COOK COUNTY MEDICAL EXAMINER'S ANNUAL REPORT

Toni Preckwinkle President, Cook County Board of Commissioners

Zahra Ali Chief Administrative Officer

Ponni Arunkumar, M.D. Chief Medical Examiner



COOK COUNTY MEDICAL EXAMINER'S OFFICE ROBERT J. STEIN INSTITUTE OF FORENSIC MEDICINE

2121 West Harrison Street Chicago, Illinois 60612-3705 Phone: (312) 666-0500

OFFICE HOURS:

The Medical Examiner's Office operates 24 hours per day, seven days per week.

The office is open to the public: 7 a.m. to 3 p.m., Monday through Friday,

except on official Cook County holidays.

IDENTIFICATION HOURS:

11:30 a.m. to 4 p.m., Monday through Friday. 12 p.m. to 4 p.m., weekends and official Cook County holidays.

www.cookcountyil.gov/agency/medical-examiner

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MESSAGE FROM THE CHIEF MEDICAL EXAMINER

Honorable Toni Preckwinkle, Cook County Board of Commissioners and residents of Cook County,

In 2021, the Cook County Medical Examiner's Office (CCMEO) once again broke the previous year's record for total number of opioid overdose deaths as well as gun-related homicides. Fentanyl contributed to approximately 88% of all opioid deaths. The Office eclipsed 1,000 total homicides for the first time in decades—a 13% increase in gun-related homicide deaths compared to 2020. And lower-income and disinvested communities continue to be impacted in these areas at a higher rate.



The Office took jurisdiction of all COVID-19 cases throughout the County in 2020 and continued handling these deaths in 2021. Total caseload for the Office was approximately double pre-COVID levels but did decrease by 21% from 2020. Natural deaths continue to be the majority of cases the Office handles.

Enclosed in this annual report is data detailing the breakdown of cases handled by the CCMEO for 2021 as well as information regarding the Office's role in organ and tissue donation, death investigation, the indigent disposition program and drug-related death statistics.

The CCMEO maintains full accreditation with the National Association of Medical Examiners (NAME) and is conformed to International Organization for Standardization (ISO) 17020 and 17025 requirements to attain the highest level of credibility available to U.S. and international medicolegal death investigation offices.

The Office won a National Association of Counties achievement award for the Medical Examiner COVID-19 dashboard, which provided timely information on COVID-19 demographic data to the public through an interactive web application.

Additionally, the CCMEO implemented a new process for families and funeral directors to obtain reports and cremation permits which ensured more timely and efficient processing of requests.

While the Office saw a tremendous number of cases in 2021, our staff handled each one with dignity and respect. I am grateful to our staff for their tireless efforts and to President Preckwinkle for her leadership and guidance during a challenging year. It has been, and continues to be, an honor to serve the residents of Cook County.

Respectfully, Ponni Amurkuman M.D.

Ponni Arunkumar, MD Chief Medical Examiner

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE 2021

Number of Deaths in Cook County

47,077

Number of Medical Examiner Cases 12,615



Number of Deaths Investigated

21,659

Number Non-Medical Examiner Cases

9,045

Average Number of Bodies in Storage per Day

203

Scene Visits

724

Complete Autopsies

4,172

Partial Autopsies

154

Unclaimed Bodies

204

Number of Bodies Transported to the Office

6,952

Number of Bodies Transported by the Office

0

Exhumations

0

Unidentified Autopsied

17

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Number of Deaths Investigated		21659
Number of Cases by Manner of Death Accident Homicide Natural Suicide Undetermined Pending Non human/No manner ¹	3568 1095 7248 506 157 8 33	12615
Homicides Autopsied		1094
Suicides Autopsied		148
Non-Motor Vehicle Accident Deaths Certified		3124
Motor Vehicle Accident Deaths Certified		444
Motor Vehicle Accidents Autopsied		56
Non-Motor Vehicle Accidents Autopsied		2059
Naturals Autopsied		696
Undetermined Autopsied		152
Unidentified Autopsied		15
Opioid-Related		1935
Gun-Related Homicides Latino NL White NL Black NL Other	139 36 819 14	1008
Scene Visits Non-Medical Examiner Cases		724 9045

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Number of Deaths in Cook County ¹	47077
Number of Bodies Transported to the Office	6925
Number of Bodies Transported by the Office	0
External Examinations By Physician By Investigator	3373 2761 612
Partial Autopsies	154
Complete Autopsies	4172
Hospital Autopsies under ME Jurisdiction	0
Cases Where Toxicology Was Performed	4711
Bodies Unidentified After Examination	17
Exhumations	0
Unclaimed Bodies	204
Number of Bodies in Storage	316
Organ Donations	263
Tissue Donations	802
Cornea Donations	1016
Microscopic Studies	692
Formal Neuropathology Studies	55
Formal Cardiac Pathology Studies	72

¹ Illinois Department of Public Health. Death Statistics. Retrieved from Vital Statistics: https://dph.illinois.gov/content/dam/soi/en/web/idph/publications/idph/data-and-statistics/vital-statistics/death-statistics/Deaths-by-county_2020-2021.pdf

COOK COUNTY MEDICAL EXAMINER'S OFFICE

MISSION

The mission of the Cook County Medical Examiner's Office is to ensure public health and safety by performing autopsies and postmortem examinations to determine cause and manner of death for individuals who die in Cook County.

VISION & COMMITMENT

It is the intent of the Cook County Medical Examiner's Office to maintain a regional forensic center of excellence for the practice and advancement of forensic science for the Midwest. Through the recruitment of high-quality staff, training of current staff and improvements to the existing facility, the Medical Examiner's Office is embracing President Preckwinkle's mission to serve as good stewards of public resources, placing a special emphasis on our core values – equity, engagement and excellence.

HISTORY OF THE MEDICAL EXAMINER'S OFFICE

Because of a 1972 referendum, the Cook County Medical Examiner's Office was established on December 6, 1976, and the Office of the Coroner was abolished.

A medical examiner differs from a coroner in that a medical examiner is an appointed official who is required to have pertinent qualifications, while a coroner is an elected official who is not required to have any qualifications.

In Cook County, the Medical Examiner must be a physician licensed to practice medicine in the State of Illinois and certified by the American Board of Pathology in anatomic and forensic pathology.

In Cook County, the President of the Board of Commissioners, with the advice and consent of the Board of Commissioners, appoints the Medical Examiner.

The Cook County office is the only Medical Examiner system in Illinois, with a jurisdiction of approximately 5.2 million people. The Medical Examiner's Office plays a vital role in the administration of justice and protection of public health.

MEDICAL EXAMINER'S OFFICE OPERATIONS

JURISDICTION

Under Illinois law and local ordinance, the Medical Examiner's Office is both required and empowered to determine the cause and manner of death. The Office investigates any human death that falls within any or all the following categories:

- Criminal violence
- Suicide
- Accident
- Suddenly when in apparent good condition
- Unattended by a practicing licensed physician
- Suspicious or unusual circumstances
- Unlawful fetal death as provided in Public Act 101-0013 of the 101st General Assembly of Illinois
- Poisoning or attributable to an adverse reaction to drugs and/or alcohol
- Disease constituting a threat to public health
- Injury or toxic agent resulting from employment
- During some medical diagnostic or therapeutic procedures
- In any prison or penal institution
- When involuntarily confined in jail, prison hospitals or other institutions or in police custody
- When any human body is to be cremated, dissected, or buried at sea
- When a dead body is brought into a new medico-legal jurisdiction without proper medical certification

DEPARTMENTS

The Medical Examiner's Office is organized into 8 divisions:

- Administration
- Forensic Technician
- Investigations
- Histology
- Medical Records
- Pathology
- Photography
- Radiology

PRIMARY MEDICAL EXAMINER FUNCTIONS

Death Investigations

The Investigations Division answers initial calls from mandated reporters concerning the death of an individual within the County. Investigators determine if the deceased falls within the jurisdiction of the Medical Examiner's Office and performs scene investigations when warranted.

MEDICAL EXAMINER'S OFFICE OPERATIONS

Autopsies and Postmortem Examinations

Forensic pathologists perform complete autopsy examinations or external examinations as necessary to determine cause and manner of death. Forensic pathologists also provide expert testimony in criminal and civil matters at deposition or trial. Forensic pathologists meet with law enforcement, state's attorneys, public defenders and family as appropriate. Finally, forensic pathologies provide prompt notification to respective agencies, such as the Department of Public Health, of any death due to a reportable disease, unsafe consumer product and unsafe work environment.

