



OFFICE OF THE COOK COUNTY
MEDICAL EXAMINER

2017 ANNUAL REPORT

Toni Preckwinkle
President, Cook County Board of Commissioners

Martha Martinez
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: 8:30 a.m. to 4:30 p.m., Monday through Friday,
except for official Cook County holidays.

IDENTIFICATION HOURS:

11:30 a.m. to 4:00 p.m., Monday through Friday.
12:00 p.m. to 4:00 p.m., weekends and official Cook County holidays.

www.cookcountyil.gov/agency/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). The office continues to improve policies and procedures and is working towards conforming to International Organization for Standardization (ISO) requirements to attain the highest level of credibility available to U.S. and international medicolegal death investigation offices.

In 2018, we continue to apply for grant funding for the office in an effort to save money for the taxpayers of Cook County. In 2017, we were awarded a federal grant to improve the reporting functions of our electronic case management system to provide more user-friendly data in our reports and integrate our case management system with an external toxicology lab.

The opioid epidemic continued in Cook County in 2017, with an eight percent increase in opioid deaths compared to those in 2016 and an increase of 80 percent compared to 2015 opioid deaths. Gun violence deaths continued to be high with 744 gun homicide deaths in Cook County, which total more than those in Los Angeles and New York combined. 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. In 2017, the CCMEO partnered with the Cook County Bureau of Technology to make the office's data on these crises readily available to public health agencies, policymakers, partner agencies, law enforcement, researchers, the public and media in an attempt to inform residents and those seeking to curb these epidemics. This data is updated daily to provide real time case information that is particularly useful to public health and drug enforcement agencies.

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.

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.

Respectfully,

A handwritten signature in black ink that reads "Pooni Arunkumar, M.D." The signature is written in a cursive, professional style.

Pooni Arunkumar, MD, FCAP
Chief Medical Examiner

COOK COUNTY
MEDICAL EXAMINER CASES
AT A GLANCE

2017

Number of
Medical Examiner Cases

6,326

Cases by Manner of Death:

Accident	2,361
Natural	2,275
Homicide	840
Suicide	481
129 Undetermined	

Number of Deaths
in Cook County

41,788

Number of Deaths
Investigated

11,864

Number Non-Medical
Examiner Cases

5,731

Average Number of Bodies
in Storage per Day

183

Scene Visits

1,145

Complete Autopsies

3,335

Partial Autopsies

149

Unclaimed Bodies

571

Number of Bodies
Transported
to the Office

5,403

Number of Bodies
Transported
by the Office

0

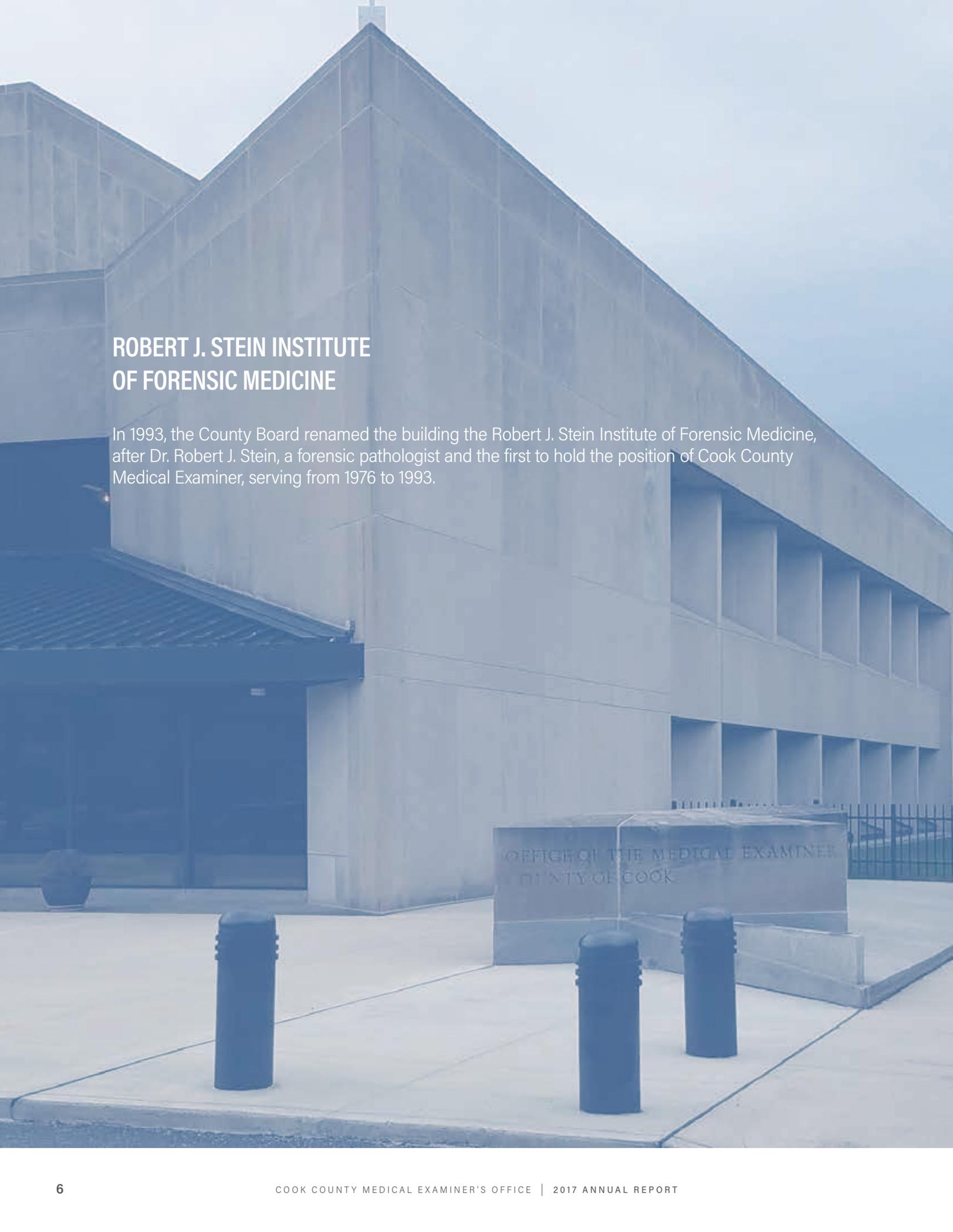
Exhumations

0

Unidentified Autopsied

10

Homicides Autopsied	840
Suicides Autopsied	158
Non Motor Vehicle Accident Deaths Certified	2,063
Motor Vehicle Accident Deaths Certified	297
M Vehicle Accidents Autopsied	62
Non-MVA Accidents Autopsied	1,406
Naturals Autopsied	779
Undetermined Autopsied	129
Gun Related Homicides	744
White	27
Black	589
Latino	125
Other	3
External Examinations	
By Physician	1,700
By Investigator	570
Hospital Autopsies under ME Jurisdiction	0
Cases Where Toxicology Was Performed	5,414
Bodies Unidentified After Examination	12
Organ Donations	113
Tissue Donations	75
Cornea Donations	568
Microscopic Studies	1,421
Formal Neuropathology Studies	105
Formal Cardiac Pathology Studies	68
Fetal Death Certificates Issued	146



