

COOK COUNTY MEDICAL EXAMINER

ANNUAL REPORT 2018

Toni Preckwinkle

President,
Cook County Board of Commissioners

Tanya S. Anthony Chief Administrative Officer

Ponni Arunkumar, M.D. Chief Medical Examiner

MAIN OFFICE:

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

HOURS:

The Medical Examiner's Office operates 24 hours per day, seven days per week. The office is open to the general public: 7:00 a.m. to 3:00 p.m., Monday through Friday, except for official Cook County holidays.

IDENTIFICATION HOURS:

11:00 a.m. to 7 p.m., Monday through Friday. 12 p.m. to 4 p.m., weekends and official Cook County holidays.

www.cookcountyil.gov/medical-examiner

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LETTER FROM THE CHIEF MEDICAL EXAMINER



The Cook County Medical Examiner's Office (CCMEO) maintains full accreditation with the National Association of Medical Examiners (NAME). This year, the office has conformed to International Organization for Standardization (ISO) requirements to attain the highest level of credibility available to U.S. and international medicolegal death investigation offices. We are the first office in the country to attain ISO 17020 and ISO 17025 accreditation.

In 2018, the office was awarded a federal grant (\$74,075) to fund toxicology testing and DNA analysis, a federal grant (\$74,551) to provide continuing education to the CCMEO Investigators with the opportunity to obtain American Board of Medicolegal Death Investigator certification, and a Comprehensive Opioid Abuse Site-based Program grant (\$381,018) to collaborate with other local agencies (Cook County Department of Public Health, Chicago Department of Public Health, Cook County Health and Hospitals System, and the Chicago High Intensity Drug Trafficking Area) to combat the opioid epidemic plaguing the community and to hire an office epidemiologist to assist with statistical analysis. In 2019, the CCMEO applied for two competitive grants. Potential monetary awards received from these solicitations will offset Cook County taxpayer dollars that are needed to fund the operational expenses of the CCMEO.

The opioid epidemic continued in Cook County in 2018 with 1,138 opioid-related deaths, a slight decrease (2.5%) compared to the 2017 opioid deaths. In 2018, fentanyl-related deaths outnumbered heroin-related deaths. Gun violence deaths continued to be high with gun homicide deaths in Cook County

totaling more than those in Los Angeles and New York combined. There was a 20% decline in gun homicide deaths in 2018, compared to 2017. Detailed information is included in the tables and maps in this report. Our forensic pathologists and staff actively participate in local and regional task forces created to address these crises.

The CCMEO started a new process for burying unclaimed Veterans using a County contract to enlist the services of local funeral homes who provide burial at Lincoln National Cemetery. This has led to the timely and respectful burial of our indigent veterans with a 40% reduction in the number of days they stay at the office.

Enclosed in this annual report, is data detailing the operations of the CCMEO. In addition to performing autopsies and determining the cause and manner of death, information is available regarding our role in organ and tissue donation, death investigation, the indigent disposition program, and drug-related death statistics.

I am forever grateful to the tireless efforts of our staff and the support of Cook County Government. It has been and continues to be an honor to serve the residents of Cook County.

Ponni Amerikanan M.D.

Respectfully,

Ponni Arunkumar, MD Chief Medical Examiner

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Number of Medical Examiner Cases

6,205



Accident	2,395
Natural	2,275
Homicide 726	
Suicide 485	
155 Undetermined	

Number of Deaths in Cook County 41,898

Number of Deaths Investigated

12,597

Number Non-Medical Examiner Cases

6,392

Average Number of Bodies in Storage per Day

180

Scene Visits

1,371

Complete Autopsies

3,410

Partial Autopsies

183

Unclaimed Bodies

525

Number of Bodies Transported to the Office

5,233

Number of Bodies Transported by the Office

0

Exhumations

1

Unidentified Autopsied

9

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Homicides Autopsie	ed	726
Suicides Autopsied		200
Non Motor Vehicle	Accident Deaths Certified	2,114
Motor Vehicle Accid	lent Deaths Certified	281
Motor Vehicle Accid	lents Autopsied	75
Non-MVA Accidents	s Autopsied	1,470
Naturals Autopsied		843
Undetermined Auto	psied	149
Gun Related Homic	ides	599
White Black Latino Other	28 491 78 3	
External Examination	ons	
By Physician		1,622
By Investigat	tor	618
Hospital Autopsies	under ME Jurisdiction	0
Cases Where Toxico	ology Was Performed	3,435
Bodies Unidentified	After Examination	9
Organ Donations		115
Tissue Donations		189
Cornea Donations		409
Microscopic Studies	3	1,195
Formal Neuropatho	logy Studies	103
Formal Cardiac Path	nology Studies	65
Fetal Death Certific	ates Issued	8



ROBERT J. STEIN INSTITUTE OF FORENSIC MEDICINE

In 1993, the County Board renamed the building the Robert J. Stein Institute of Forensic Medicine, after Dr. Robert J. Stein, a forensic pathologist and the first to hold the position of Cook County Medical Examiner, serving from 1976 to 1993.

THE OFFICE OF THE COOK COUNTY MEDICAL EXAMINER



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 create 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 vision of fiscal responsibility, innovative leadership, transparency and accountability, and improved services.

HISTORY OF THE MEDICAL EXAMINER'S OFFICE

As a result of a 1972 referendum, the Office of the Medical Examiner of Cook County 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 specific qualifications, while a coroner is an elected official who is not required to have any particular 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 5.3 million people. The Office of the Medical Examiner 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 is both required and empowered to determine the cause and manner of death. The Medical Examiner investigates any human death that falls within any or all of 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 CCMEO is organized in 10 divisions:

- Administration
- Autopsy
- Intake/Morgue Attendants
- Investigations
- Histology

- Medical Records
- Pathology
- Photography
- Radiology
- Toxicology

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 jurisdiction of the CCMEO and performs scene investigations.

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 Health, of any death due to a reportable disease, unsafe consumer product and unsafe work environment.

Other Services Provided

Other services provided by the CCMEO include:

- Providing vital statistics with cause and manner of death for inclusion on the death certificate
- Preparing 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

MEDICAL EXAMINER'S OFFICE OPERATIONS

INFORMATION FOR FAMILIES

In addition to its vital role in law enforcement and public health, one of the most important duties of the CCMEO 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 CCMEO.

The CCMEO works with families to assist them through the process. The CCMEO investigators and clerical staff are there to help, and the staff of 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 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 CCMEO 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 Medical Records Department will notify the funeral home. 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 CERTIFICATES

Families can 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 CCMEO for the contact information of the registrar that handled a decedent's death certificate.

RECOVERING PROPERTY OF DECEDENTS

The CCMEO 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 CCMEO 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 CCMEO 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 CCMEO can now be found on the open data portal for Cook County Government.

In February 2014, the CCMEO began utilizing cremation as a dignified alternative to burial for indigent remains. Cremated remains are kept at the CCMEO for one year and may be picked up by the family or willing persons who are authorized to do so.

UNIDENTIFIED PERSONS

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

UNCLAIMED PERSONS

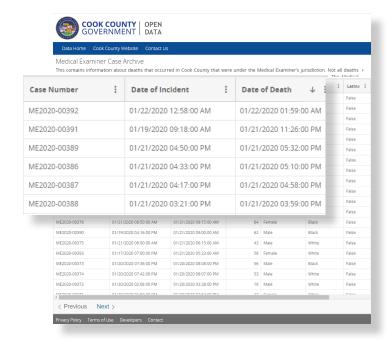
If someone is a next of kin to an unclaimed person, they can contact our Indigent Coordinator to claim that person. Unclaimed indigents will be cremated at the County's expense within 60 days of admission to the CCMEO as dictated by the CCMEO Ordinance.

2018 HIGHLIGHTS

URBAN AND REGIONAL INFORMATION SYSTEMS ASSOCIATION (URISA) EXEMPLARY SYSTEM RECOGNITION

In 2017, the CCMEO Office and Cook County's Bureau of Technology teamed up to create the first-of-their-kind interactive dashboards, maps, and an <u>open dataset</u> providing the public with a geographic visualization of every Medical Examiner case since 2014. The system is updated daily.

"As Cook County continues to face challenges like gun violence and an opioid epidemic, this portal can aid researchers, medical professionals, law enforcement, journalists and the public in obtaining vital data," Cook County Board President Toni Preckwinkle said. "We are honored that URISA has recognized our efforts to provide our stakeholders with information about these public health and safety issues."



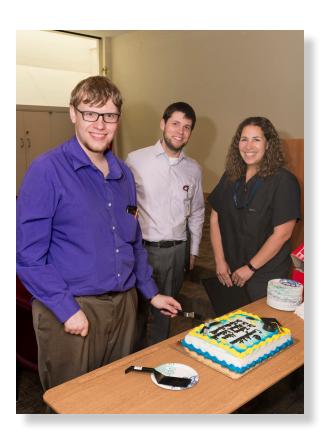
THREE FELLOWS GRADUATE

Fellows Howell, Eckhardt, and Akers finished their one year Forensic pathology fellowship at the CCMEO on June 30, 2018.

Drs. Howell and Eckhardt continued on as Assistant Medical Examiners at our office.

Dr. Akers went on to become an Assistant Medical Examiner in Ohio.

We salute them for their excellent work ethic and wish them well in their new jobs.



2018 **HIGHLIGHTS**

MISSING PERSONS DAY

On Saturday, April 28, 2018, the CCMEO in partnership with National Missing and Unidentified Persons System (NamUs), the Cook County Sheriff's Office, the Chicago Police Department, Illinois State Police, and coroners from throughout the region hosted its inaugural Missing Persons Day. Those with friends and family missing more than one month were able

to submit DNA samples, medical records, pictures and other records to aid in the search of their loved ones. Emotional support services were also made available. The CCMEO maintains updated information about unidentified remains on its <u>website</u> with the goal of identifying the deceased with information obtained from the public.