Other Services Provided

Other services provided by the Medical Examiner's Office include:

- Providing Vital Statistics with cause and manner of death for inclusion on the death certificate
- Preparing or reviewing toxicology reports which list any foreign substance found in body
- Coordinating and obtaining consultations when appropriate
- Processing cremation permits for funeral directors
- Teaching medical students, pathology residents, law enforcement personnel and international observers
- Conducting award-winning research
- Providing statistics to third parties to optimize public health

Information for Families

In addition to its vital role in law enforcement and public health, one of the most important duties of the Medical Examiner's Office is to provide information to families who have lost a loved one – often suddenly and unexpectedly. Adding to the stress of coping with a sudden loss, this may be the first-time families have dealt with the Medical Examiner's Office.

The Medical Examiner's Office works with families to assist them through the process. The Medical Examiner's Office investigators and clerical staff are there to help, and forensic pathologists can assist family members trying to understand how the death occurred. In some situations, the Medical Examiner will not be able to discuss details of the case until the autopsy report is issued.

Autopsies and External Examinations

An autopsy is a thorough examination of the body, inside and out, performed to document or rule out injuries and diseases. The autopsy procedure is performed by a medical doctor with special forensic training in recognizing the appearance of injuries and the effects of diseases. An autopsy may take several hours to perform and is often followed by laboratory tests, some of which can take months to complete. In cases where an autopsy may not be warranted, an examination of only the external surfaces of the body is performed.

Requesting an Autopsy Report

Families may request copies of postmortem reports through the Medical Examiner's Online

MEDICAL EXAMINER'S OFFICE OPERATIONS

Portal or by contacting the Medical Records Department.

Information related to Pending Cases

After the medical examination is complete, it is sometimes necessary to perform further analysis, be it medical or investigative in nature, to determine the exact cause and manner of death. In this instance, a "Pending" Death Certificate will be issued. Disposition of the deceased may take place with this Pending Death Certificate. Once the forensic pathologist has determined the final cause of death, the Pathology Department will notify the families of the cause and manner of death. At this point, the funeral home can obtain certified copies of the final death certificate for the family through the Illinois Department of Vital Records.

Death Certificate

Families may obtain certified copies of death certificates by contacting the funeral home or the Cook County Clerk's Office. There are some suburbs which operate their own registrar. Families are advised to call the funeral home or the Medical Examiner's Office for the contact information of the registrar that handled a decedent's death certificate.

Recovering Property of Descendants

The Medical Examiner's Office inventories all personal belongings of the decedent upon arrival to the office. Property will be turned over to the funeral home retained by the legal next of kin. The Medical Examiner's Office may ask the requestor to provide a birth certificate, marriage license or other papers to prove the relationship to the deceased. Unclaimed property will be held by the Medical Examiner's Office for one year. After one year, the property is subject to sale by auction.

Virtual Cemetery

The final disposition sites of the indigents buried/cremated by the Medical Examiner's Office can now be found on the open data portal for Cook County Government. In February 2014, the Medical Examiner's Office began utilizing cremation as a dignified alternative to burial for indigent remains. Cremated remains are kept at the Medical Examiner's Office for one year and may be picked up by the family or willing persons who are authorized to do so.

Unidentified Persons

The Medical Examiner's Office has a website to provide up-to-date descriptions of unidentified remains whose cases have been processed. Individuals may contact the Medical Examiners' Office Investigations Department regarding matching one of the unidentified bodies to the identity of a missing person.

Unclaimed Persons

If someone is a next of kin to an unclaimed person, they can contact our Indigent Coordinator to claim that person. Unclaimed indigents will be cremated at the County's expense within 60 days of admission to the Medical Examiner's Office as dictated by the Cook County Medical Examiner Ordinance.

2021 HIGHLIGHTS

NATIONAL ASSOCIATION OF COUNTIES ACHIEVEMENT AWARD

The Medical Examiner's Office was awarded a National Association of Counties Achievement Award for its "Medical Examiner COVID-19 Dashboard" in the health category. The dashboard provided up to date information on COVID-19 deaths to the public through an interactive website. Data is searchable in multiple categories that allow users to view demographic information and where deaths occurred throughout the County.

THREE FELLOW GRADUATES

Fellows Libby Aronson, Meredith Reynolds and Xin Zhang finished their one-year forensic pathology fellowship at the CCMEO on June 30, 2021, Doctors Aronson and Reynolds stayed on at the CCMEO as Assistant Medical Examiners. We congratulate them for their excellent work ethic and wish them well as they embark on their careers.

GRANTS

In 2021, the Office was awarded a federal grant (Rapid DNA Analysis Program of the Cook County Medical Examiner's Office) for \$153,093 to fund DNA testing. The Office was also awarded the Comprehensive Opioid Abuse Site-based Program Grant for \$381,018 in 2018, funding an epidemiologist to assist with statistical analysis.



2021 HIGHLIGHTS

INDIGENT BURIAL: DIGNIFIED FINAL DISPOSITION

In 2014, the CCMEO transitioned from burying indigent decedents to utilizing cremation for dignified final disposition. In 2015, a full-time indigent coordinator was hired to manage the indigent disposition process. Since its inception, the indigent cremation program has cremated more than 3,000 indigent decedents and streamlined the process. The program is made possible through partnerships with the U.S Department of Veterans Affairs, the Cook County Public Administrator, the Cook County Sheriff's Police Department, the Cook County Funeral Director Association, the Archdiocese of Catholic Cemeteries, foreign consulates, faith organizations and support from the community.

In 2018, the CCMEO started a new process for burying unclaimed veterans by utilizing a County contract to enlist the services of local funeral homes who transport unclaimed veterans to Abraham Lincoln National Cemetery. This has led to the timely and respectful burial of indigent and unclaimed veterans. As the CCMEO looks forward, we will continue to cremate indigent decedents, strive to eliminate unnecessary wait in disposition and provide a dignified final disposition option for indigents.



The following is a list of funeral homes, directors and other individuals who assisted the CCMEO in 2021:

Funeral Home	Director
EVANSTON FUNERAL & CREMATION	ROLAND WEIS
NORTHLAKE FH	LEONARD ZIELINSKI
RIZZO FS	MARK RIZZO
	JACK LAROCCO
HULTGREN FH	TIM HULTGREN
	SUSAN DYER
JOHNSON FH	LINDA BROOKS
WARREN FH & CREMATORY	GREG JORGENSEN
	KAREN RADA
SAMBRANO FS	LAURA SAMBRANO
	TAMMY WILLIAMS
AQUAGREEN DISPOSITIONS	RYAN CATTONI
YGEE FS	YVETTE GREEN

COLLABORATIVE EFFORTS

LOCAL MEDICAL EDUCATION AGREEMENTS

The Medical Examiner's Office has agreements with several universities in which medical students and residents participate in one to three-month rotations to observe pathologists conducting examinations, including autopsies, to determine the cause and manner of death. The following are the institutions that participate in this program:

- Des Moines University Osteopathic Medical Center
- Loyola University Chicago Medical Center
- Ann and Robert H. Lurie Children's Hospital of Chicago
- Marian University
- McGaw Medical Center of Northwestern University
- Midwestern University
- Rosalind Franklin School of Medical Sciences
- Rush University Medical Center
- St. James School of Medicine
- University of Chicago Medical Center
- University of Illinois at Chicago
- University of Wisconsin

NATIONAL MEDICAL EDUCATION AGREEMENTS

The Medical Examiner's Office has an agreement with Des Moines University for students interested in forensic medicine to observe autopsies and learn about the practice of forensic medicine.

The Medical Examiner's Office also has agreements with Concordia University and Eastern Virginia Medical School for medical students to observe how pathologists determine cause and manner of death through examinations and autopsies.

INTERNATIONAL MEDICAL EDUCATION AGREEMENTS

The Medical Examiner's Office has an agreement with the University of Rome, Department of Anatomy, Histology, Forensic Medicine and Orthopedics, the Medical University of Gdansk (Gdansk, Poland) and the Postgraduate Institute of Medicine, University of Colombo, in Colombo, Sri Lanka, that allows visiting professors to rotate through the Medical Examiner's Office and gain valuable experience on examinations, especially in the examination of gunshot victims – a process that is not common in other countries.

PATHOLOGISTS' ASSISTANT ROTATIONS

The Medical Examiner's Office has an agreement with Rosalind Franklin University of Medicine and Science that facilitates pathologist assistant students to observe pathologists conducting examinations and autopsies.

COLLABORATIVE EFFORTS

MORTUARY SCIENCES

The Medical Examiner's Office has agreements with Malcolm X College and Worsham College of Mortuary Science that facilitate the donation of indigent bodies for use by mortuary students to further their study of mortuary science. These agreements are in accordance with the Illinois Cadaver Act and generate lab-use fees to the Medical Examiner's Office.

GRIEF COUNSELING

The Medical Examiner's Office entered into an agreement in November 2013 with the University of Illinois Jane Addams School of Social Work that allows students to assist the families of patients by providing grief counseling.

PUBLIC POLICY

The Medical Examiner's Office entered into an agreement with the University of Chicago-Harris School of Public Policy to support the Medical Examiner's Office in projects related to homicide and opioid death.