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 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 national forensic center of excellence for the practice and advancement of forensic science. 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 pertinent 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 5.2 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
- Criminal abortion
- 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 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 Medical Examiner's Office 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 Medical Examiner's Office 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

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 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 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 can request copies of postmortem reports through the Medical Examiner's Office, 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 Medical Examiner's Office for the contact information of the registrar that handled a decedent's death certificate.

RECOVERING PROPERTY OF DECEDENTS

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 are able to 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.

HIGHLIGHTS 2017

DANAKELLY HAMPTON RECOGNITION

On April 26th, 2017, Investigator DanaKelly Hampton responded to a reported death scene in Chicago, Illinois. After entering the decedent's bedroom, Investigator Hampton noted several items that she, through her vast training and experience, suspected to be a makeshift apparatus for the production of methamphetamine. She also noted a crystalline substance on the dresser, as well as several small plastic bags that she recognized to be consistent with those used to package and distribute illicit substances. Based on her observations, she notified the police supervisor at the scene, and recommended that he remove his officers from the scene and contact the Chicago Fire Department.

The responding CFD supervisor used the photographs Investigator Hampton took inside of the residence, and determined that the Hazardous Materials Unit was needed at the scene, and the area should be evacuated. Investigator Hampton's intelligent observations at the scene and quick thinking ensured the safety of the first responders, as well as the citizens who reside in the area. She is truly an exemplary employee and was recognized for this effort by the Cook County Board of Commissioners.



MISSING PERSONS DAY

On Saturday, May 20, 2017, 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 missing 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 website with the goal of identifying the deceased with information obtained from the public.



THREE FELLOWS GRADUATE

Fellows Grace Dukes, Kimberly Golden and Zachary Michalick finished their one year residency at the CCMEO on June 30, 2017. Each went on to become Assistant Medical Examiners in various parts of the country.

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



INDIGENT MEMORIAL

On July 13, 2017, the CCMEO in coordination with the Chicago Archdiocese and Catholic Cemeteries held an indigent memorial dedication and burial. Cook County Board President Toni Preckwinkle and Cardinal Blasé Cupich together unveiled a black granite memorial that marks the gravesites of the indigent, unidentified and unborn who came under the care of the CCMEO. The following statements were made at the event:



“As a Catholic community, it is a corporal work of mercy to bury and pray for the dead,” Cardinal Cupich said. “This monument not only identifies the gravesides of the unidentified, unclaimed and unborn, it commemorates the lives of the deceased and demonstrates that every life is valuable and everyone’s death should be recognized and honored.”

“We may not know the stories or the challenges of the people we will bury, but each person was a member of our community — a friend, a neighbor, a son, a daughter,” President Preckwinkle said. “This monument is a symbol of our community coming together to care for one another.”

GIFT OF HOPE 2017 LIFESAVING PARTNERS AWARD

Chief Medical Examiner Dr. Ponni Arunkumar was recognized for her efforts in organ and tissue donation. “Since her appointment as Chief Medical Examiner of Cook County in July 2016, Dr. Ponni Arunkumar has demonstrated her dedication and commitment to offering grieving families the opportunity to donate on behalf of deceased loved ones. A long-time supporter of organ and tissue donation, she has worked hand in hand with Gift of Hope on hundreds of organ and tissue donation cases. Since taking office, Dr. Arunkumar has never refused to release cases for donation, including those that can sometimes present challenges like multiple gunshot wounds or child abuse cases. She makes herself available around the clock to provide guidance, advice and solutions whenever needed. Her remarkable commitment to donation has resulted in more than 550 organs transplanted and 2,000 tissues recovered from donors since her appointment. Dr. Arunkumar consistently demonstrates excellence and courage in the face of adversity. She navigates the death investigation and donation processes with remarkable compassion and confidence. Her outstanding dedication to help ensure that every opportunity for donation is successful makes her truly deserving of the Gift of Hope 2017 Lifesaving Partners Award.”



- Gift of Hope Organ & Tissue Donor Network

INDIGENT BURIAL: DIGNIFIED FINAL DISPOSITION

Traditionally, the Medical Examiner's Office 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 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 Medical Examiner's Office hired a full-time Indigent Coordinator to manage the indigent disposition process. The County will continue to bury unidentified and fetal remains.

*The Medical Examiner's Office expresses
a special thank you to
Roman F. Szabelski, Executive Director,
Catholic Cemeteries, Archdiocese of Chicago,
for all his assistance with the
indigent burials at
Mt. Olivet Cemetery.*

*Thanks to all the funeral directors
who continue to assist the Medical
Examiner's Office in laying to rest decedents
in a dignified manner through their
professionalism and compassion.*

Thank you!

The following is a list of funeral homes, directors and other individuals who assisted the Cook County Medical Examiner's Office in 2017:

AA Rayner & Sons Funeral Home
AquaGreen Dispositions
AR Leak & Sons Funeral Home
Benson Family Funeral Home
Brady-Gill Funeral Home
Cage Memorial Chapel
Calahan Funeral Home
Colonial-Wojciechowski Funeral Home
Dignity Memorial
Drechsler, Brown & Williams Funeral Home
Dyer Prepcare
Evans Funeral Home
Evanston Funeral & Cremation
Hickey Memorial Chapel
John Ligda Funeral Director
Johnson Funeral Home
Leonard Memorial Funeral Home
Lolita Shaffer Funeral Services
Maher Funeral Home
Minor-Morris Funeral Home
Northern Illinois Funeral Services
Perez-Franco Funeral Home
Prignano Funeral Home
Sambrano Funeral Service
Symonds Funeral Home
Tatum Funeral Service
Thompson-Kuenster Funeral Home
Trevino Funeral Services
Wallace-Harrison Funeral Services
William Randolph Hearses
YGee Funeral Services

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, 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 Medical Examiner's Office 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 Medical Examiner's Office 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 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 pathologists' assistant students to observe pathologists conducting examinations, including autopsies.