INDIGENT BURIAL: DIGNIFIED FINAL DISPOSITION

Traditionally, the CCMEO buried all indigents at the County's expense. However, in early 2014, Cook County ceased this practice and, after much collaboration and dialogue with a variety of stakeholders, introduced cremation as the primary means of dignified final disposition. The County will continue to bury unidentified and fetal remains. The process of declaring a deceased individual as indigent involves a partnership with support agencies such as the U.S. Department of Veterans Affairs, foreign consulates,

the Illinois Department of Corrections, and the Cook County Public Administrator, among others. In 2015, the CCMEO hired a full-time Indigent Coordinator to manage the indigent disposition process. In 2018, the CCMEO started a new process for burying unclaimed Veterans using a County contract to enlist the services of local funeral homes who provide burial at Lincoln National Cemetery. This has led to the timely and respectful burial of our indigent veterans with a 40% reduction in the number of days they stay at the office.

The Medical Examiner's Office
expresses a special thank you to
expresses a special thank you to
Roman F. Szabelski, Executive Director,
Catholic Cemeteries, Archdiocese of Chicago,
Indiana F. Szabelski, Executive Director,
Indiana State of Company of Catholic Cemetery

Thanks to all the funeral directors
Examiner's Office in laying to rest
their professionalism and compassion.

Thank You!

The following is a list of funeral homes, directors and other individuals who assisted the CCMEO in 2018:

AA Rayner & Sons James Smith

Charles Childs

Aquagreen Dispositions Ryan Cattoni

Calahan Funeral Home Molly Calhoun

Chicago Jewish Funerals Simcha Frank

Durante Funeral Service Gary Durante

Evanston Funeral And Cremation Violetta Delatorre

Roland Weis Tammy Williams

Halpin Funeral Home Colm Halpin

Hultgren Funeral Home Tim Hultgren

Mark Rizzo

Johnsons Funeral Home Eileen Johnson

Laura Sambrano Funeral Service Laura Sambrano

Northwest Funeral Care Leonard Zielinski

Pederson Ryberg Funeral Home

Perez Franco Funeral Home Yadira Perez

Rizzo Funeral Service Mark Rizzo

Sambrano Funeral Service Laura Sambrano

Ygee Funeral Service Yvette Green

Nhemya Ward

Malcolm X Mortuary School

Worsham Mortuary School

COLLABORATIVE EFFORTS

LOCAL MEDICAL EDUCATION AGREEMENTS

The CCMEO 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, in order to determine the cause and manner of death. The following are the institutions that participate in this program:

- Loyola University Chicago Medical Center
- Ann and Robert H. Lurie Children's Hospital of Chicago
- McGaw Medical Center of Northwestern University
- Midwestern University
- · Rush University Medical Center
- University of Chicago Medical Center
- University of Illinois at Chicago (UIC)

NATIONAL MEDICAL EDUCATION AGREEMENTS

The CCMEO has an agreement with Des Moines University for students with interest in forensic medicine to observe autopsies and learn about the practice of Forensic Medicine.

The CCMEO also has an agreement with Pacific Northwest University of Health Sciences, Concordia University, and Eastern Virginia Medical School for medical students to observe pathologists conduct examinations, including autopsies, in order to determine the cause and manner of death.

INTERNATIONAL MEDICAL EDUCATION AGREEMENTS

The CCMEO 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 CCMEO and gain valuable experience about examinations, especially in the examination of gunshot victims — a process that is not common in other countries.

PATHOLOGISTS' ASSISTANT ROTATIONS

The CCMEO has an agreement with Rosalind Franklin University of Medicine and Science that facilitates pathologists' assistant students to observe examinations, including autopsies.

MORTUARY SCIENCES

The CCMEO has agreements with Malcolm X College and Worsham College of Mortuary Science that facilitates 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 CCMEO.

GRIEF COUNSELING

The CCMEO 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 CCMEO entered into an agreement with the University of Chicago – Harris School of Public Policy to support the CCMEO.

ILLINOIS VIOLENT DEATH REPORTING SYSTEM

The CCMEO 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 policy makers analyze violence-related deaths, identify risk factors and develop prevention efforts.

COLLABORATIVE EFFORTS

ORGAN/TISSUE DONATION

Anatomical Gift Association of Illinois

The CCMEO 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 CCMEO 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 CCMEO. Each organ donor can save up to seven lives and each tissue donor can improve 50 lives.

CONSULTATIONS

The CCMEO requests radiology consultation from John H. Stroger, Jr. Hospital of Cook County regarding 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.

FELLOWSHIP

The CCMEO 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 CCMEO 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, and 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 CCMEO is undertaking the following initiatives in 2019:

- Increase the number of assistant medical examiners to reduce the average caseload per pathologist.
- Complete capital improvements including the renovation of autopsy rooms and the investigations department, intercom expansion throughout the building, and replacement of the built-in toxicology walk-in refrigerator/freezer.
- 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.

CASE **OVERVIEW**







CATEGORIZED PRIMARY CAUSES OF DEATH

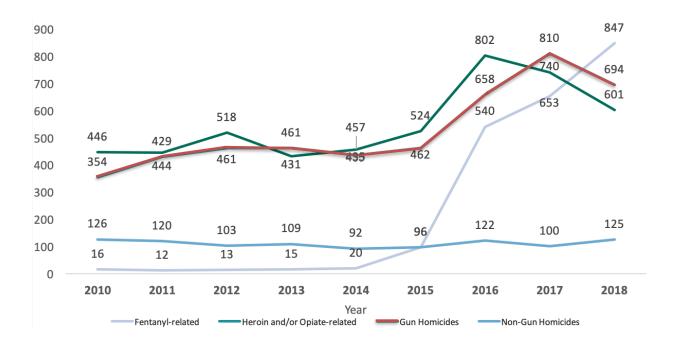
Categorized Primary Causes of Death	2015	2016	2017	2018
Anoxic encephalopathy	31	25	25	15
Asthma	42	23	23	15
Cancer	32	24	16	18
Carbon monoxide toxicity	30	28	21	29
Chronic obstructive pulmonary disease	25	19	14	11
Cirrhosis	7	4	2	4
Closed head injuries	104	128	107	99
Cold Exposure	10	13	20	24
Complications of diabetes	46	41	50	52
Complications of fracture	68	61	50	67
Complications of morbid obesity or obesity	16	31	26	17
Complications of Multiple Injuries	465	509	511	540
Complications of stab wounds	41	58	41	53
Cranial/Cervical injuries	88	113	101	82
Drowning	44	58	70	64
Drug Toxicity	728	1173	1311	1358
Electrocution	6	7	10	5
Epilepsy	24	23	19	19
Ethanol toxicity	159	182	177	178
Exsanguination	2	10	1	2
Fall or complications of fall	49	53	80	70
Fetal death	5	12	4	8
Gunshot	672	923	908	768
Hanging	68	72	114	112
Heart Disease	2108	1990	1794	1909
Hemorrhage or hematoma	110	106	83	100
Hemothorax	3	2	1	2
Liver Disease	28	8	7	1
Others	239	257	198	229
Paraplegia	0	0	2	4
Pneumonia	30	32	19	17
Prematurity	2	2	1	0
Pulmonary thromboembolism	66	37	56	47
Renal disease	8	7	6	0
Sarcoidosis	3	1	2	3
Sepsis	24	26	19	17
Suffocation	145	128	121	109
Thermal injuries	30	29	31	48
Undetermined	109	112	92	109
Total	5667	6327	6133	6205

TOP FOUR CAUSES OF DEATHS 2015 TO 2018





DRUG TOXICITY AND HOMICIDE TRENDS FROM 2010 TO 2018



Year	Fentanyl- related	Heroin and/or Opiate- related	Gun Homicides	Non-Gun Homicides
2010	16	354	446	126
2011	12	429	444	120
2012	13	461	518	103
2013	15	461	431	109
2014	20	435	457	92
2015	96	462	524	96
2016	540	658	802	122
2017	653	810	740	100
2018	847	694	601	125
Total	2212	4764	4963	993

Note: Fentanyl-related and heroin and/or opiate-related cases are not mutually exclusive. Our office observes a significant amount of cases caused by the toxicity of a combination of drugs. Therefore, we present the number of cases based on drug type in order for the public to better understand the trend.

DEMOGRAPHICS OF OPIATE DECEDENTS

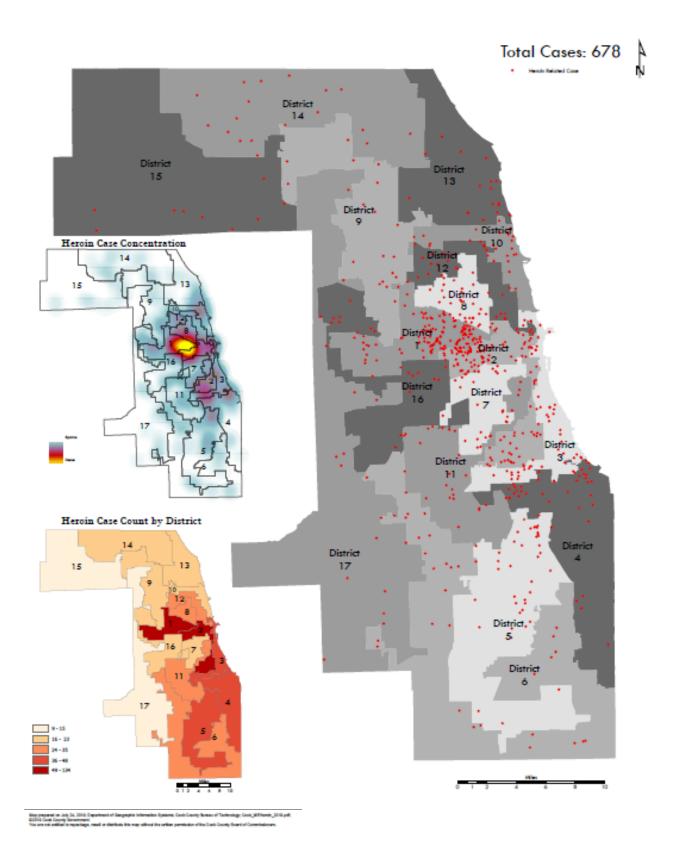
Drug	2015	2016	2017	2018
Opiates	647	1081	1167	1138
Heroin-related	497	693	787	680
Fentanyl-related	103	560	669	847