ILLINOIS VIOLENT DEATH REPORTING SYSTEM

The Medical Examiner's Office shares data with the Illinois Violent Death Reporting System (IVDRS). The IVDRS links data from various public health and criminal justice sources to present the fullest possible picture of the circumstances surrounding violent death in Illinois. IVDRS helps Illinois policymakers analyze violence-related deaths, identify risk factors and develop prevention efforts.

ORGAN/TISSUE DONATION

Anatomical Gift Association of Illinois

The Medical Examiner's Office and the Anatomical Gift Association of Illinois facilitate donations of indigent bodies for medical teaching in accordance with the Illinois Cadaver Act.

Gift of Hope

The Medical Examiner's Office has an agreement with Gift of Hope to donate organs and tissue upon consent of the next of kin. Gift of Hope will occasionally request to procure tissues postmortem at the Medical Examiner's Office. Each organ donor can save up to seven lives and each tissue donor can improve 50 lives.

CONSULTATIONS

The Medical Examiner's Office requests radiology consultation from John H. Stroger, Jr. Hospital of Cook County on complicated cases involving extensive radiology to determine cause and manner of death. The Office requests neuropathology and cardiac pathology consultation from Northwestern Hospital, anthropology consultation from anthropologists at Loyola University and University of Chicago and dental consultation from Dr. Sanford Block.

COLLABORATIVE EFFORTS

FELLOWSHIP

The Medical Examiner's Office offers annually a one-year forensic pathology fellowship program for three graduates of an accredited residency program in general pathology. This program is accredited by the Accreditation Council for Graduate Medical Education (ACGME).

The selected fellows receive training in scene investigation, forensic toxicology, firearms, odontology, autopsy techniques, injury pattern recognition and anthropology. In addition to this training, the selected fellows each perform approximately 250 autopsies during the program.

TOURS

The Medical Examiner's Office limits the number of tours of the facility out of respect for the deceased and their families and to avoid any disruption to daily operations. Tours are provided to students in health-related fields, fire personnel, law enforcement personnel and trainees as well as government agencies involved in the medicolegal justice system. For more information, contact Mary Marik, Registered Health Information Administrator, at (312) 997-4430.

A LOOK AHEAD

The Medical Examiner's Office has the following initiatives in 2022:

- Increase the number of assistant medical examiners to reduce the average caseload per pathologist.
- Capital improvements including the renovation of the investigations department and intercom expansion throughout the building
- Continue planning for a new state of the art medical examiner building
- Continue to work with Gift of Hope to increase organ and tissue donation throughout Cook County.
- Maintain National Association of Medical Examiner's accreditation and accreditation with the International Standards Organization.

CHARTS AND GRAPHS

Fig. 1. Number of Cases Examined by CCMEO, 2012-2021

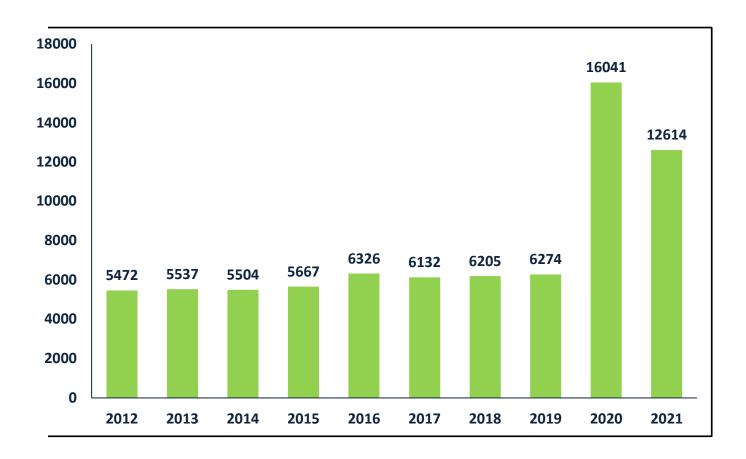


TABLE 1. MONTH WHEN INCIDENT OCCURRED

MONTH	Number	Percent
JANUARY	1272	10.08%
FEBRUARY	791	6.27%
MARCH	901	7.14%
APRIL	1018	8.07%
MAY	947	7.51%
JUNE	735	5.83%
JULY	811	6.43%
AUGUST	1040	8.24%
SEPTEMBER	963	7.63%
OCTOBER	937	7.43%
NOVEMBER	1042	8.26%
DECEMBER	1616	12.81%
NOT KNOWN	541	4.29%

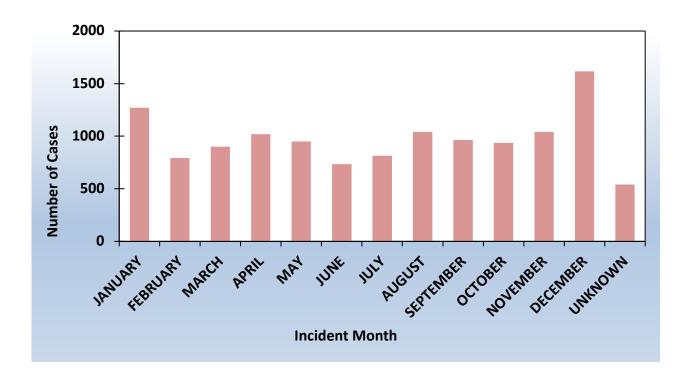


TABLE 1. DAY WHEN INCIDENT OCCURRED

DAY	Number	Percent
SUNDAY	1731	13.72%
MONDAY	1788	14.17%
TUESDAY	1690	13.40%
WEDNESDAY	1696	13.45%
THURSDAY	1724	13.67%
FRIDAY	1735	13.75%
SATURDAY	1709	13.55%
NOT KNOWN	541	4.29%

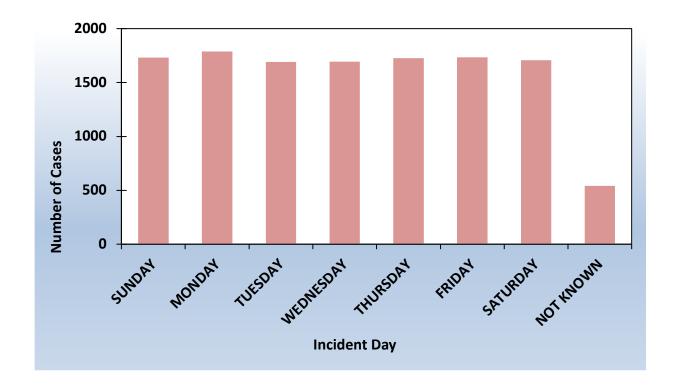


TABLE 3. AGE GROUPS of DECENDENTS

AGE	Number	Percent
Under 1	81	0.64%
1 to 4	28	0.22%
5 to 14	60	0.48%
15 to 24	688	5.45%
20 to 34	1198	9.50%
35 to 44	1192	9.45%
45 to 54	1702	13.49%
55 to 64	2453	19.44%
65 to 74	2197	17.42%
75 to 84	1587	12.58%
85 and older	1430	11.33%



TABLE 4. RACE AND LATINO ORIGIN OF DECEDENTS

RACE	Number	Percent
AM. INDIAN	13	0.10%
BLACK	5284	41.89%
WHITE	4793	38.00%
ASIAN	311	2.47%
LATINO	1818	14.41%
OTHER	395	3.13%