MORTUARY SCIENCES

The Medical Examiner's Office 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 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.

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 policy makers 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 as a means to determine cause and manner of death.

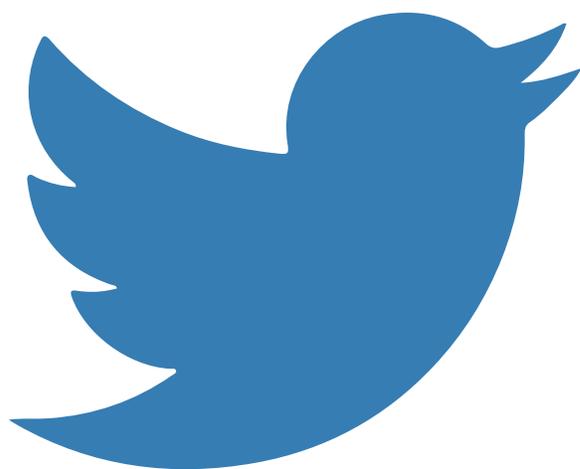
FELLOWSHIP

The Medical Examiner's Office offers annually a one-year forensic pathology fellowship program for up to 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, and government agencies involved in the medicolegal justice system. For more information, contact Mary Marik, Registered Health Information Administrator, at (312) 997-4430.



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A LOOK AHEAD

The Medical Examiner's Office has the following initiatives in 2018:

- Increase the number of assistant medical examiners and fellows 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.
- Introduction of a document management software solution to maintain up-to-date policies and procedures and track changes to help the office gear toward ISO accreditation.
- Maintain National Association of Medical Examiner's accreditation.
- Pursue accreditation with the International Standards Organization.