Gender	2015	2016	2017	2018
Male	471	802	890	849
Female	176	280	276	289

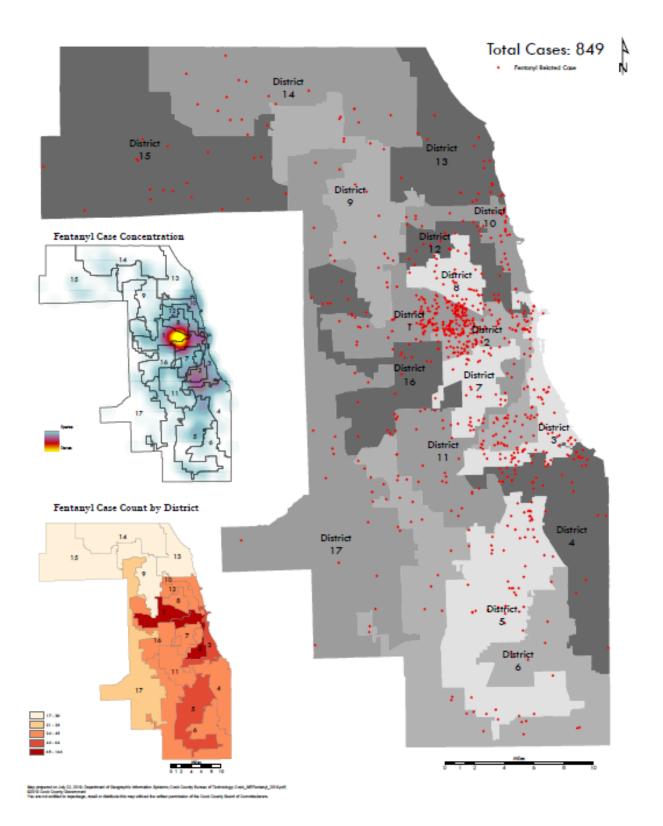
Race/Ethnicity	2016	2017	2018
White (non-Hispanic)	514	554	489
Black (non-Hispanic)	399	482	492
Hispanic/Latino	157	121	153

Age Range	2015	2016	2017	2018
15-24	47	82	71	71
25-34	140	248	236	231
35-44	131	226	242	234
45-54	173	299	328	296
55-64	135	199	239	258
65-74	14	25	43	45
75-84	0	6	5	0

HEROIN RELATED CASES IN 2018



FENTANYL RELATED CASES IN 2018



DEMOGRAPHICS OF **GUN HOMICIDES**

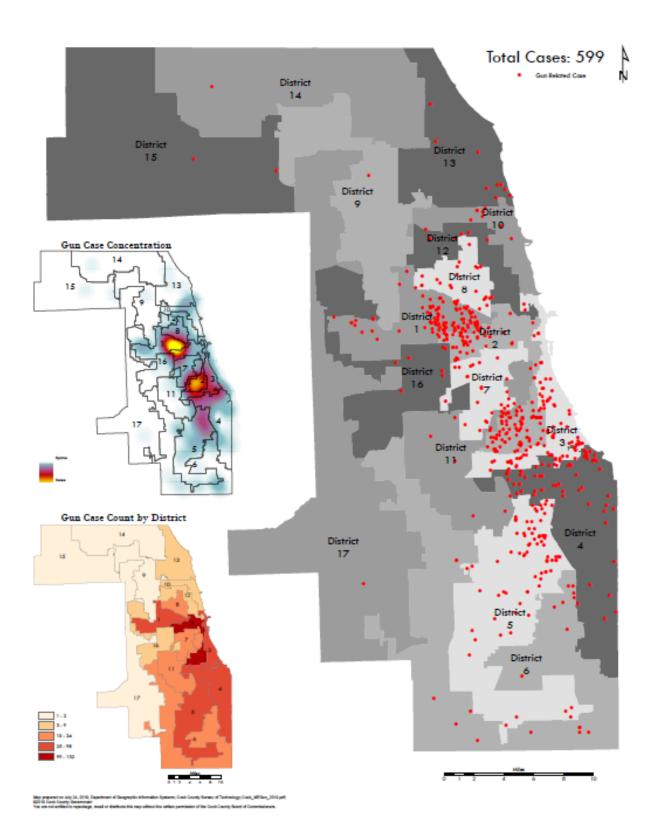
	2015	2016	2017	2018
Gun homicides	525	805	744	597

Gender	2015	2016	2017	2018
Male	495	750	680	547
Female	30	55	64	54

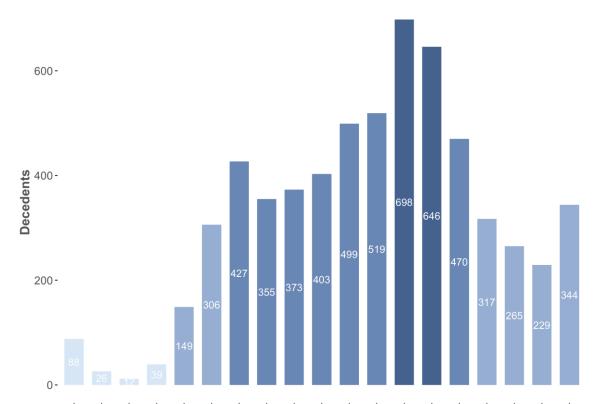
Race/Ethnicity	2015	2016	2017	2018
White (non-Hispanic)	25	35	27	28
Black (non-Hispanic)	421	641	589	492
Hispanic/Latino	67	125	125	78

Age Range	2015	2016	2017	2018
0-14	16	15	12	10
15-24	239	360	331	221
25-34	166	247	247	212
35-44	67	112	90	89
45-54	22	42	37	36
55-64	16	22	18	20
65-74	1	4	6	10
75-84	2	2	2	2
85-94	1	0	1	1

GUN RELATED HOMICIDES IN 2018



AGE DISTRIBUTION

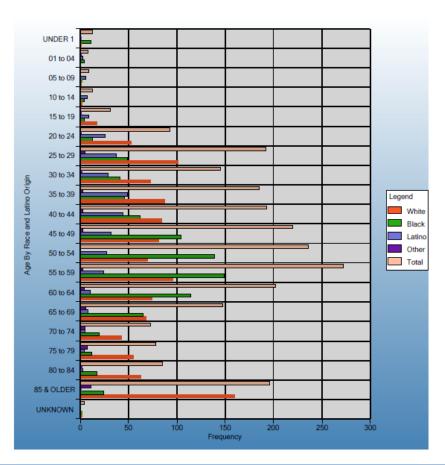


Under 11-4 5-9 10-1415-1920-2425-2930-3435-3940-4445-4950-5455-5960-6465-6970-7475-7980-84 85+ **Age**

Age	Decedents	Percentage
Under 1	88	1.43%
1-4	26	0.42%
5-9	12	0.19%
10-14	39	0.63%
15-19	149	2.42%
20-24	306	4.96%
25-29	427	6.93%
30-34	355	5.76%
35-39	373	6.05%
40-44	403	6.54%
45-49	499	8.09%
50-54	519	8.42%
55-59	698	11.32%
60-64	646	10.48%
65-69	470	7.62%
70-74	317	5.14%
75-79	265	4.3%
80-84	229	3.71%
85+	344	5.58%
Total	6165	100.00%

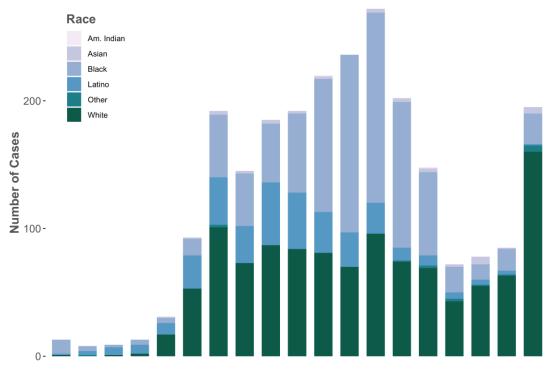
^{*}Note: All graphs and tables do not reflect non-human remains, fetal cases, or others where no death certificate was issued. All age distribution graphs do not count cases of decedents with unknown age.

AGE DISTRIBUTION BY RACE IN 2018



Age	Black	White	Latino	Asian	Other	Unknown	Total	%
Under 1	63	7	14	1	0	2	87	1.41%
1-4	15	1	8	1	₁₂ 1	0	26	0.42%
5-9	4	2	6	0	0	0	12	0.19%
9-14	17	8	13	1	0	0	39	0.63%
15-19	87	30	28	4	0	0	149	2.42%
20-24	153	88	61	3	1	0	306	4.97%
25-29	182	155	80	7	3	0	427	6.93%
30-34	173	121	51	7	3	0	355	5.76%
35-39	148	145	74	5	1	0	373	6.06%
40-44	168	141	80	10	3	1	403	6.54%
45-49	219	201	63	14	1	0	498	8.09%
50-54	253	202	61	2	0	0	518	8.41%
55-59	341	296	48	9	2	0	696	11.30%
60-64	320	273	40	10	2	1	646	10.49%
65-69	190	242	26	7	3	1	469	7.62%
70-74	107	186	13	8	2	1	317	5.15%
75-79	77	158	13	12	3	1	264	4.29%
80-84	68	150	6	4	1	0	229	3.72%
85+	65	259	4	10	5	1	344	5.59%
Total	2650	2665	689	115	31	8	6158	100%
%	43.0%	43.3%	11.19%	1.87%	0.50%	0.13%	100%	

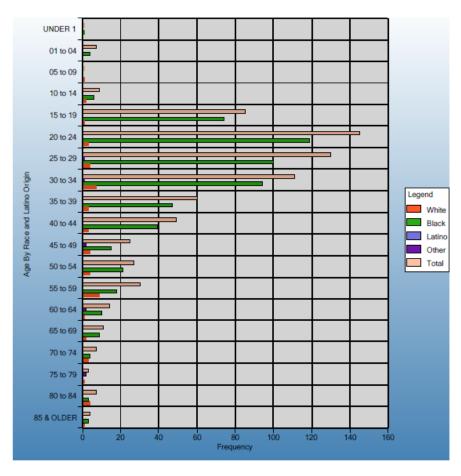
AGE DISTRIBUTION OF ACCIDENTS BY RACE IN 2018