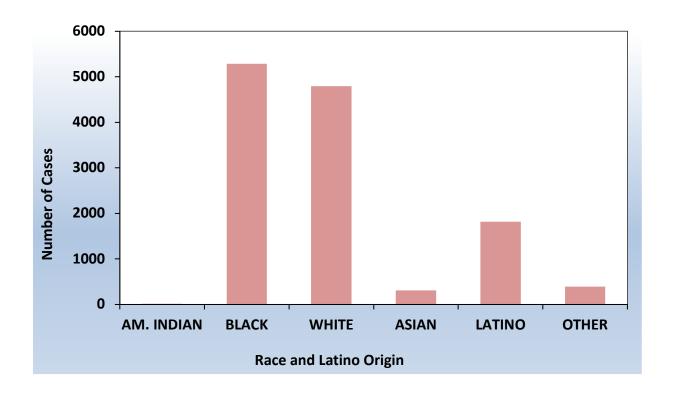


TABLE 5. GENDER OF DECEDENTS

GENDER	Number	Percent
MALE	8512	67.48%
FEMALE	4069	32.26%
NOT KNOWN	33	0.26%

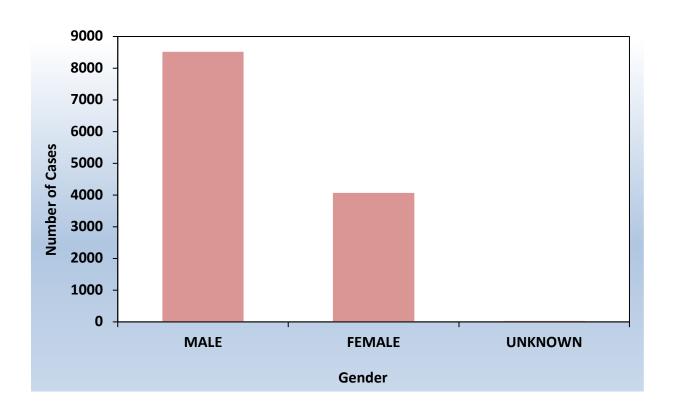
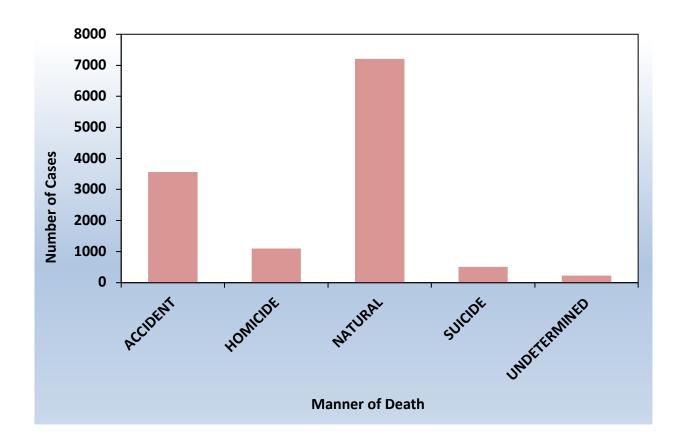


TABLE 6. MANNER OF DEATH²

MANNER	Number	Percent
ACCIDENT	3568	28.29%
HOMICIDE	1093	8.67%
NATURAL	7248	57.46%
PENDING	8	0.06%
SUICIDE	506	4.01%
UNDETERMINED	190	1.51%
NO MANNER		



² Category of cases without manner (n=33) of death is not shown

TABLE 7. AUTOPSY STATUS

AUTOPSY	Number	Percent
YES	4324	55.89%
NO	3412	44.11%

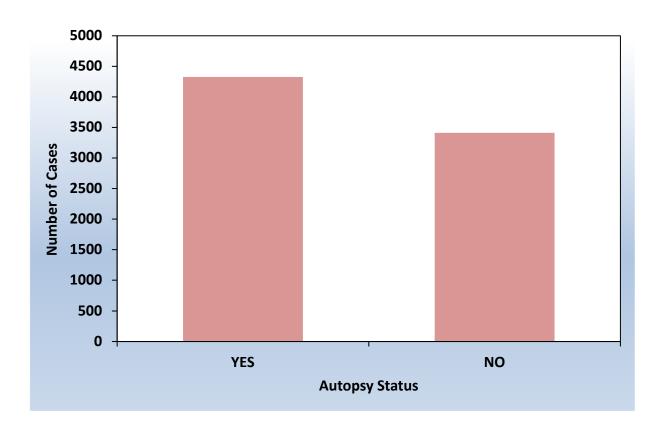


TABLE 8. MOTOR VEHICLE ACCIDENTS

STATUS	Number	Percent
DRIVER/OPERATOR	257	51.20%
OTHER	19	3.78%
PASSENGER	91	18.13%
PEDESTRIAN	134	26.69%

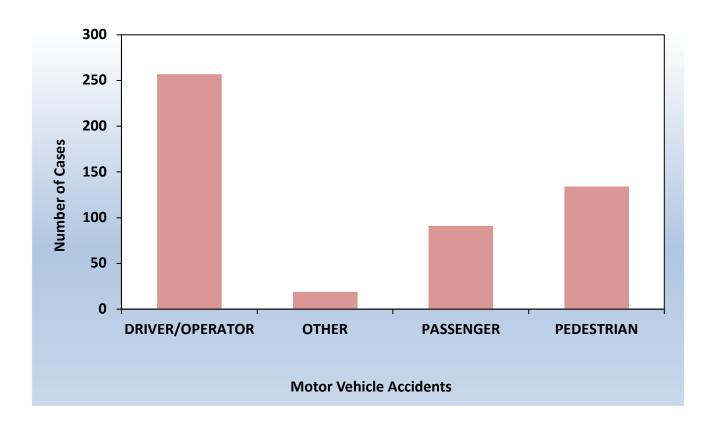


TABLE 9. MANNER OF DEATH BY MONTH OF INCIDENT

MONTH	ACCIDENT	HOMICIDE	NATURAL	PENDING	SUICIDE	UNDETERMINED & NO MANNER	Total
JANUARY	248	68	903	0	40	13	1272
FEBRUARY	215	47	487	0	36	6	791
MARCH	286	70	493	0	35	17	901
APRIL	282	73	615	0	34	14	1018
MAY	315	96	471	0	48	17	947
JUNE	291	112	263	2	47	20	735
JULY	337	134	281	0	39	20	811
AUGUST	309	107	550	0	48	26	1040
SEPTEMBER	299	130	466	0	51	17	963
OCTOBER	315	90	462	1	57	12	937
NOVEMBER	278	83	628	4	36	13	1042
DECEMBER	326	74	1176	1	29	10	1616
NOT KNOWN	67	10	453	0	6	5	541
Total	3568	1094	7248	8	506	190	12614

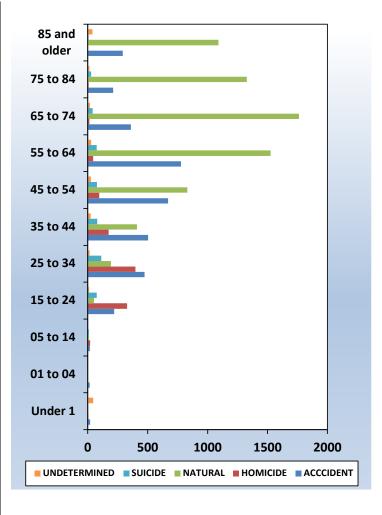
TABLE 10. MANNER OF DEATH BY WEEKDAY OF INCIDIENT³

Manner	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
ACCIDENT	553	485	454	496	483	485	545
HOMICIDE	205	148	139	138	105	164	185
NATURAL	874	1051	993	977	1034	982	884
PENDING	1	2	1	1	1	0	2
SUICIDE	73	80	72	60	72	77	66
UNDETERMINED & NO MANNER	25	22	31	24	29	27	27
Total	1731	1788	1690	1696	1724	1735	1709

³ All cases do not have incident date so day of incident cannot be determined for all cases.

TABLE 11. AGE GROUP AND MANNER OF DEATH⁴

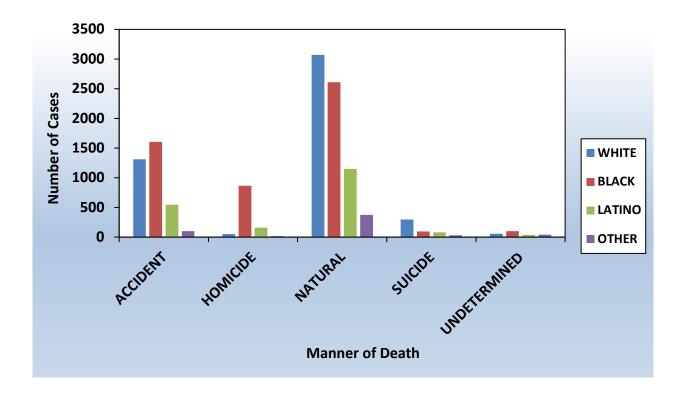
	ACCID.	ном.	NATU.	SUIC.	UNDETER. & NO MANNER
<1	23	6	5	0	45
1-4	15	4	6	0	3
5-14	17	21	11	9	2
15-24	221	328	51	74	12
25-34	474	399	194	114	15
35-44	504	174	410	79	25
45-54	671	96	832	77	23
55-64	778	46	1534	76	20
65-74	360	14	1776	41	5
75-84	213	7	1336	28	3
>=85	292	0	1093	8	37
Total	3568	1095	7248	506	190



⁴ The graph and table do not show pending cases (n=8).

TABLE 12. MANNER OF DEATH BY RACE (WHITE/BLACK) AND LATINO ORIGIN5

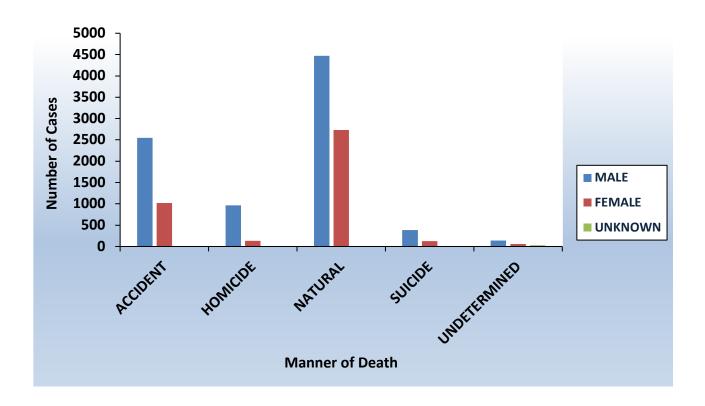
Number	WHITE	BLACK	LATINO	OTHER
ACCIDENT	1314	1607	549	98
HOMICIDE	51	867	160	16
NATURAL	3091	2622	1159	376
SUICIDE	295	97	81	33
UNDETERMINED & NO MANNER	40	86	25	39
Total	4791	5279	1974	562



⁵ This table does not show Asian, Am. Indian, and Other Race. The graph and table do not show pending cases.