CASE OVERVIEW



TRENDS



MAPS

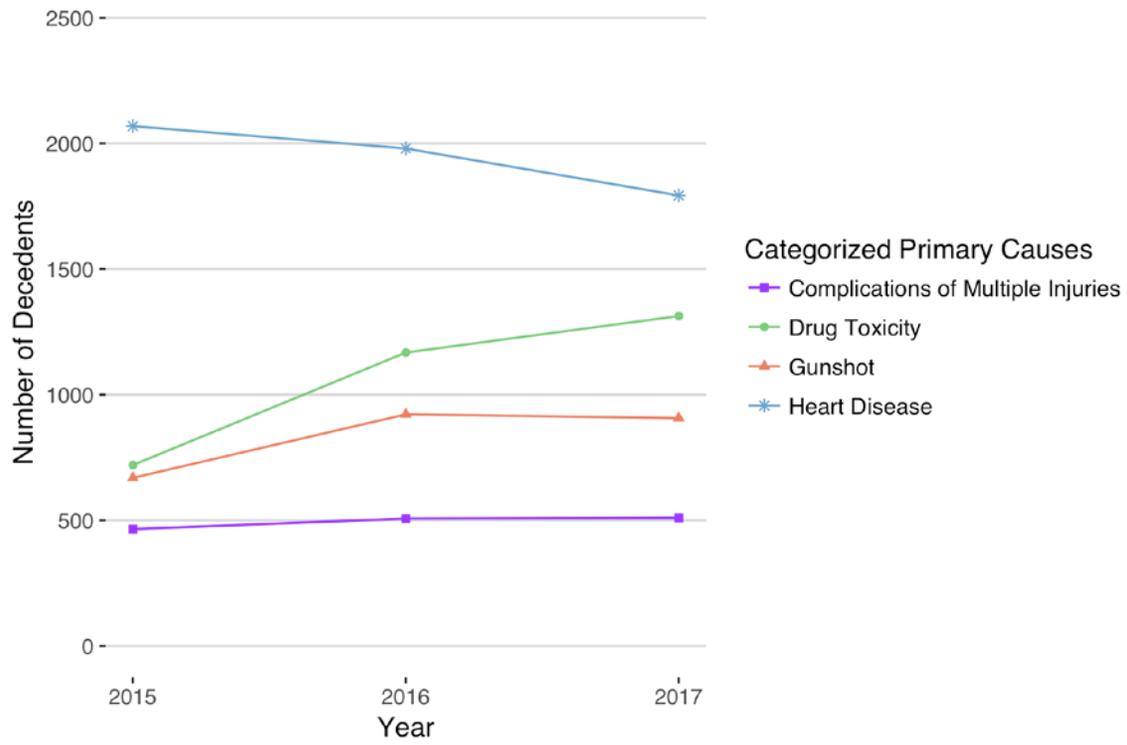


CHARTS

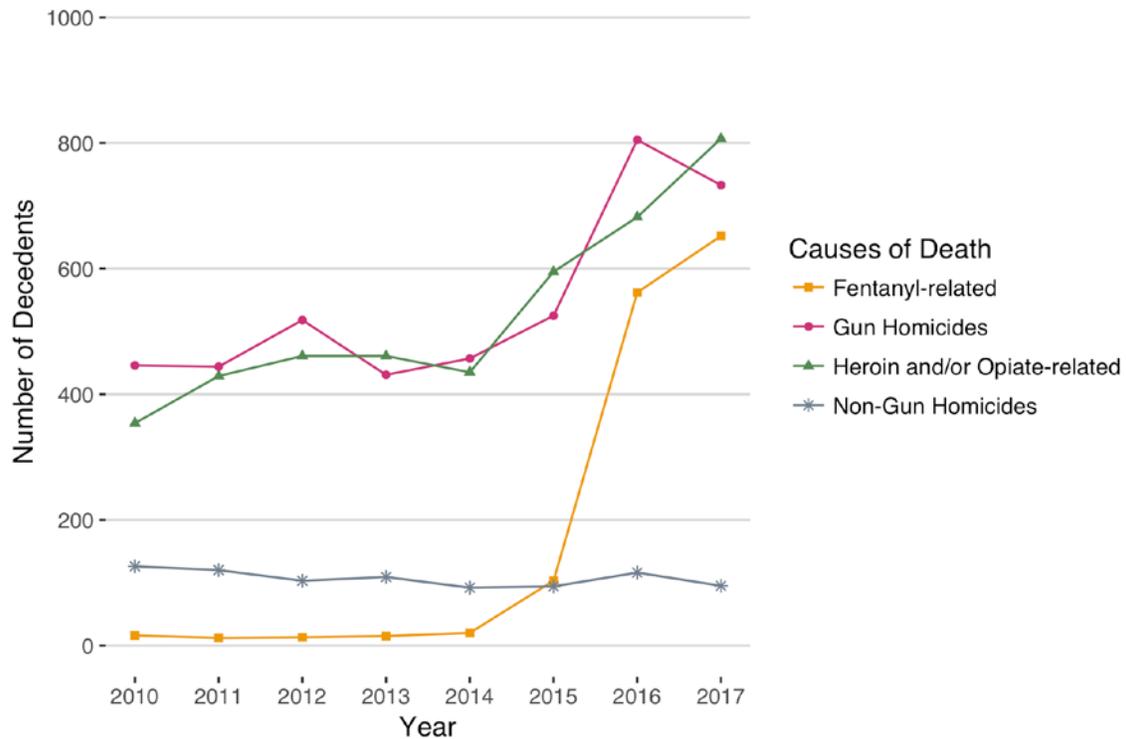
CATEGORIZED PRIMARY CAUSES OF DEATH

Categorized Primary Causes of Death	Decedents in 2015	Decedents in 2016	Decedents in 2017	Total
Anoxic encephalopathy	31	25	25	81
Asthma	42	24	23	89
Carbon monoxide toxicity	30	28	21	79
Chronic obstructive pulmonary disease	25	19	14	58
Closed head injuries	104	128	107	339
Complications of diabetes	47	41	50	138
Complications of fracture	70	65	54	189
Complications of morbid obesity or obesity	16	31	26	73
Complications of Multiple Injuries	465	507	510	1482
Complications of stab wounds	44	58	42	144
Cranial/Cervical injuries	35	38	39	112
Drowning	46	58	70	174
Drug Toxicity	720	1168	1313	3201
Electrocution	3	3	5	11
Epilepsy	24	23	20	67
Ethanol toxicity	141	171	176	488
Fall or complications of fall	49	53	80	182
Gunshot	669	922	907	2498
Hanging	68	72	114	254
Heart Disease	2069	1980	1793	5842
Hemorrhage or hematoma	139	141	115	395
Hypothermia	10	14	18	42
Pneumonia	30	32	19	81
Pulmonary thromboembolism	69	37	57	163
Suffocation	147	131	122	400
Thermal injuries	29	27	30	86
Undetermined	109	112	94	315
Others	436	419	289	1144
Total	5667	6327	6133	18127

TOP FOUR PRIMARY CAUSES OF DEATH



DRUG TOXICITY AND HOMICIDE TRENDS



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	103	595	525	94
2016	562	682	805	116
2017	669	820	744	96
Total	1410	4237	4370	856

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 OPIOID DECEDENTS

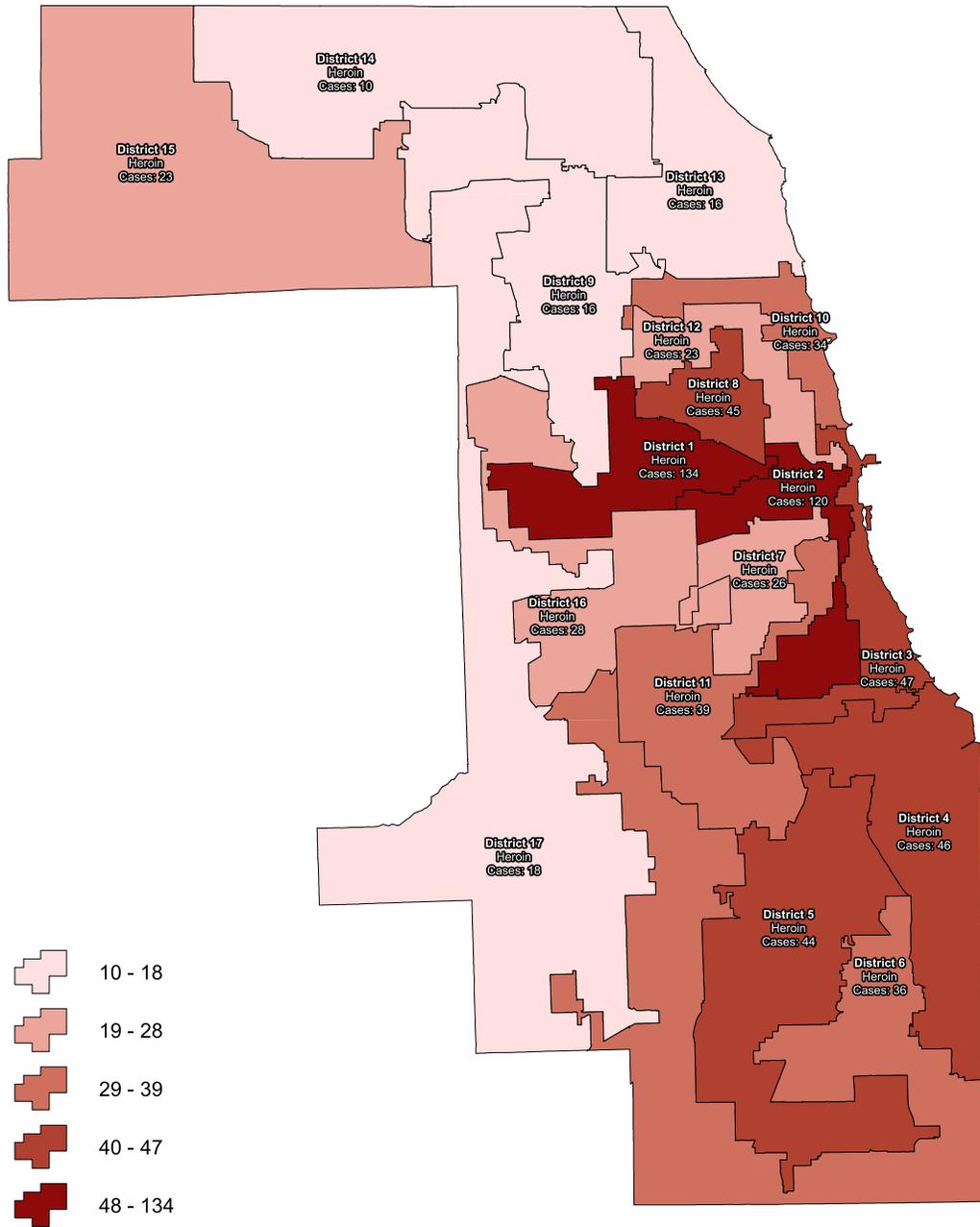
Drug	2015	2016	2017
Opioids	647	1081	1167
Heroin-related	497	693	787
Fentanyl-related	103	560	669