Under 1 1-4 5-9 10-14 15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-74 75-79 80-84 85+

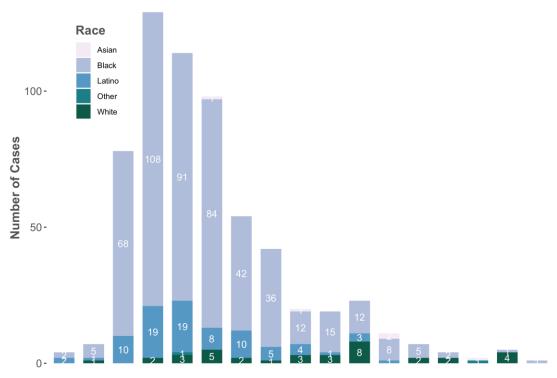
Age	Black	White	Latino	Asian	Other	Total	%
Under 1	11	1	0	0	0	12	0.51%
1-4	4	0	2	0	1	7	0.30%
5-9	2	1	4	0	0	7	0.30%
10-14	4	2	2	0	0	8	0.34%
15-19	4	17	8	1	0	30	1.26%
20-24	13	53	26	1	0	93	3.92%
25-29	49	101	37	3	2	192	8.09%
30-34	41	73	29	2	0	145	6.11%
35-39	46	87	49	3	0	185	7.80%
40-44	61	84	44	2	0	191	8.05%
45-49	104	80	32	1	0	217	9.15%
50-54	139	70	27	0	0	236	9.95%
55-59	147	96	24	3	0	270	11.38%
60-64	114	74	10	3	1	202	8.52%
65-69	65	69	8	3	2	147	6.20%
70-74	20	43	5	2	2	72	3.04%
75-79	12	55	4	6	1	78	3.29%
80-84	17	63	3	1	1	85	3.58%
85+	24	160	1	5	5	195	8.22%
Total	877	1129	315	36	15	2372	100.00%
%	36.97%	47.60%	13.28%	1.52%	0.63%	100.00%	

AGE DISTRIBUTION OF HOMICIDE BY RACE IN 2018



Age	Black	White	Latino	Asian	Other	Total	Percentage
Under 1	1	0	0	0	0	1	0.14%
1-4	3	0	3	0	0	6	0.83%
5-9	6	2	1	0	0	9	1.25%
10-14	74	1	10	0	0	85	11.77%
15-19	119	3	23	0	0	145	20.08%
20-24	100	4	25	0	1	130	18.01%
25-29	94	7	9	1	0	111	15.37%
30-34	47	3	10	0	0	60	8.31%
35-39	38	3	7	0	0	48	6.65%
40-44	15	4	4	2	0	25	3.46%
45-49	20	4	2	0	0	26	3.60%
50-54	17	9	3	0	0	29	4.02%
55-59	10	1	1	2	0	14	1.94%
60-64	9	2	0	0	0	11	1.52%
65-69	4	3	0	0	0	7	0.97%
70-74	3	4	0	0	0	7	0.97%
75-79	3	1	0	0	0	4	0.55%
80-84	0	1	0	0	0	1	0.14%
85+	0	1	0	1	1	3	0.42%
Total	563	53	98	6	2	722	100.00%
Percentage	77.98%	7.34%	13.57%	0.83%	0.28%	100.00%	

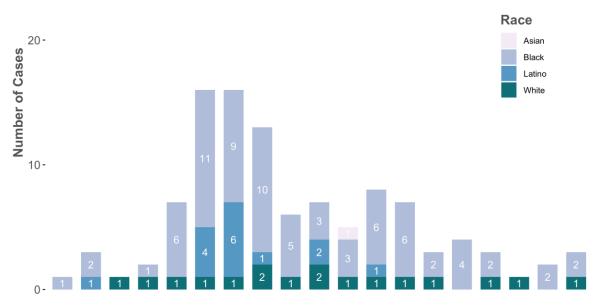
AGE DISTRIBUTION OF MALE HOMICIDE BY RACE IN 2018



1-4 10-14 15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-74 75-79 80-84 85+ **Age**

Age	Asian	Black	Latino	Other	White	Total	Percentage
1-4	0	2	2	0	0	4	0.65%
10-14	0	5	1	0	1	7	1.13%
15-19	0	68	10	0	0	78	12.62%
20-24	0	108	19	0	2	129	20.87%
25-29	0	91	19	1	3	114	18.45%
30-34	1	84	8	0	5	98	15.86%
35-39	0	42	10	0	2	54	8.74%
40-44	0	36	5	0	1	42	6.80%
45-49	1	12	4	0	3	20	3.24%
50-54	0	15	1	0	3	19	3.07%
55-59	0	12	3	0	8	23	3.72%
60-64	2	8	1	0	0	11	1.78%
65-69	0	5	0	0	2	7	1.13%
70-74	0	2	0	0	2	4	0.65%
75-79	1	0	0	1	0	2	0.32%
80-84	0	1	0	0	4	5	0.81%
85+	0	1	0	0	0	1	0.16%
Total	5	492	83	2	36	618	100.00%
Percentage	0.81%	79.61%	13.43%	0.32%	5.83%	100.00%	

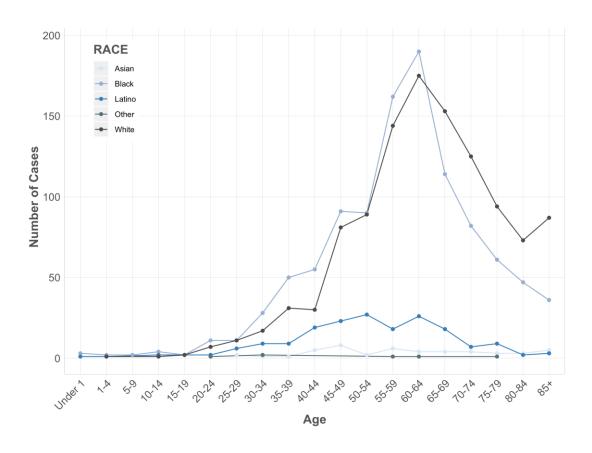
AGE DISTRIBUTION OF FEMALE HOMICIDE BY RACE IN 2018



Under 1 1-4 5-9 10-14 15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-74 75-79 80-84 85+

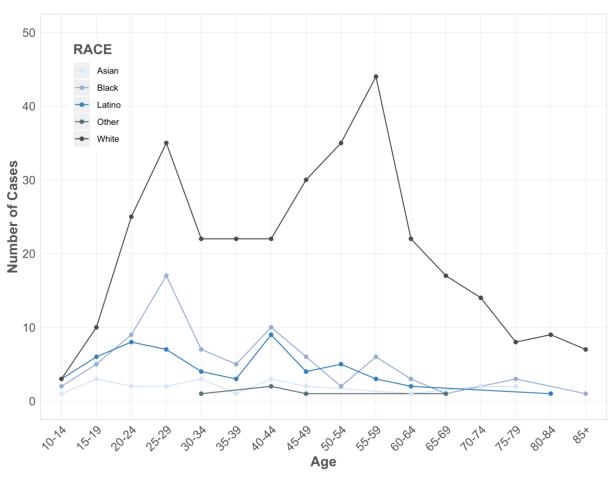
Age	Black	White	Latino	Asian	Total	%
Under 1	1	0	0	0	1	0.94%
1-4	2	0	1	0	3	2.83%
5-9	0	1	0	0	1	0.94%
10-14	1	1	0	0	2	1.89%
15-19	6	1	0	0	7	6.60%
20-24	11	1	4	0	16	15.09%
25-29	9	1	6	0	16	15.09%
30-34	10	2	1	0	13	12.26%
35-39	5	1	0	0	6	5.66%
40-44	3	2	2	0	7	6.60%
45-49	3	1	0	1	5	4.72%
50-54	5	1	1	0	7	6.60%
55-59	5	1	0	0	6	5.66%
60-64	2	1	0	0	3	2.83%
65-69	4	0	0	0	4	3.77%
70-74	2	1	0	0	3	2.83%
75-79	0	1	0	0	1	0.94%
80-84	2	0	0	0	2	1.89%
85+	2	1	0	0	3	2.83%
Total	73	17	15	1	106	100.00%
%	68.87%	16.04%	14.15%	0.94%	100.00%	

AGE DISTRIBUTION OF DECEDENTS OF NATURAL CAUSEBY RACE IN 2018



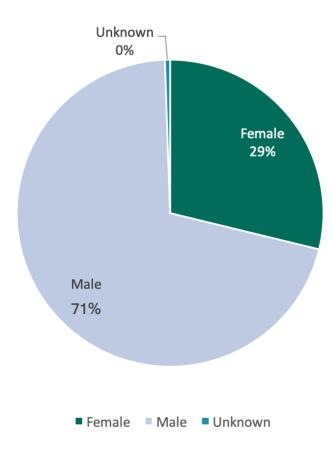
Age	Asian	Black	Latino	Other	White	Total	Percent
Under 1	0	3	1	0	0	4	0.167%
1-4	0	2	1	0	1	4	0.167%
5-9	0	2	0	0	0	2	0.083%
10-14	0	4	2	0	1	7	0.292%
15-19	0	2	2	0	2	6	0.250%
20-24	0	11	2	1	7	21	0.875%
25-29	2	11	6	0	11	30	1.250%
30-34	1	28	9	2	17	57	2.375%
35-39	1	50	9	0	31	91	3.792%
40-44	5	55	19	0	30	109	4.542%
45-49	8	91	23	0	81	203	8.458%
50-54	2	90	27	0	89	208	8.667%
55-59	6	162	18	1	144	331	13.792%
60-64	4	190	26	1	175	396	16.500%
65-69	4	114	18	0	153	289	12.042%
70-74	4	82	7	0	125	218	9.083%
75-79	3	61	9	1	94	168	7.000%
80-84	3	47	2	0	73	125	5.208%
85+	5	36	3	0	87	131	5.458%
Total	48	1041	184	6	1121	2400	100.000%
Percent	2.000%	43.375%	7.667%	0.250%	46.708%	100.000%	