TABLE 13. MANNER OF DEATH BY GENDER OF DECENDENT⁶

MANNER	MALE	FEMALE	NOT KNOWN	Total
ACCIDENT	2548	1019	1	3568
HOMICIDE	963	131	0	1094
NATURAL	4495	2750	3	7248
SUICIDE	383	123	0	506
UNDETERMINED & NO MANNER	117	44	29	190
Total	8506	4067	33	12606

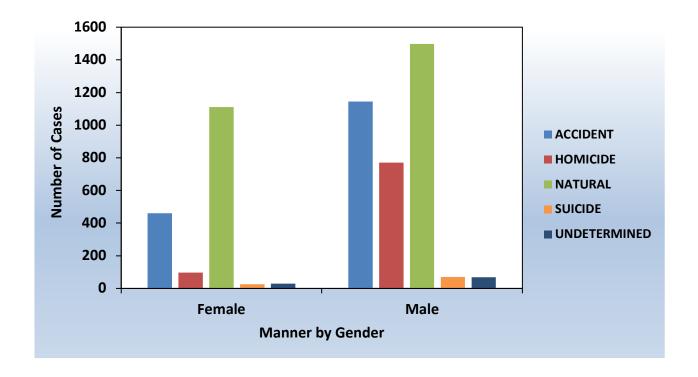


⁶ Table and graph do not show cases with pending manner of death (n=8) and those without manner (n=33).

TABLE 14. MANNER OF DEATH BY RACE AND LATINO ORIGIN AND GENDER OF DECEDENT7

RACE: BLACK

GENDER	ACCIDENT	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED & NO MANNER	Total
Female	461	96	1117	26	24	1724
Male	1146	771	1504	71	61	3553
Total	1607	867	2621	97	85	5277

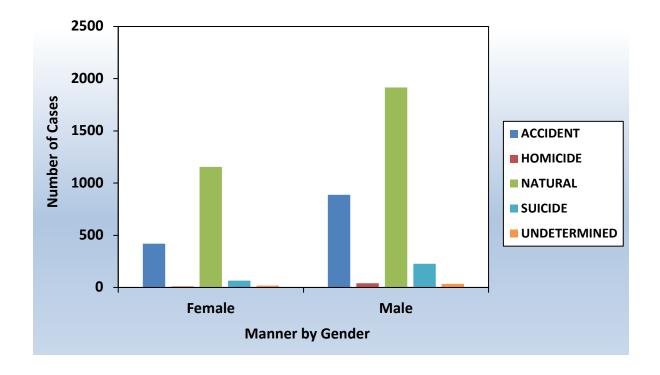


⁷ Table and graph do not show cases with pending manner of death.

TABLE 15. MANNER OF DEATH BY RACE AND LATINO ORIGIN AND GENDER OF DECEDENT8

RACE: WHITE

GENDER	ACCIDENT	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED & NO MANNER	Total
Female	422	10	1162	66	13	1673
Male	892	41	1929	229	27	3118
Total	1314	51	3091	295	40	4791

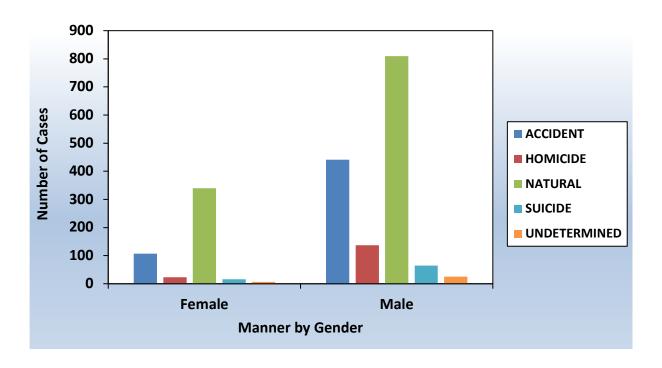


⁸ Table and graph do not show cases with pending manner of death.

TABLE 16. MANNER OF DEATH BY RACE AND LATINO ORIGIN AND GENDER OF DECEDENT9

RACE: LATINO

GENDER	ACCIDENT	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED & NO MANNER	Total
Female	107	23	342	16	6	494
Male	442	137	817	65	19	1480
Total	549	160	1159	81	25	1974



⁹ Table and graph do not show cases with pending manner of death.

TABLE 17. ACCIDENT MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP

	WHITE	BLACK	LATINO	OTHER
<1	3	15	5	0
1-4	2	8	4	1
5-14	5	6	6	0
15-24	67	88	57	9
25-34	187	161	118	8
35-44	215	168	112	9
45-54	186	374	100	11
55-64	191	503	74	10
65-74	129	193	25	13
75-84	121	56	23	13
>=85	208	35	25	24
Total	1314	1607	549	98

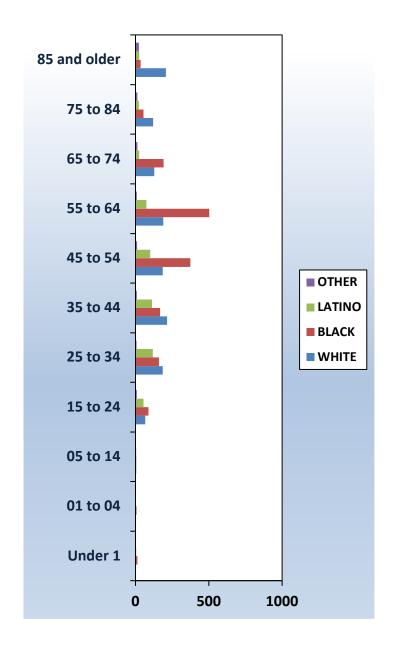


TABLE 18. HOMICIDE MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP AMONG MALES

	WHITE	BLACK	LATINO	OTHER
<1	2	0	3	0
1-4	0	2	0	0
5-14	0	10	4	0
15-24	9	235	44	4
25-34	11	296	49	3
35-44	7	128	18	1
45-54	4	61	14	2
55-64	5	30	2	2
65-74	1	9	1	1
75-84	2	0	2	1
>=85	0	0	0	0
Total	41	771	137	14

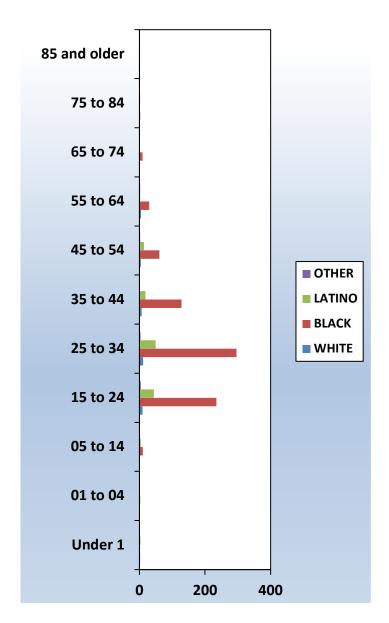


TABLE 19. HOMICIDE MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP AMONG FEMALES

	WHITE	BLACK	LATINO	OTHER
<1	0	1	0	0
1-4	0	1	1	0
5-14	0	5	2	0
15-24	2	27	7	0
25-34	4	31	4	1
35-44	1	13	5	1
45-54	1	12	2	0
55-64	0	5	1	0
65-74	2	0	0	0
75-84	0	1	1	0
>=85	0	0	0	0
Total	10	96	23	2

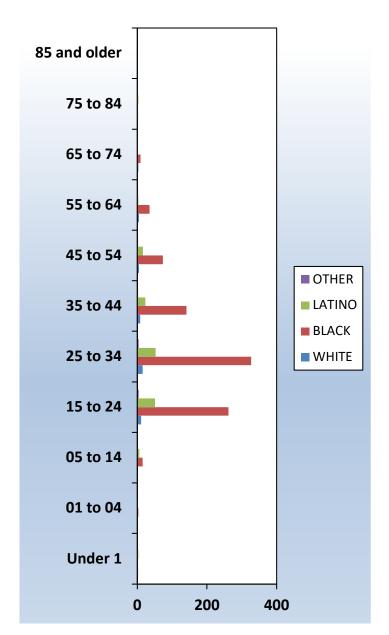


TABLE 20. HOMICIDE MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP

	WHITE	BLACK	LATINO	OTHER
<1	2	1	3	0
1-4	0	3	1	0
5-14	0	15	6	0
15-24	11	262	51	4
25-34	15	327	53	4
35-44	8	141	23	2
45-54	5	73	16	2
55-64	5	35	3	2
65-74	3	9	1	1
75-84	2	1	3	1
>=85	0	0	0	0
Total	51	867	160	16