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

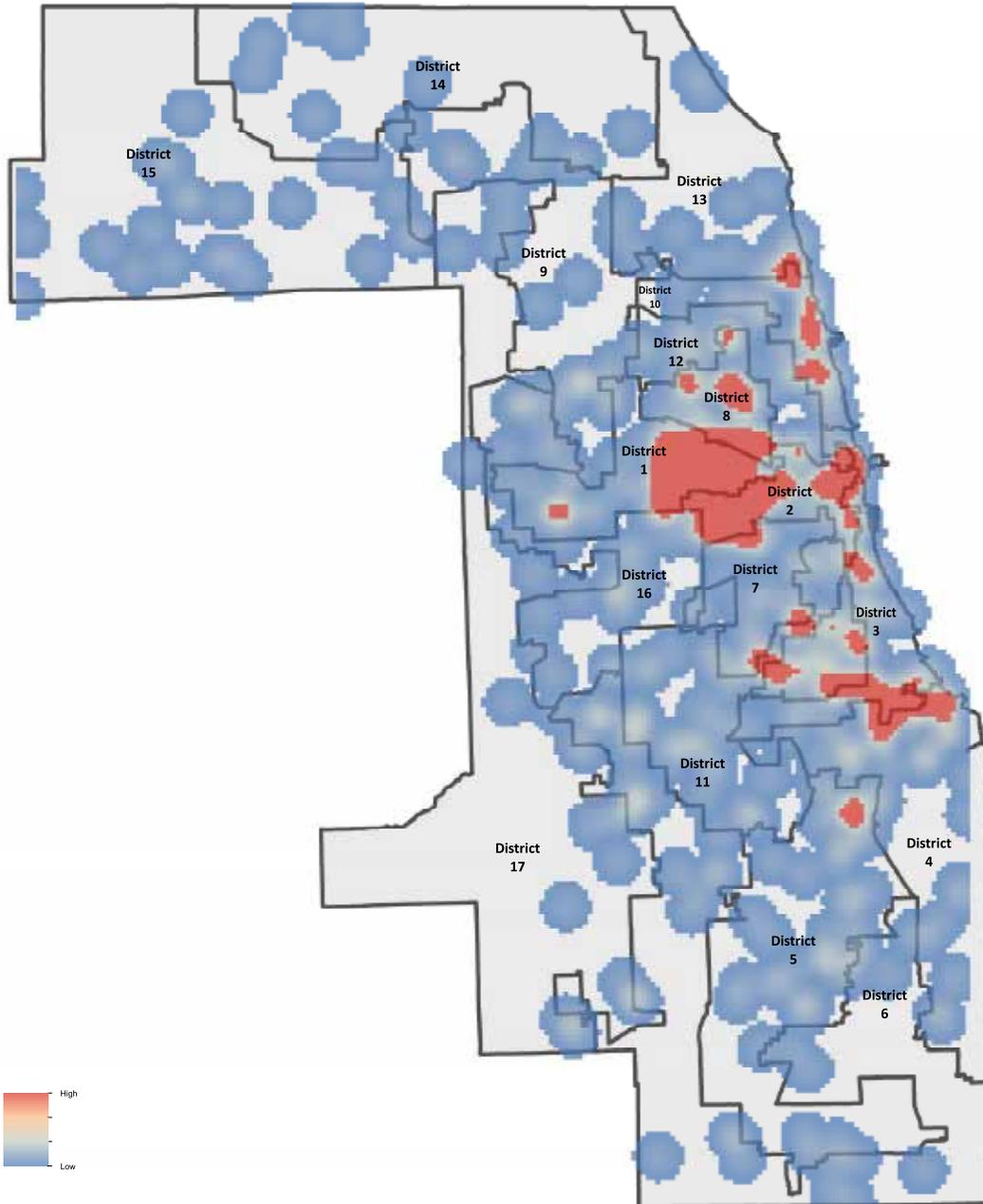
Race/Ethnicity	2016	2017
White (non-Hispanic)	514	554
Black (non-Hispanic)	399	482
Hispanic/Latino	157	121

