principal federal agency responsible for measuring crime, criminal victimization, criminal offenders, victims of crime, correlates of crime, and the operation of criminal and civil justice systems at the federal, state, tribal, and local levels. BJS collects, analyzes, and disseminates reliable statistics on crime and justice systems in the United States, supports improvements to state and local criminal justice information systems, and participates with national and international organizations to develop and recommend national standards for justice statistics. Doris J. James is the acting director.

This report was written by Connor Brooks. Sean E. Goodison verified the report.

Theodore Robinson and Brigit Baron edited the report. Theodore Robinson produced the report.

November 2021, NCJ 302051



Office of Justice Programs
Building Solutions • Supporting Communities • Advancing Justice
www.ojp.gov