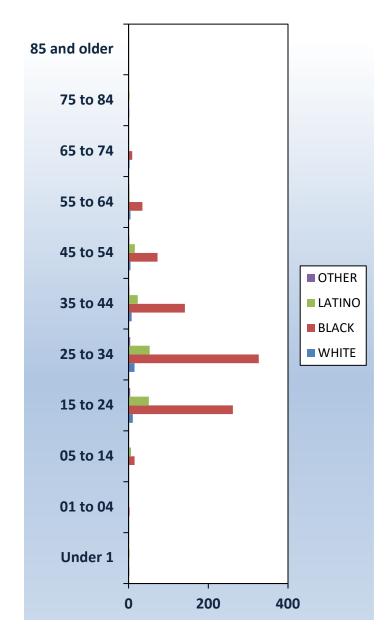


TABLE 21. NATURAL MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP

	WHITE	BLACK	LATINO	OTHER
<1	0	4	0	1
1-4	1	3	0	2
5-14	3	2	5	1
15-24	8	23	19	1
25-34	53	92	44	5
35-44	114	180	94	22
45-54	272	331	200	29
55-64	572	648	261	53
65-74	753	671	268	84
75-84	664	407	161	104
>=85	651	261	107	74
Total	3091	2622	1159	376

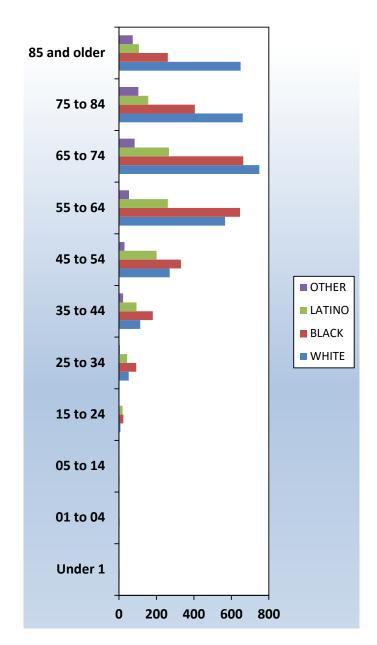


TABLE 22. SUICIDE MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP

	WHITE	BLACK	LATINO	OTHER
<1	0	0	0	0
1-4	0	0	0	0
5-14	2	5	2	0
15-24	25	26	18	5
25-34	43	32	28	11
35-44	51	11	11	6
45-54	51	9	12	5
55-64	60	7	6	3
65-74	32	3	3	3
75-84	24	3	1	0
>=85	7	1	0	0
Total	295	97	81	33

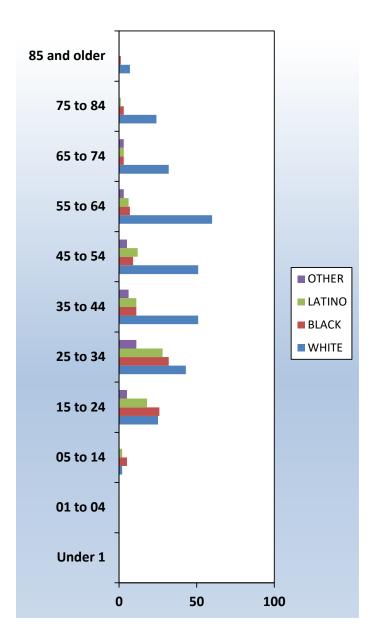


TABLE 23. UNDETERMINED MANNER OF DEATH BY RACE/LATINO ORIGIN AND AGE GROUP

	WHITE	BLACK	LATINO	OTHER
<1	4	28	8	2
1-4	0	3	0	0
5-14	0	1	1	0
15-24	3	6	1	1
25-34	2	10	2	1
35-44	8	12	4	1
45-54	7	9	4	3
55-64	7	11	1	1
65-74	1	1	2	1
75-84	2	0	1	0
>=85	4	2	0	2
Total	38	83	24	12

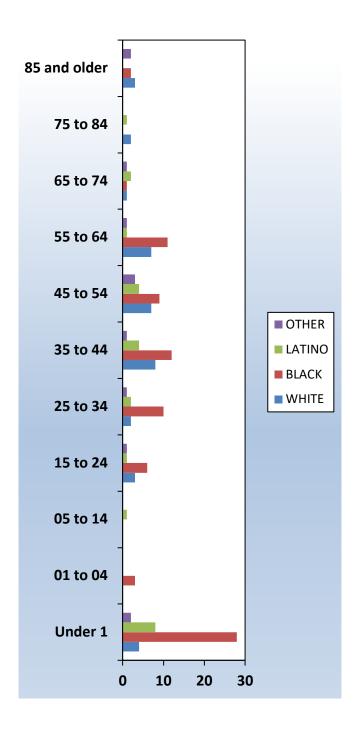
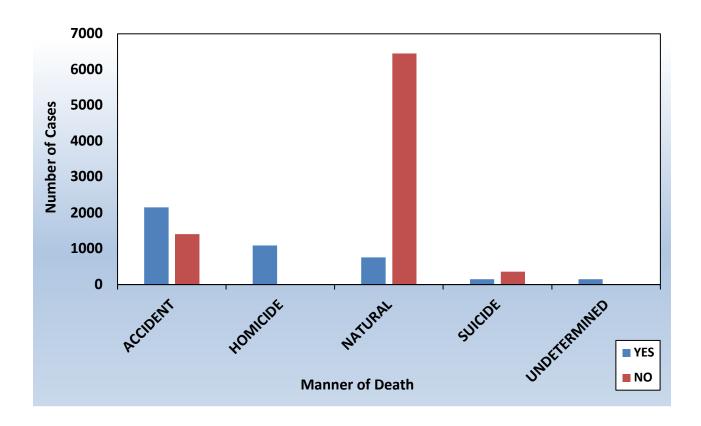


TABLE 24. MANNER OF DEATH BY AUTOPSY STATUS¹⁰

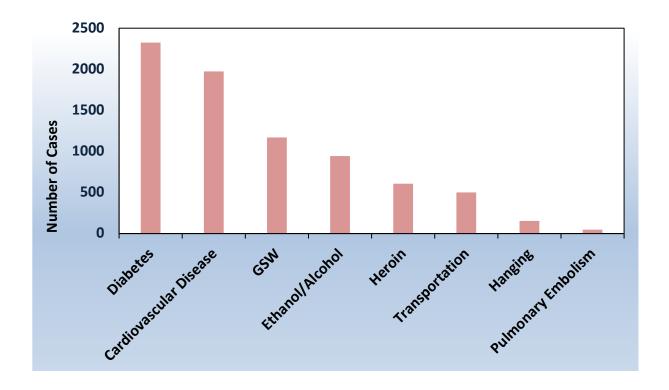
AUTOPSY					
MANNER	YES	NO	Total		
ACCIDENT	2162	1406	3568		
HOMICIDE	1094	1	1095		
NATURAL	758	6490	7248		
SUICIDE	148	358	506		
UNDETERMINED	153	4	157		



¹⁰ Table and graph do not show cases with pending manner of death (n=8) and those without manner (n=33).

TABLE 25. CAUSE OF DEATH (GENERAL)

Cause	Number	Percent
Diabetes	2326	18.44%
Cardiovascular Disease	1976	15.67%
GSW ¹¹	1171	9.28%
Ethanol/Alcohol	943	7.48%
Heroin	607	4.81%
Transportation	502	3.98%
Hanging	153	1.21%
Pulmonary Embolism	46	0.36%



¹¹ Gunshot Wound

TABLE 26. FREQUENT CAUSE OF ACCIDENTAL OVERDOSE BY RACE AND LATINO ORIGIN

DRUG	White	Black	Latino	Other
Fentanyl-related	527	920	250	17
Cocaine-related	256	581	127	6
Combined Drug	446	795	217	15
Ethanol/Alcohol-related	191	276	119	3
Heroin-related	181	344	70	3