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

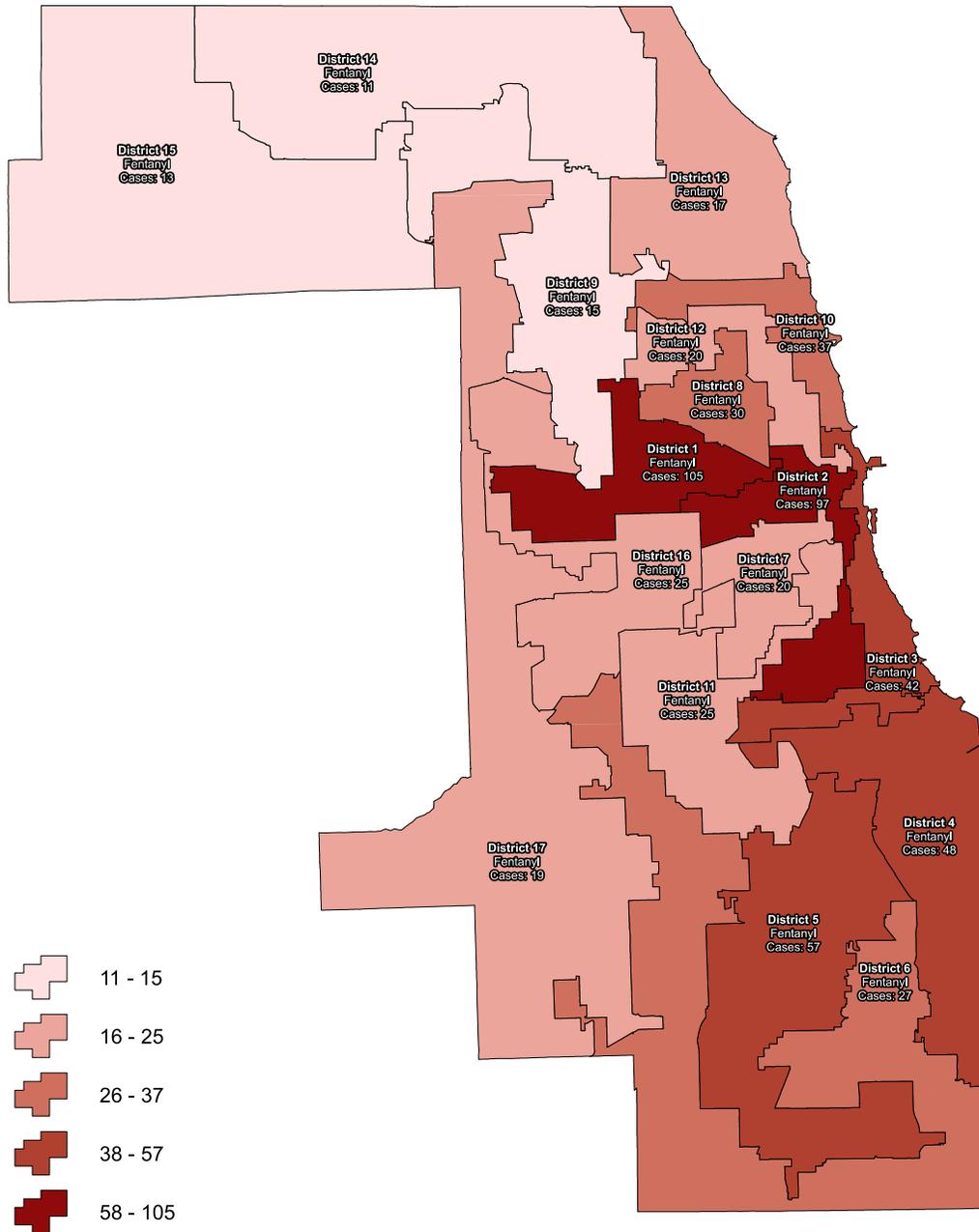
HEROIN CASES PER DISTRICT



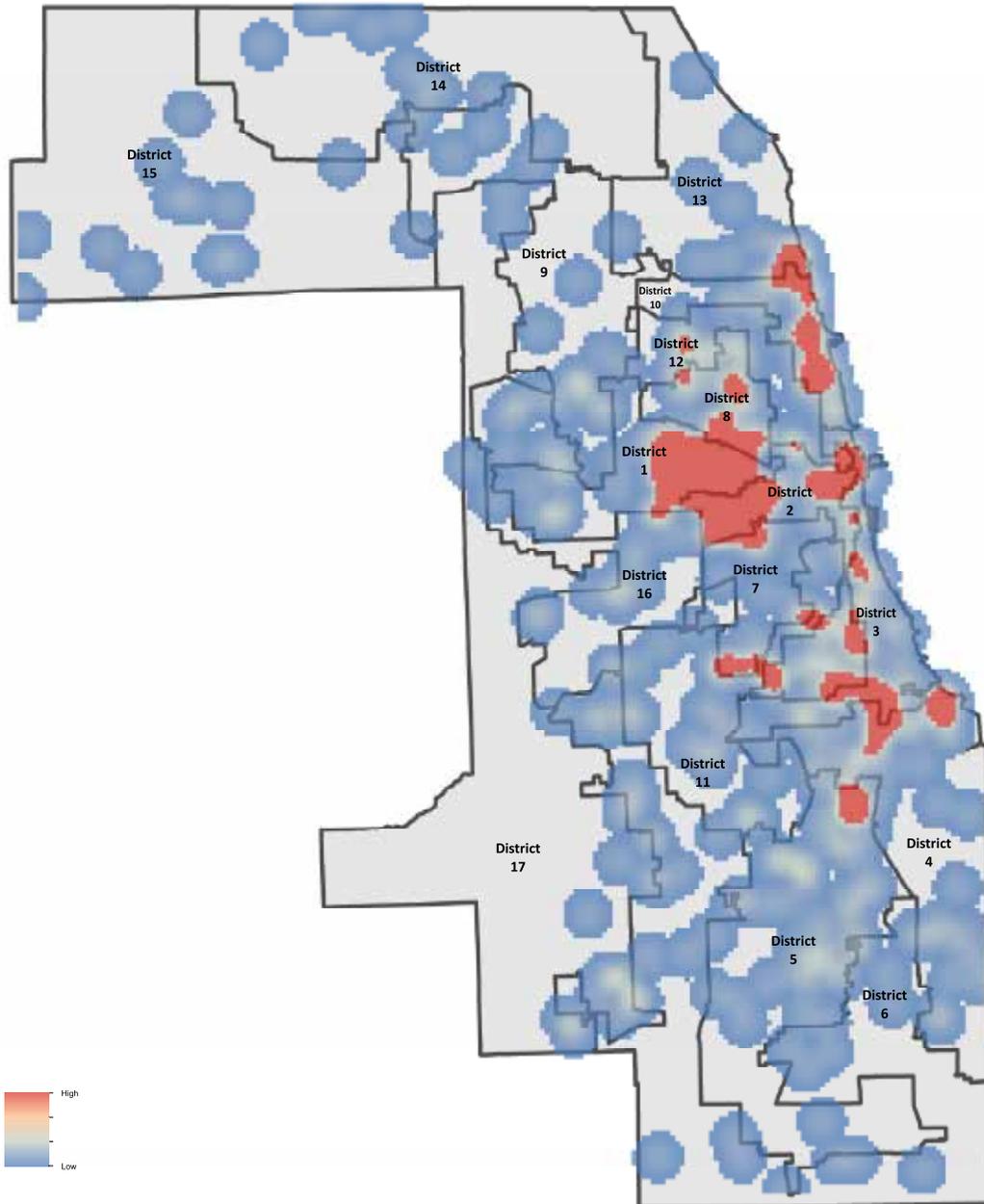
HEROIN CASES CONCENTRATION



FENTANYL CASES PER DISTRICT



FENTANYL CASES CONCENTRATION



GUN HOMICIDE DEMOGRAPHICS