AGE DISTRIBUTION OF DECEDENTS BY SUICIDE BY RACE IN 2018



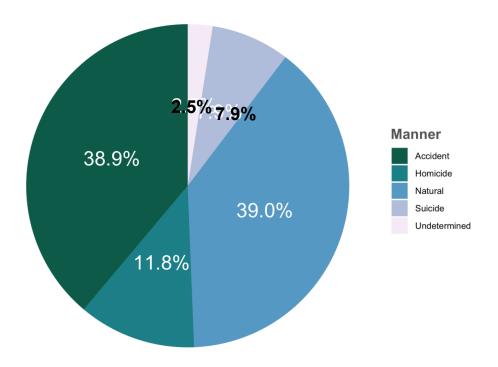
Age	Black	White	Latino	Asian	Other	Total	Percent
Under 1	0	0	0	0	0	0	0%
1-4	0	0	0	0	0	0	0%
5-9	0	0	0	0	0	0	0%
10-14	2	3	3	1	0	9	1.87%
15-19	5	10	6	3	0	24	4.98%
20-24	9	24	8	2	0	43	8.92%
25-29	17	35	7	2	0	61	12.66%
30-34	7	22	4	3	1	37	7.68%
35-39	5	22	3	1	0	31	6.43%
40-44	10	22	9	3	2	46	9.54%
45-49	6	30	4	2	1	43	8.92%
50-54	2	35	5	0	0	42	8.71%
55-59	6	44	3	0	0	53	11.00%
60-64	3	22	2	1	0	28	5.81%
65-69	1	16	0	0	1	18	3.73%
70-74	0	14	0	2	0	16	3.32%
75-79	3	8	0	2	0	13	2.70%
80-84	0	9	1	0	0	10	2.08%
85+	1	7	0	0	0	8	1.66%
Total	77	323	55	22	5	482	100.00%
Percent	15.98%	67.01%	11.41%	4.56%	1.04%	100.00%	

GENDER DISTRIBUTION OF ALL DECEDENTS IN 2018



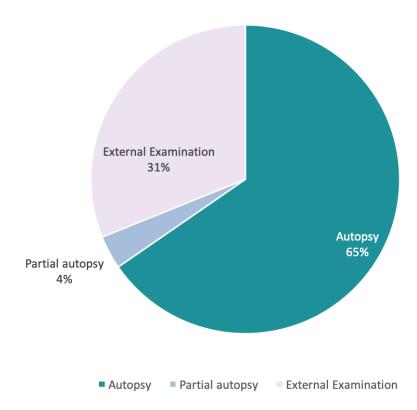
Gender	Decedents	Percentage
Female	1787	28.80%
Male	4384	70.65%
Unknown	34	0.55%

MANNER OF DEATH IN 2018



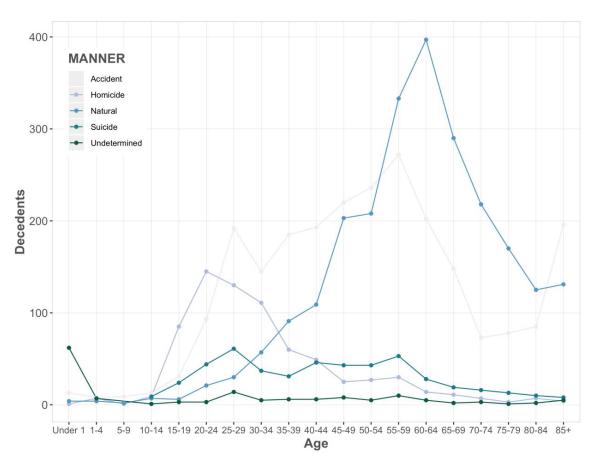
Manner	Decedents	Percentage
Accident	2396	38.9%
Homicide	725	11.8%
Natural	2406	39.0%
Suicide	485	7.90%
Undetermined	156	2.50%

AUTOPSY STATUS IN 2018



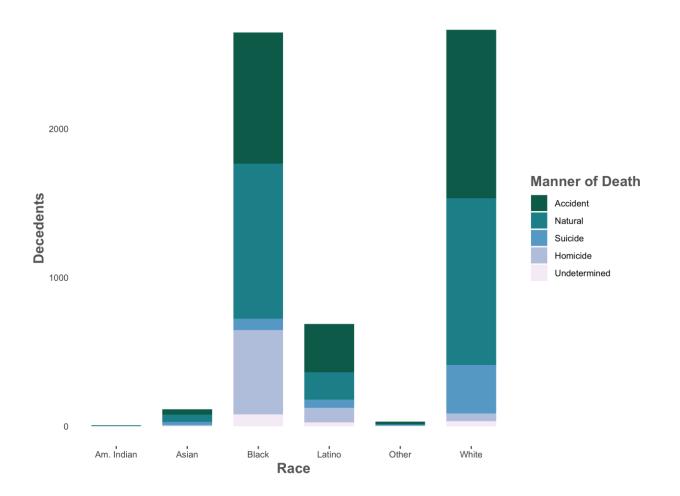
Autopsy Status	Decedents	Percentage
Full autopsy	3410	65%
Partial autopsy	183	4%
External examination	1622	31%

AGE OF DISTRIBUTION OF DECEDENTS BY MANNER



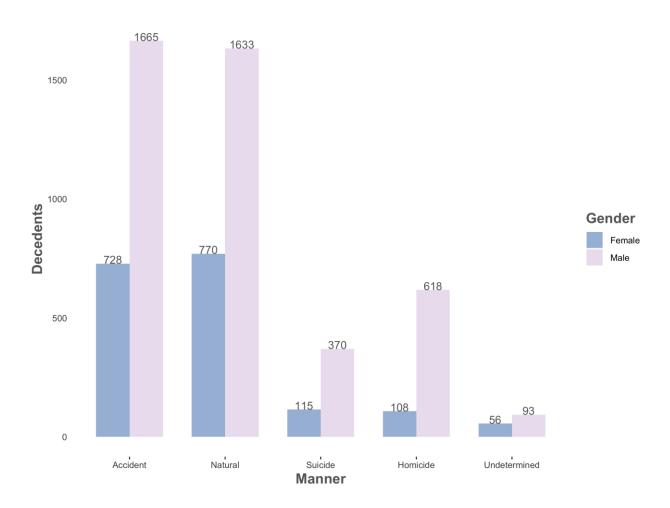
Age	Accident	Homicide	Natural	Suicide	Undetermined	Total	Percent
Under 1	13	1	4	0	62	80	1.299%
1-4	8	7	4	0	7	26	0.422%
5-9	9	1	2	0	0	12	0.195%
10-14	13	9	7	9	1	39	0.633%
15-19	31	85	6	24	3	149	2.420%
20-24	93	145	21	44	3	306	4.970%
25-29	192	130	30	61	14	427	6.935%
30-34	145	111	57	37	5	355	5.766%
35-39	185	60	91	31	6	373	6.058%
40-44	193	49	109	46	6	403	6.545%
45-49	220	25	203	43	8	499	8.105%
50-54	236	27	208	43	5	519	8.429%
55-59	272	30	333	53	10	698	11.337%
60-64	202	14	397	28	5	646	10.492%
65-69	148	11	290	19	2	470	7.634%
70-74	73	7	218	16	3	317	5.149%
75-79	78	3	170	13	1	265	4.304%
80-84	85	7	125	10	2	229	3.719%
85+	196	4	131	8	5	344	5.587%
Total	2392	726	2406	485	148	6157	100.000%
Percent	38.850%	11.791%	39.077%	7.877%	2.404%	100.00%	

MANNER OF DEATH BY RACE



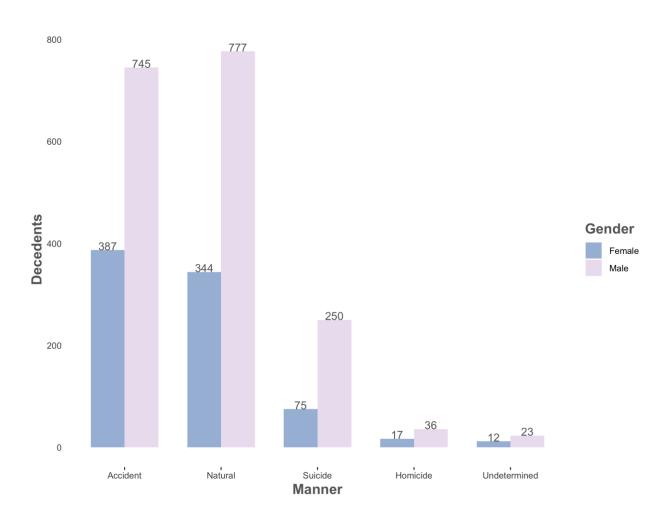
Race	Accident	Natural	Suicide	Homicide	Undetermined	Total	Percent
Am. Indian	2	3	1	0	1	7	0.114%
Asian	37	48	22	6	2	115	1.868%
Black	880	1041	77	567	81	2646	42.975%
Latino	325	184	55	98	26	688	11.174%
Other	15	6	5	2	3	31	0.503%
Unknown	3	3	0	0	1	7	0.114%
White	1130	1121	325	53	34	2663	43.252%
Total	2392	2406	485	726	148	6157	100.000%
Percent	38.850%	39.077%	7.877%	11.791%	2.404%	100.000%	