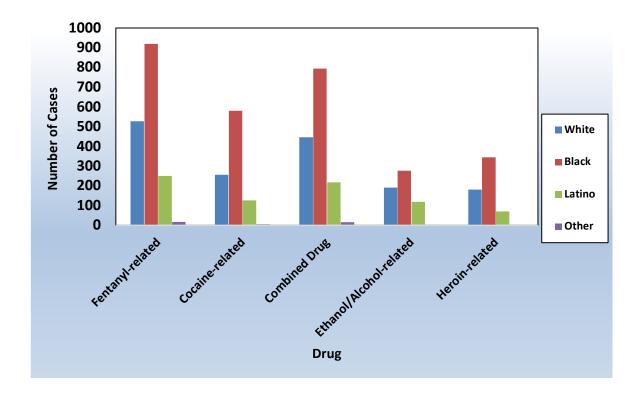


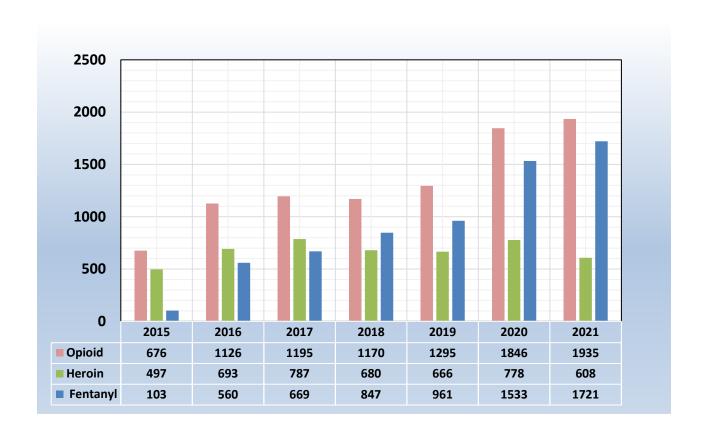
TABLE 27. FREQUENT CAUSE OF DEATH BY RACE AND LATINO ORIGIN (HOMICIDE MANNER OF DEATH)13

CAUSE	White	Black	Latino	Other	Total
Asphyxiation/Asphyxia	0	2	1	0	3
Blunt Force	1	7	3	1	12
Gunshot wound	36	819	139	14	1008
Multiple Injuries	2	3	6	0	11
Other	6	15	4	0	25
Stab or Sharp Force	7	22	7	1	37

TABLE 28. FREQUENCY OF HOMICIDE BY RACE AND LATINO ORIGIN

	2020		2021	
	#	% of Total	#	% of Total
White	46	4.67%	51	4.66%
Black	766	77.69%	868	79.25%
Latino	167	16.94%	160	14.63%
Other	7	0.71%	16	1.46%
Total	986		1095	

OPIOID DEATHS



OPIOID DEATHS

Drug	2015	2016	2017	2018	2019	2020	2021
Opioid	676	1126	1195	1170	1295	1846	1935
Heroin-related	497	693	787	680	666	778	608
Fentanyl-related ¹²	103	560	669	847	961	1533	1721

Demographics of Opioid Cases

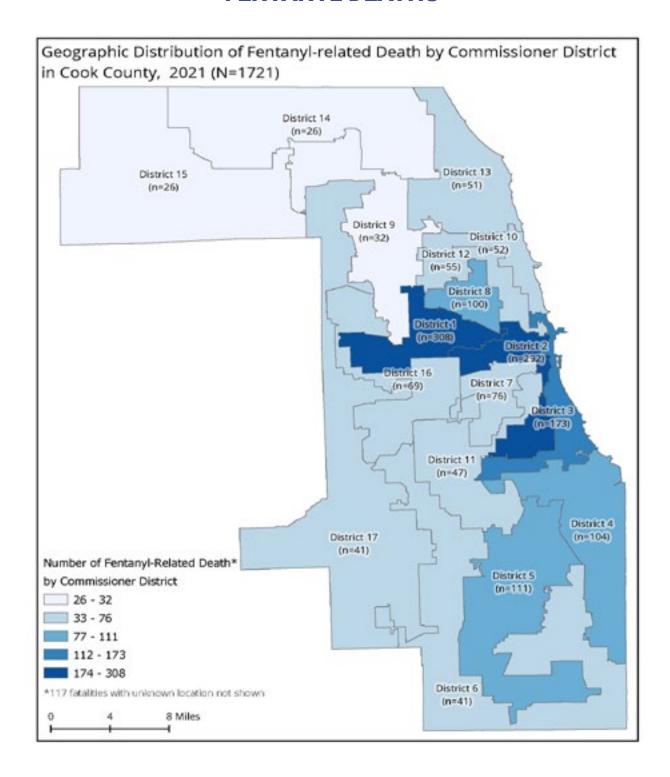
Gender	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Male	353	76	166	486	833	909	870	967	1420	1473
Female	103	40	76	190	293	286	300	328	426	462

Race/Ethnicity	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
NL White	246	54	158	409	545	578	509	534	655	600
NL Black	147	47	81	219	408	487	502	593	901	1030
Latino	53	15	0	28	161	123	155	153	270	281

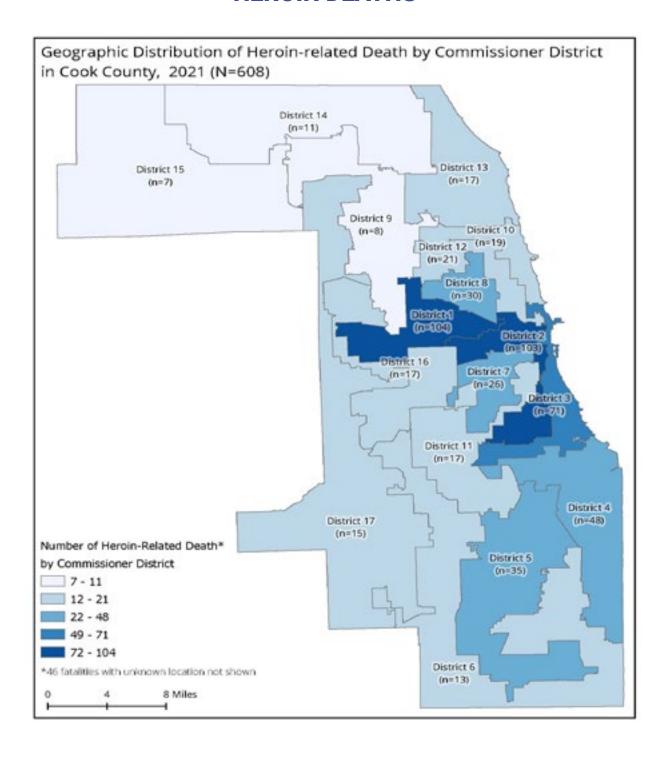
Age	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<1	0	2	0	0	0	0	0	0	0	3
1-4	1	0	0	1	0	0	0	0	1	0
5-14	0	0	0	0	0	1	0	0	0	0
15-24	40	12	16	47	86	74	73	60	95	121
25-34	108	25	47	145	251	243	235	212	314	318
35-44	105	18	60	134	240	252	240	259	378	352
45-54	142	34	70	184	311	336	304	390	481	471
55-64	58	20	40	144	206	242	269	294	438	521
65-74	1	5	6	18	26	42	46	72	124	137
75-84	1	0	1	1	4	5	3	3	12	7
>=85	0	0	2	2	2	0	0	5	3	5
Total	456	116	242	676	1126	1195	1170	1295	1846	1935

¹² Fentanyl and heroin cases are not mutually exclusive. Opioid cases frequently have a combination of opioids and other substances.

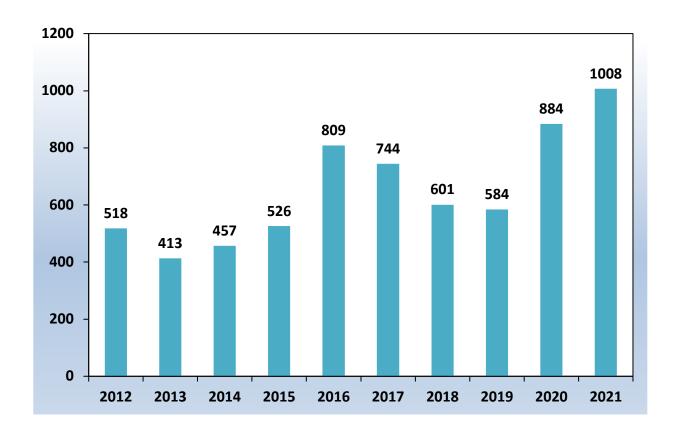
FENTANYL DEATHS



HEROIN DEATHS



GUN HOMICIDE DEATHS



GUN HOMICIDE DEATHS

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gun Homicide	518	431	457	526	809	744	601	584	884	1008