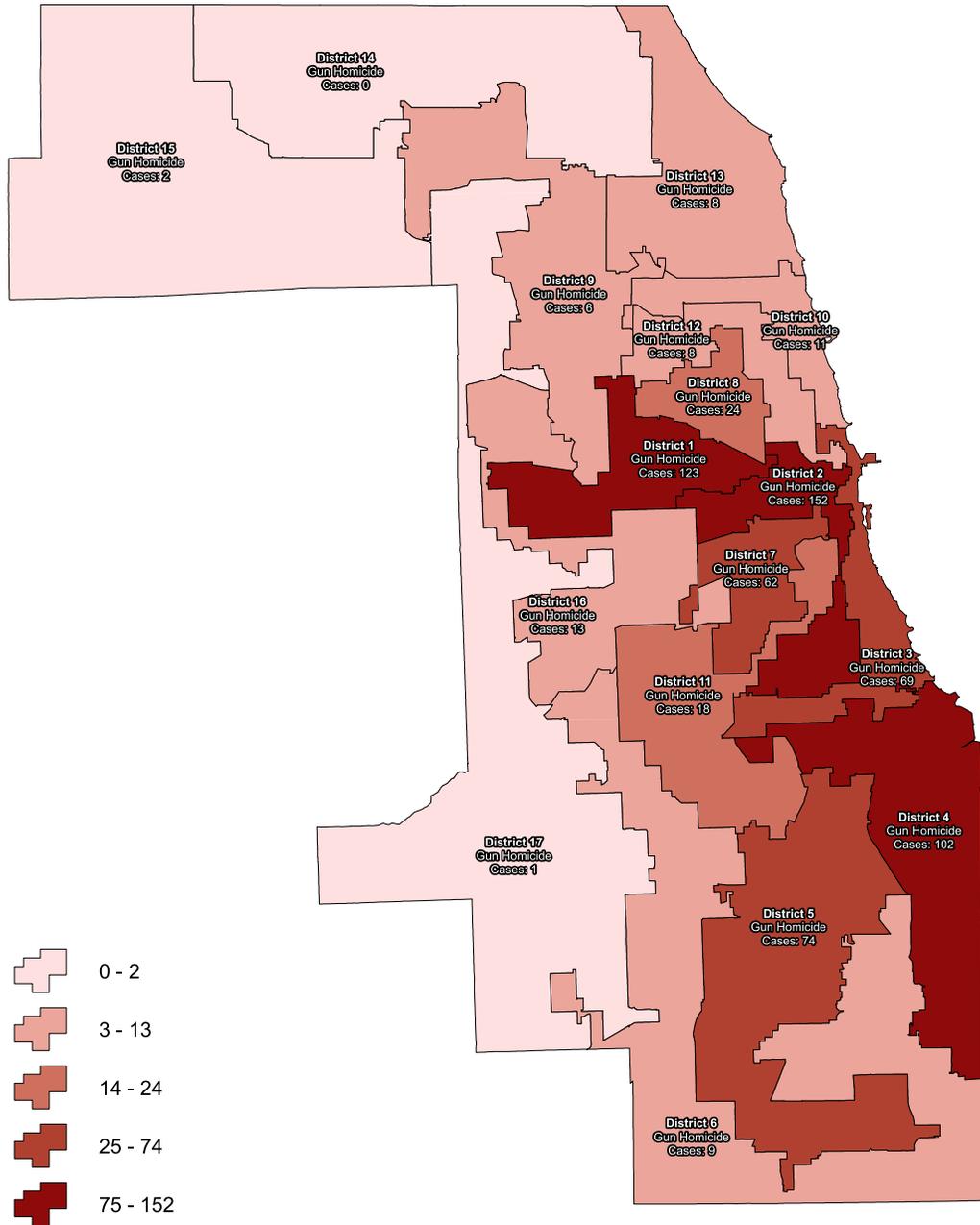
	2015	2016	2017
Gun homicides	525	805	744

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

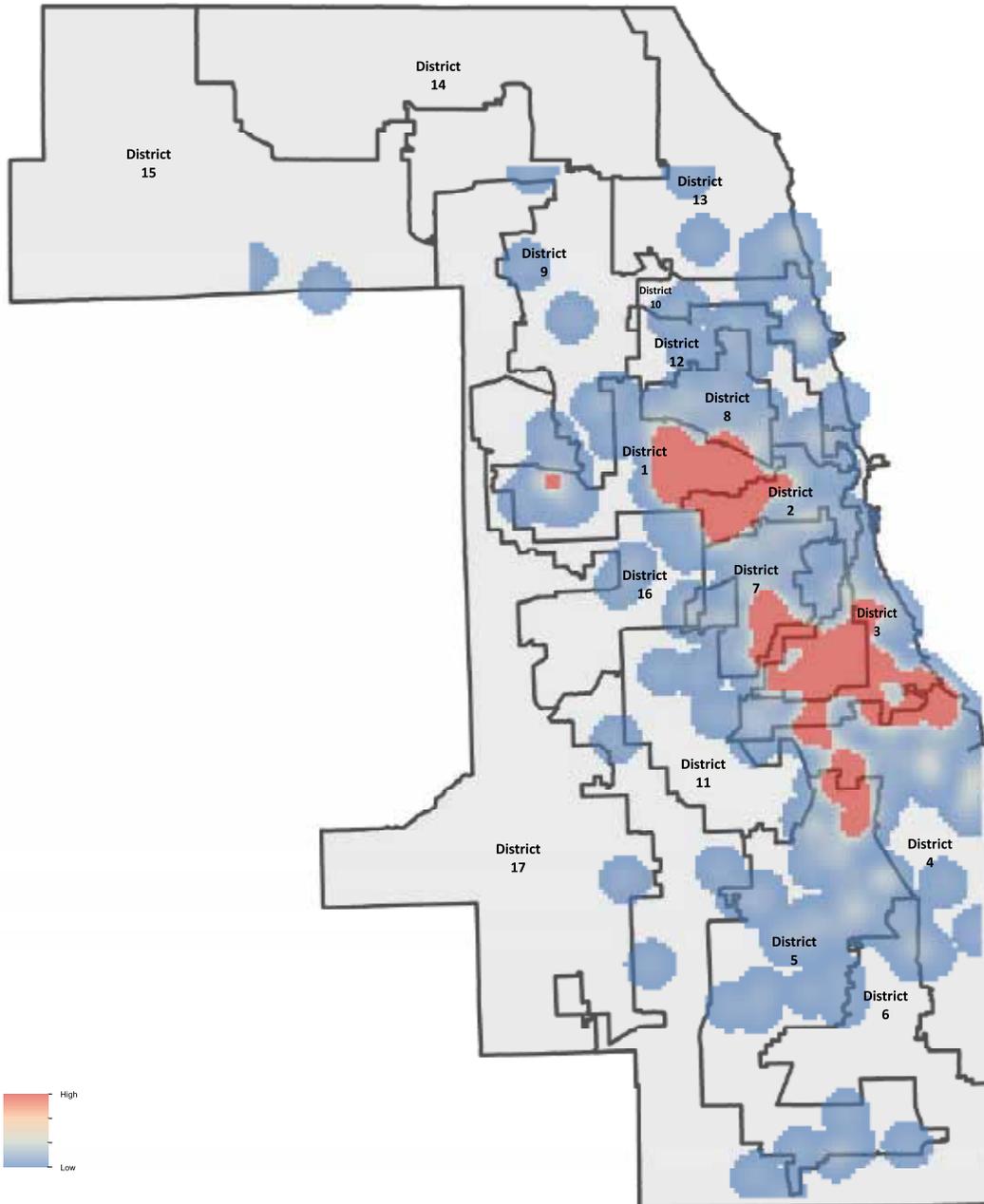
Race/Ethnicity	2015	2016	2017
White (non-Hispanic)	25	35	27
Black (non-Hispanic)	421	641	589
Hispanic/Latino	67	125	125