MANNER OF DEATH BY GENDER



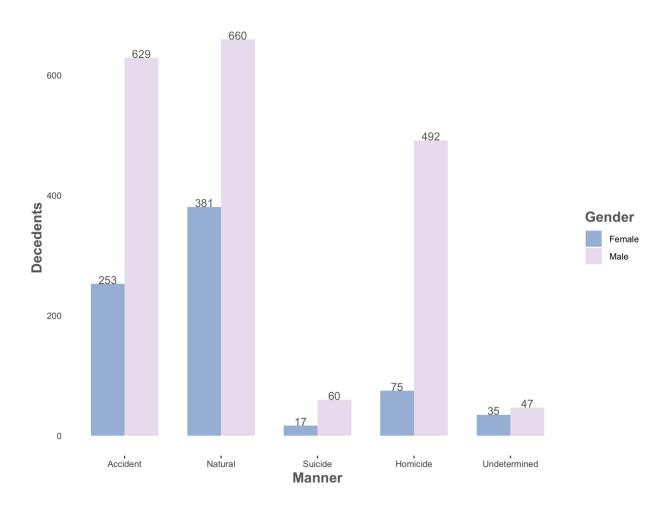
Gender	Accident	Natural	Suicide	Homicide	Undetermined	Total	Percent
Female	728	770	115	108	56	1777	28.866%
Male	1665	1633	370	618	93	4379	71.134%
Total	2393	2403	485	726	149	6156	100.000%
Percent	38.873%	39.035%	7.878%	11.793%	2.420%	100.000%	

MANNER OF DEATH FOR WHITE DECEDENTS BY GENDER



Gender	Accident	Natural	Suicide	Homicide	Undetermined	Total	Percent
Female	387	344	75	17	12	835	31.356%
Male	743	777	250	36	22	1828	68.644%
Total	1130	1121	325	53	34	2663	100.000%
Percent	42.433%	42.095%	12.204%	1.990%	1.277%	100.000%	

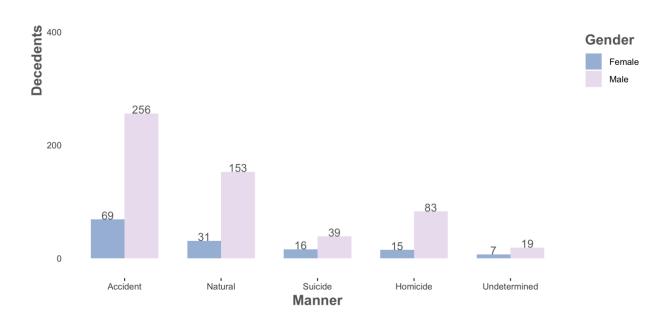
MANNER OF DEATH FOR BLACK DECEDENTS BY GENDER



Gender	Accident	Natural	Suicide	Homicide	Undetermined	Total	Percent
Female	253	381	17	75	35	761	28.728%
Male	629	660	60	492	47	1888	71.272%
Total	882	1041	77	567	82	2649	100.000%
Percent	33.296%	39.298%	2.907%	21.404%	3.096%	100.000%	

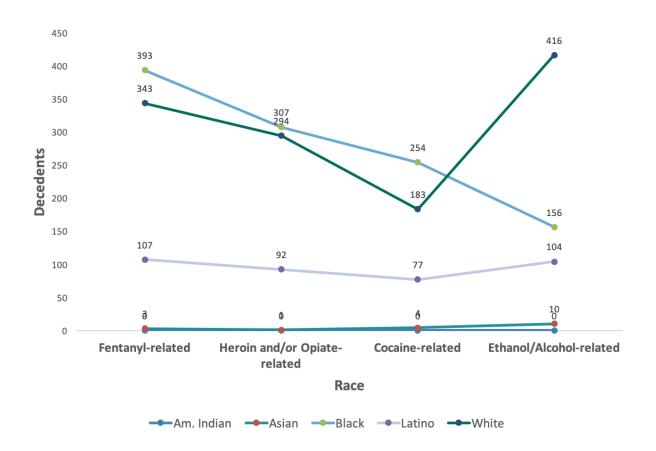
MANNER OF DEATH FOR LATINO DECEDENTS BY GENDER

600



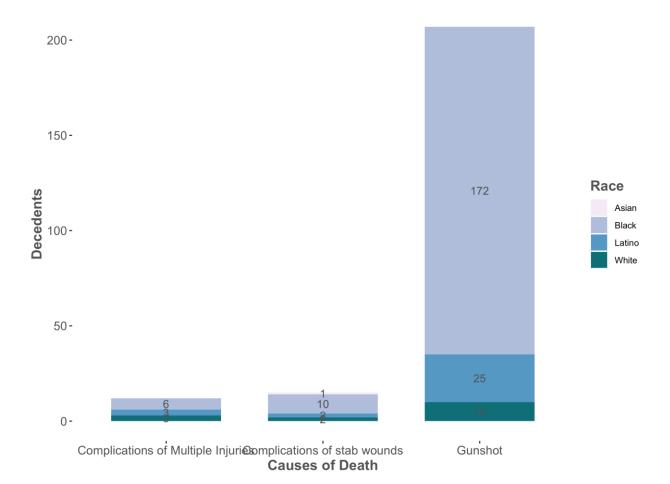
Gender	Accident	Natural	Suicide	Homicide	Undetermined	Total	Percentage
Female	69	31	16	15	7	138	20.06%
Male	256	153	39	83	19	550	79.94%
Total	325	184	55	98	26	688	100.00%
Percentage	47.24%	26.74%	7.99%	14.24%	3.78%	100.00%	

DRUG COMPOSITION OF ACCIDENTAL DRUG OVERDOSE



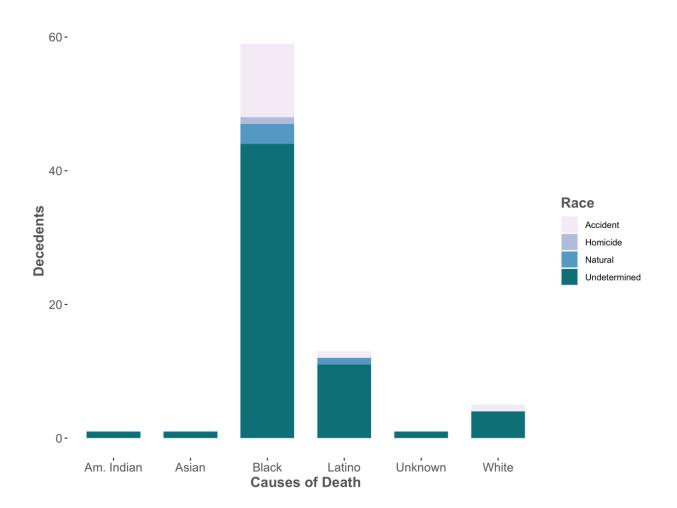
Race	Fentanyl- related	Heroin and/or Opiate-related	Cocaine- related	Ethanol/Alcoh ol-related	Total
Am. Indian	0	0	0	0	0
Asian	3	1	4	10	18
Black	393	307	254	156	1110
Latino	107	92	77	104	380
Other	1	0	0	10	11
Unknown	0	0	1	0	1
White	343	294	183	416	1236
Total	847	694	519	696	

TOP FOUR CAUSES OF HOMICIDE DEATHS BY RACE



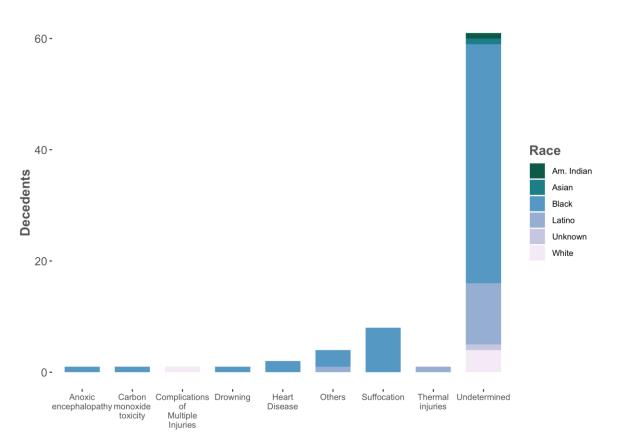
Race	Complications of Multiple Injuries	' (aunchot		Total
Black	6	10	172	188
Latino	3	2	25	30
White	3	2	10	15
Asian	0	1	0	1
Total	12	15	207	

MANNER OF INFANT DEATHS BY RACE



Race	Accident	Homicide	Natural	Undetermined	Total	Percentage
Black	11	1	3	44	59	73.75%
Latino	1	0	1	11	13	16.25%
White	1	0	0	4	5	6.25%
Am. Indian	0	0	0	1	1	1.25%
Asian	0	0	0	1	1	1.25%
Unknown	0	0	0	1	1	1.25%
Total	13	1	4	62	80	100.00%
Percentage	16.25%	1.25%	5.00%	77.50%	100.00%	

FREQUENT CAUSES OF INFANT DEATHS BY RACE

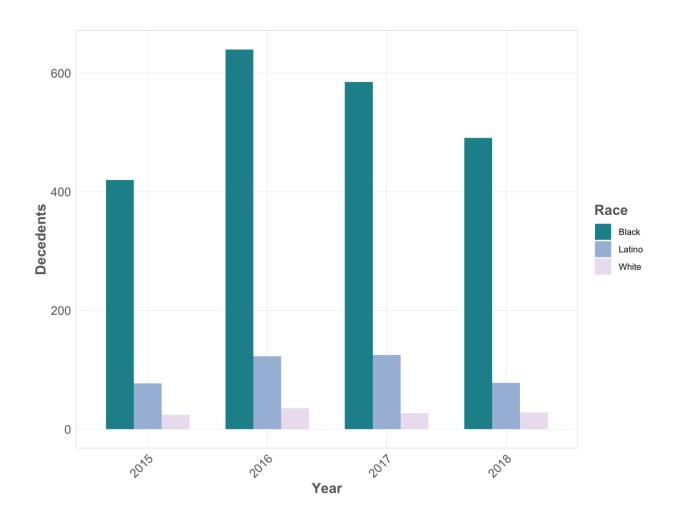


Cause	Black	White	Latino	Am. Indian	Asian	Unkno wn	Total	Percent
Anoxic encephalopathy	1	0	0	0	0	0	1	1.25%
Carbon monoxide toxicity	1	0	0	0	0	0	1	1.25%
Complications of Multiple Injuries	0	1	0	0	0	0	1	1.25%
Drowning	1	0	0	0	0	0	1	1.25%
Heart Disease	2	0	0	0	0	0	2	2.50%
Others	3	0	1	0	0	0	4	5.00%
Suffocation	8	0	0	0	0	0	8	10.00%
Thermal injuries	0	0	1	0	0	0	1	1.25%
Undetermined	43	4	11	1	1	1	61	76.25%
Total	59	5	13	1	1	1	80	100%
Percentage	73.75%	6.25%	16.25%	1.25%	1.25%	1.25%	100%	

Note: The World Health Organization defines "Sudden Infant Death Syndrome" (SIDS) as unknown causes of infant mortality1. Before 2013, SIDS accounted for a significant number of infant mortalities investigated in our office. Since then our office has followed the World Health Organization's practice to discontinue the use of SIDS as a "diagnostic" phrase and to re-classify SIDS from "Natural" to "Undetermined" manner of death. This diagnostic shift reflects the enormous need of in-depth medical research to unmask the causes of sudden infant mortality. The shift has also led to increased number of infant deaths of undetermined cause and manner.