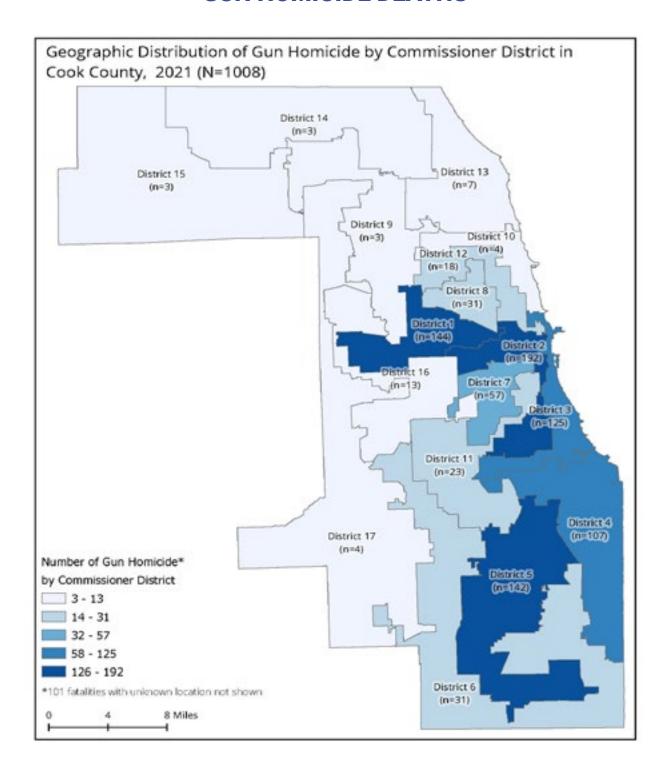
DEMOGRAPHICS OF GUN HOMICIDE CASES

Gender	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Male	477	403	422	496	753	680	547	524	813	902
Female	41	28	35	30	56	64	54	60	71	106

Race/Ethnicity	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
NL White	27	18	28	24	35	27	28	28	29	36
NL Black	406	342	359	422	644	589	492	472	702	819
Latino	84	70	65	77	126	125	78	80	148	139

Age	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<1	0	2	0	0	1	2	0	0	1	0
1-4	1	0	0	0	0	0	0	0	1	0
5-14	11	8	9	10	4	9	9	3	11	19
15-24	242	195	234	239	371	331	221	235	280	317
25-34	160	135	119	167	249	247	212	200	344	382
35-44	59	59	50	67	112	90	89	80	159	164
45-54	28	17	29	22	42	37	36	41	48	80
55-64	13	4	8	16	22	18	20	18	27	34
65-74	4	5	5	1	4	6	10	4	6	10
75-84	0	2	1	2	2	2	2	2	3	2
>=85	0	0	2	2	2	2	2	0	4	1
Total	518	427	457	526	809	744	601	584	884	1008

GUN HOMICIDE DEATHS



GUN-RELATED DEATHS

TABLE 29. FREQUENCY OF HOMICIDES FROM GUNSHOT WOUND BY RACE AND LATINO ORIGIN

	2020	2021
	% of Total	% of Total
White	3.29%	3.57%
Black	79.34%	81.25%
Latino	16.80%	13.79%
Other	0.57%	1.39%

INFANT DEATHS

Infant13 Deaths. CCMEO investigated a total of 90 infant deaths in 2021.

TABLE 30. INFANT DEATH BY MONTH AND YEAR

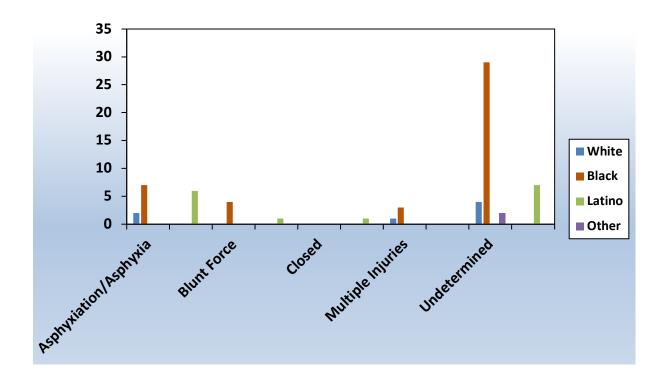
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
2016	6	7	10	12	11	13	6	6	7	9	12	13	112
2017	7	7	8	3	8	8	12	11	6	8	6	12	96
2018	9	3	8	6	5	6	14	10	6	3	15	10	95
2019	10	4	8	8	8	9	9	8	3	2	5	9	83
2020	6	4	3	12	11	10	4	5	5	5	10	5	80
2021	8	6	9	3	11	10	9	7	6	7	8	6	90

^{13 0-1-}year-old

INFANT DEATHS

TABLE 31. FREQUENT CAUSE OF INFANT DEATH BY RACE AND LATINO ORIGIN

CAUSE	White	Black	Latino	Other	Total
Asphyxiation/Asphyxia	2	7	5	0	14
Blunt Force	0	2	1	0	3
Closed	0	0	1	0	1
Multiple Injuries	1	2	0	0	3
Undetermined	4	29	7	2	42



CHILD DEATHS

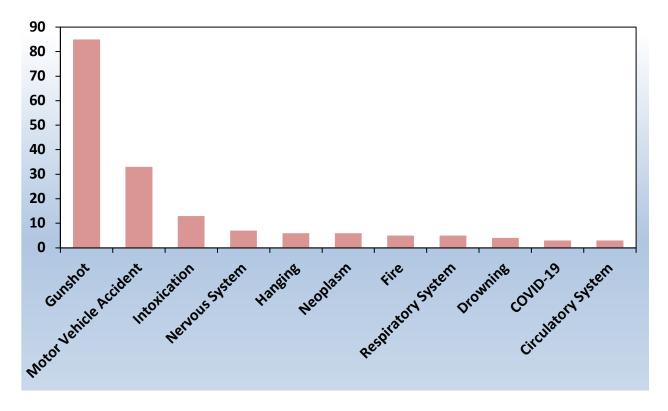
Deaths in Children (age 2-17). CCMEO investigated a total of 192 children deaths in 2021.

TABLE 32. CHILDREN DEATH BY MONTH AND YEAR

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
2016	13	10	8	8	16	15	18	14	6	15	13	13	149
2017	10	16	10	11	17	22	13	17	12	10	11	7	156
2018	7	7	12	5	14	14	15	32	12	17	10	4	149
2019	6	11	12	9	11	10	13	12	12	15	7	13	131
2020	16	3	10	14	37	15	9	12	6	6	9	16	153
2021)	15	10	14	13	22	17	24	14	18	19	18	8	192

CHILD DEATHS

Figure 29. Children Death by Primary Cause in Cook County, 2021



CHILD DEATH BY JURISDICTION

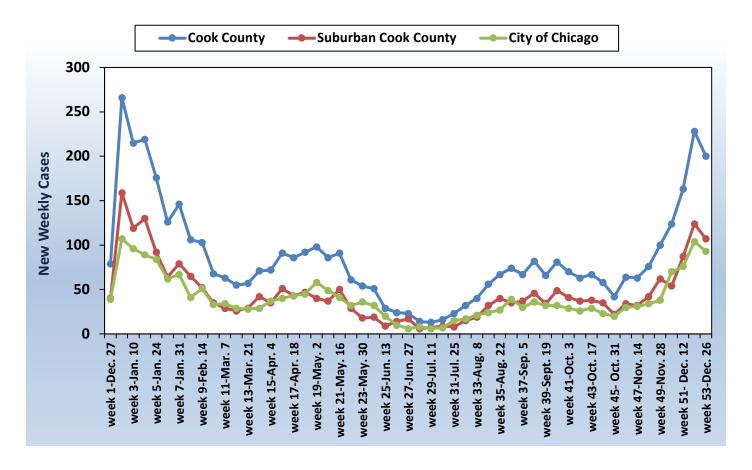
COVID-19 Mortality. CCMEO investigated 4,593 COVID-19 cases from January 1, 2021, to December 31, 2021. The breakdown of deaths due to COVID-19 by jurisdiction and year is shown.

Fig. 30. Number of COVID-19 Mortality Cases by Year and Jurisdiction, 2020-2021



CHILD DEATH BY JURISDICTION

Fig. 31. New Weekly COVID-19 Mortality Cases by Jurisdiction, January 01, 2021 through December 31, 2021



New weekly cases of COVID-19 deaths fluctuated between January and December 2021 in Cook County. The number of deaths was highest in week two (n=266) and then decreased between weeks of three and twelve. There was a gradual increase in COVID-19 deaths that started in week 45 and peaked in week 52.

APPENDIX A

The "At A Glance" section was prepared using data produced by Lablynx between January 1, 2021, to December 31, 2021. Data for manner of death (accident, homicide, natural, suicide, undetermined), organ, tissue and cornea donations were pulled independently.

Figures 1-30 and tables 1-31 were prepared using "2021 Annual Report" produced by Lablynx between January 1, 2021, to December 31, 2021.

The infant, children and COVID-19 sections reflect cases that start with ME2021. If these data are filtered out by date of death, date of incident or date of examination, these numbers will be different. The trend figures reflect cases that start with ME2016, ME2017, ME2018, ME2019, ME2020 and ME2021.

To find city of incident, cases were filtered for each jurisdiction including Cook County, City of Chicago and suburban Cook County. The only exception is COVID-19 deaths which were filtered out by city of residence.

ACKNOWLEDGMENTS

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