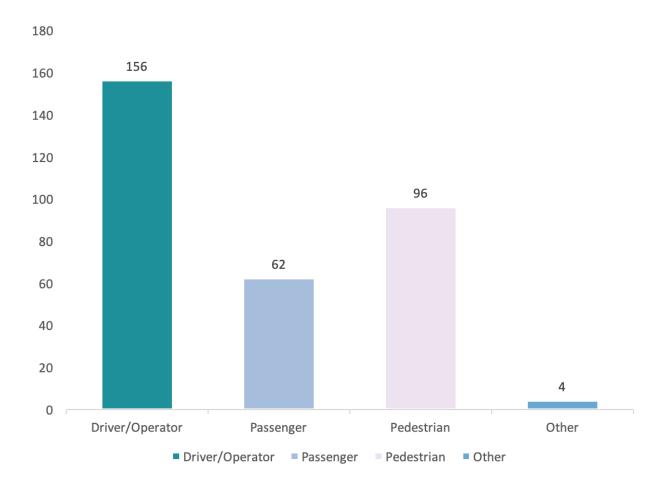
¹ http://apps.who.int/classifications/icd10/browse/2016/en#/R96

GUN HOMICIDE BY RACE FROM 2015 TO 2018



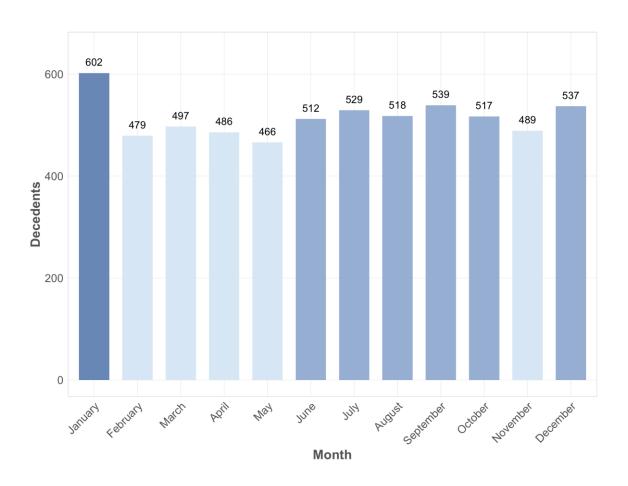
Race	Decedents in 2015	Decedents in 2016	Decedents in 2017	Decedents in 2018	Total
White	24	35	27	28	114
Black	420	640	585	490	2135
Latino	77	123	125	78	403

MOTOR VEHICLE ACCIDENTS IN 2018



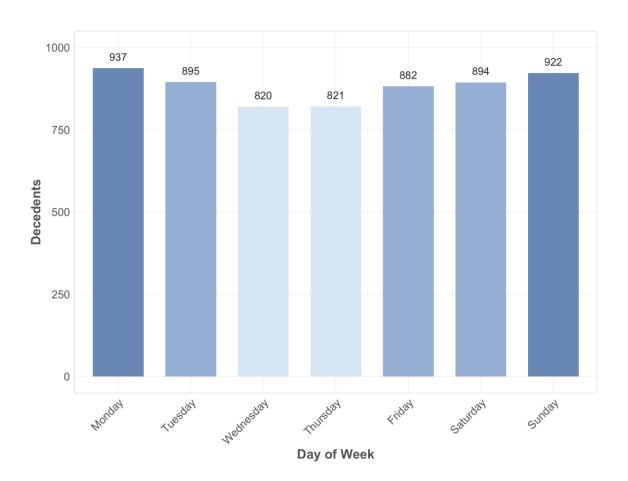
Status	Decedents	Percent
Driver/Operator	156	49.06%
Passenger	62	19.50%
Pedestrian	96	30.19%
Other	4	1.26%
Total	318	100.00%

MONTH WHEN INCIDENT HAPPEN



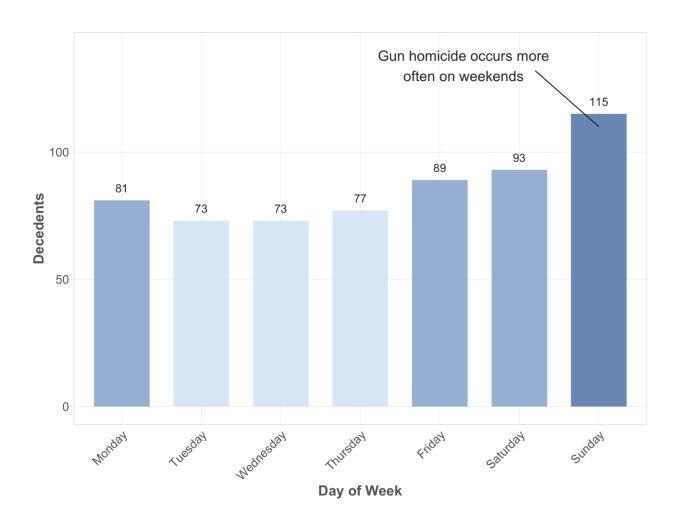
Month	Decedents	Percentage
January	602	9.76%
February	479	7.76%
March	497	8.05%
April	486	7.88%
May	466	7.55%
June	512	8.3%
July	529	8.57%
August	518	8.39%
September	539	8.73%
October	517	8.38%
November	489	7.92%
December	537	8.7%
Total	6171	100.00%

DAY OF WEEK WHEN INCIDENT HAPPEN IN 2018



Weekday	Decedents	Percentage
Monday	937	15.18%
Tuesday	895	14.5%
Wednesday	820	13.29%
Thursday	821	13.3%
Friday	882	14.29%
Saturday	894	14.49%
Sunday	922	14.94%
Total	6171	100.00%

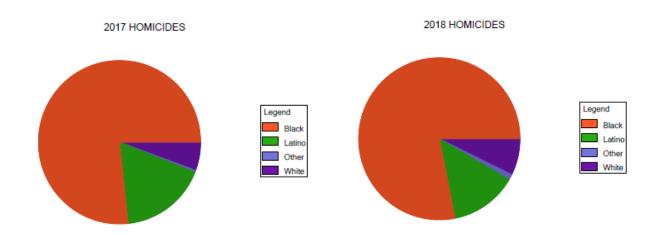
DAY OF WEEK WHEN GUN HOMICIDE OCCURRED IN 2018



Weekday	Decedents	Percentage
Monday	81	13.48%
Tuesday	73	12.15%
Wednesday	73	12.15%
Thursday	77	12.81%
Friday	89	14.81%
Saturday	93	15.47%
Sunday	115	19.13%
Total	601	100.00%

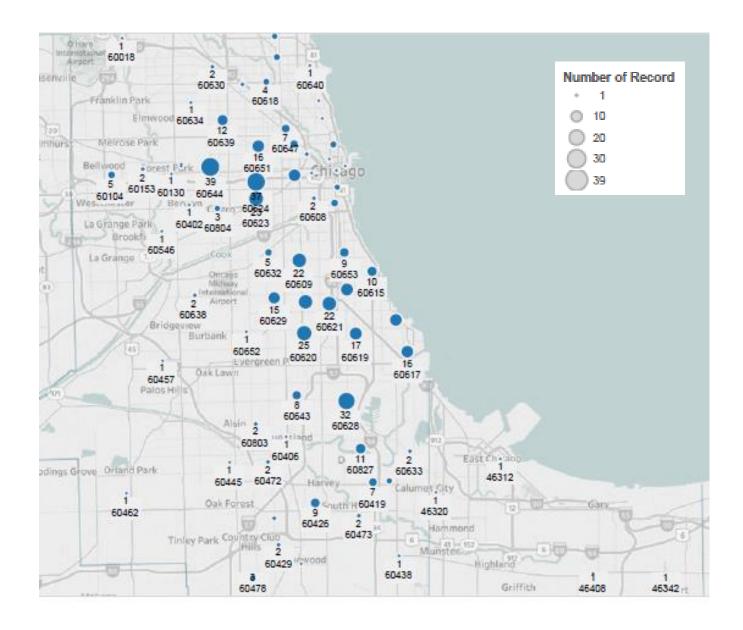
Note: This graph omitted cases with unknown incident date.

FREQUENCY OF HOMICIDES BY RACE AND LATINO ORIGIN



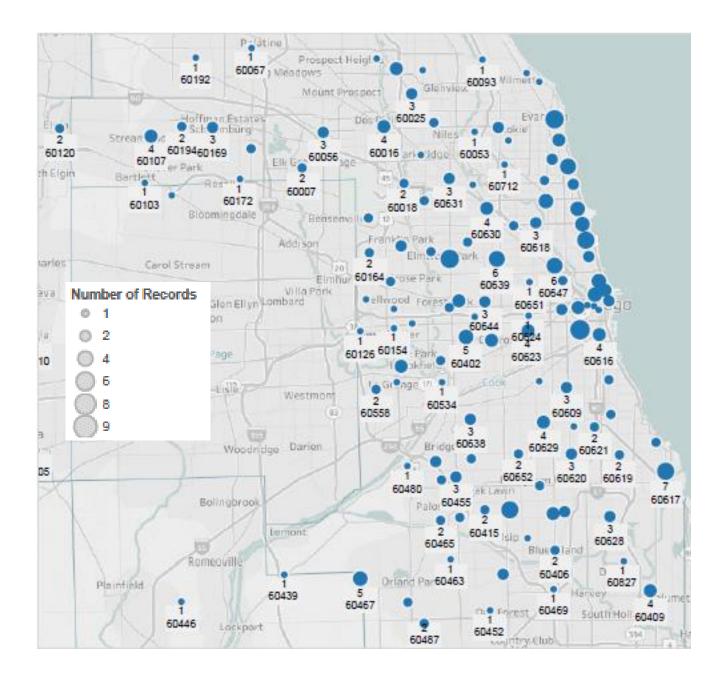
	2017		20	18
	#	% of Total	#	% of Total
White	47	5.60%	53	7.30%
Black	644	76.67%	567	78.10%
Latino	146	17.38%	98	13.50%
Other	3	0.36%	8	1.10%
Total	840	100%	726	100%

HOMICIDE MAP



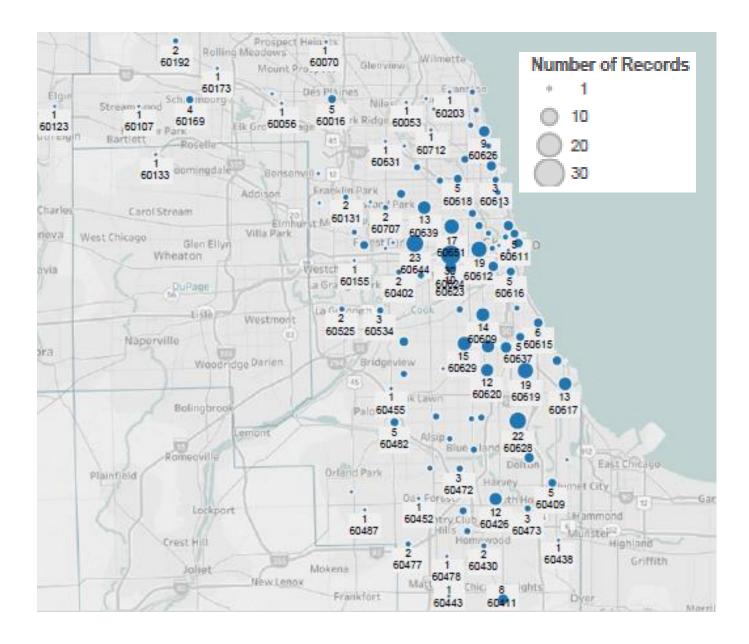
Map based on Longitude (generated) and Latitude (generated). Size shows sum of Number of Records. The marks are labeled by sum of Number of Records and INCIDENTZIP. Details are shown for INCIDENTZIP. The data is filtered on INCIDENT_DATE Year and MANNERNAME. The INCIDENT_DATE Year filter keeps 2018. The MANNERNAME filter keeps HOMICIDE.

SUICIDE MAP



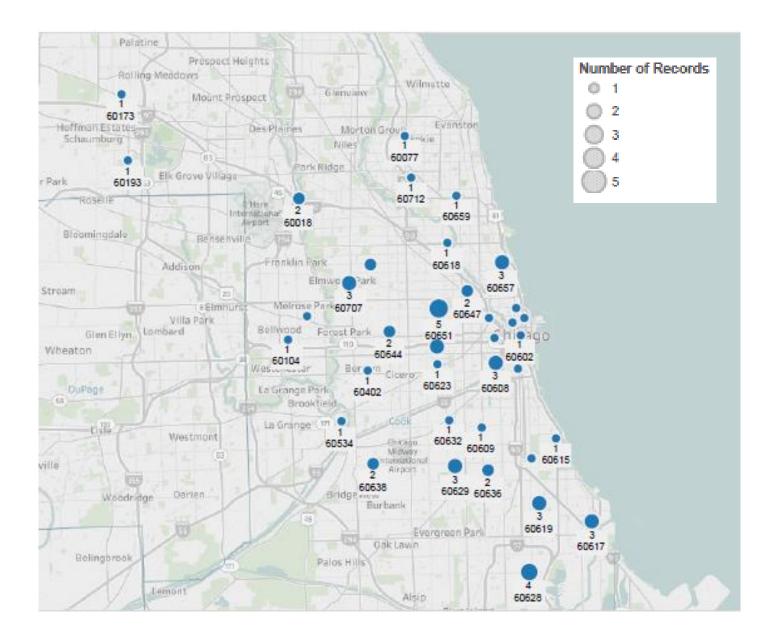
Map based on Longitude (generated) and Latitude (generated). Size shows sum of Number of Records. The marks are labeled by sum of Number of Records and INCIDENTZIP. Details are shown for INCIDENTZIP. The data is filtered on INCIDENT_DATE Year and MANNERNAME. The INCIDENT_DATE Year filter keeps 2018. The MANNERNAME filter keeps SUICIDE.

COCAINE MAP



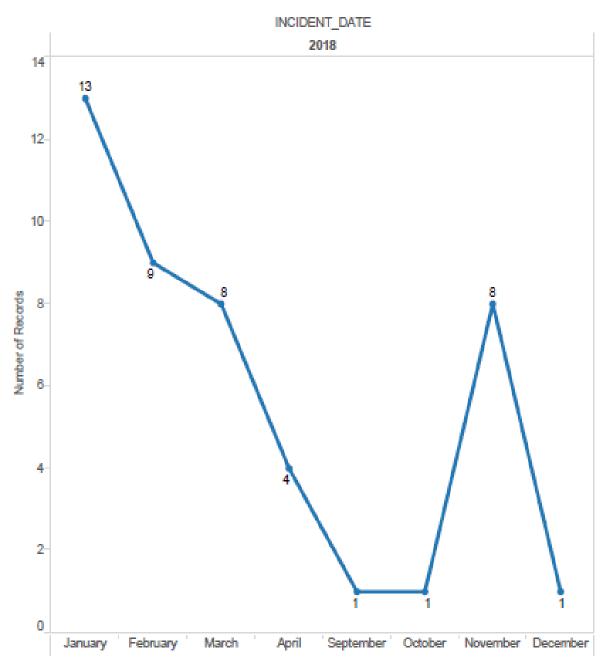
Map based on Longitude (generated) and Latitude (generated). Size shows sum of Number of Records. The marks are labeled by sum of Number of Records and INCIDENTZIP. The data is filtered on CAUSE_COMBINED and INCIDENT_DATE Year. The CAUSE_COMBINED filter has multiple members selected. The INCIDENT_DATE Year filter keeps 2017.

COLD MAP



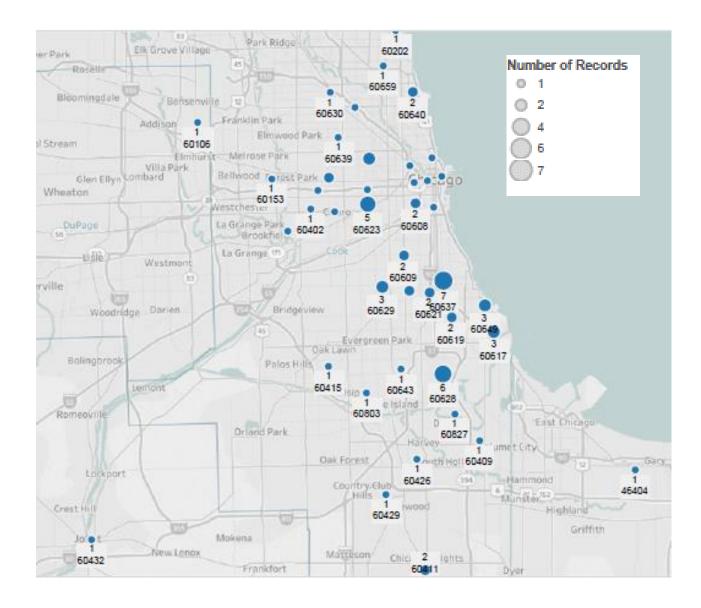
Map based on Longitude (generated) and Latitude (generated). Size shows sum of Number of Records. The marks are labeled by sum of Number of Records and INCIDENTZIP. Details are shown for INCIDENTZIP. The data is filtered on coldrelated and INCIDENT_DATE Year. The coldrelated filter keeps True. The INCIDENT_DATE Year filter keeps 2017 and 2018.

COLD RELATED DEATHS BY MONTH



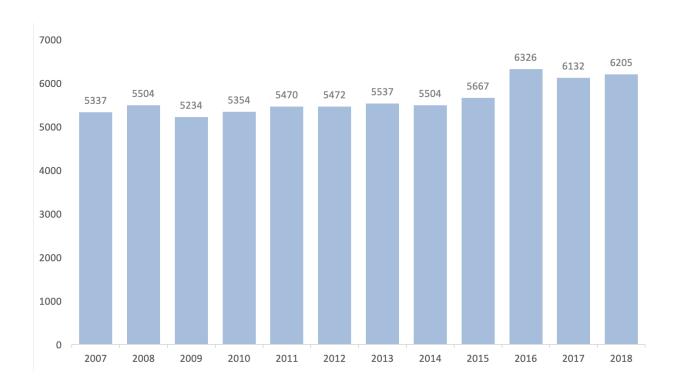
The trend of sum of Number of Records for INCIDENT_DATE Month broken down by INCI-DENT_DATE Year. The marks are labeled by sum of Number of Records. The data is filtered on coldrelated and INCIDENT_DATE Year. The coldrelated filter keeps True. The INCIDENT_DATE Year filter ranges from 2018 to 2018.

INFANT DEATH MAP



Map based on Longitude (generated) and Latitude (generated). Size shows sum of Number of Records. The marks are labeled by sum of Number of Records and INCIDENTZIP. The data is filtered on INCIDENT_DATE Year and CASEPLAYERAGE. The INCIDENT_DATE Year filter keeps 2017. The CASEPLAYERAGE filter ranges from 0 to 0.

NUMBER OF ME CASES PER YEAR



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