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

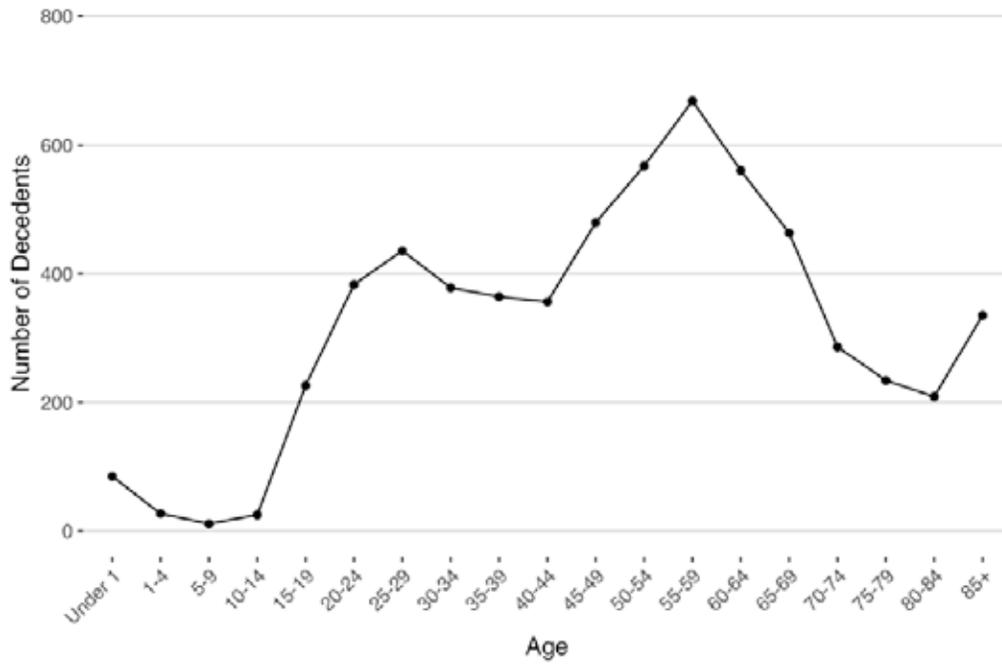
GUN HOMICIDE CASES PER DISTRICT



GUN HOMICIDE CASES CONCENTRATION



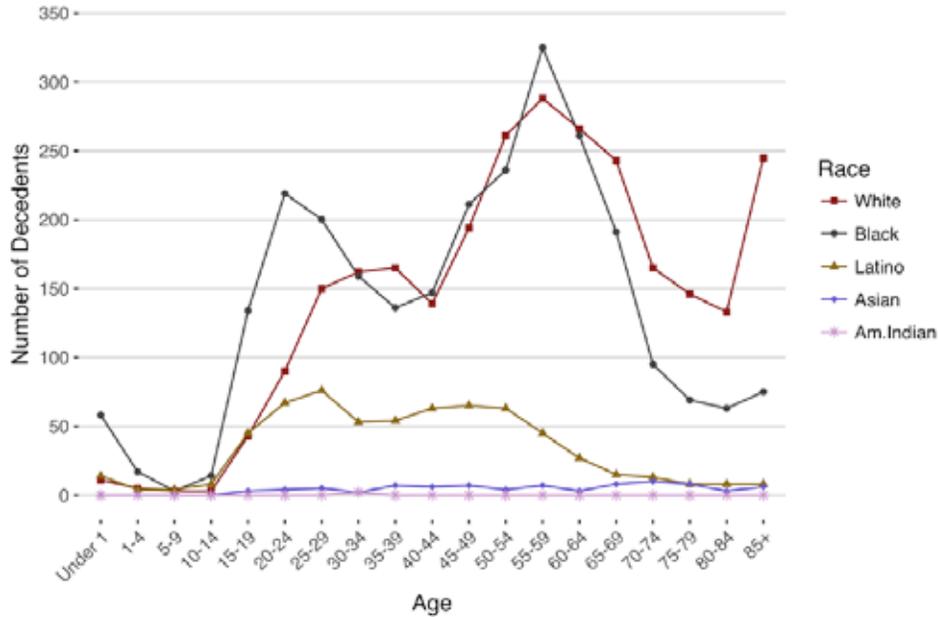
AGE DISTRIBUTION OF DECEDENTS



Age	Decedents	Percentage
Under 1	85	1.40%
1-4	27	0.44%
5-9	11	0.18%
10-14	25	0.41%
15-19	226	3.71%
20-24	383	6.29%
25-29	435	7.14%
30-34	378	6.21%
35-39	364	5.98%
40-44	356	5.84%
45-49	479	7.86%
50-54	567	9.31%
55-59	668	10.97%
60-64	560	9.19%
65-69	463	7.60%
70-74	286	4.70%
75-79	234	3.84%
80-84	209	3.43%
85+	335	5.50%
Total	6091	100.00%

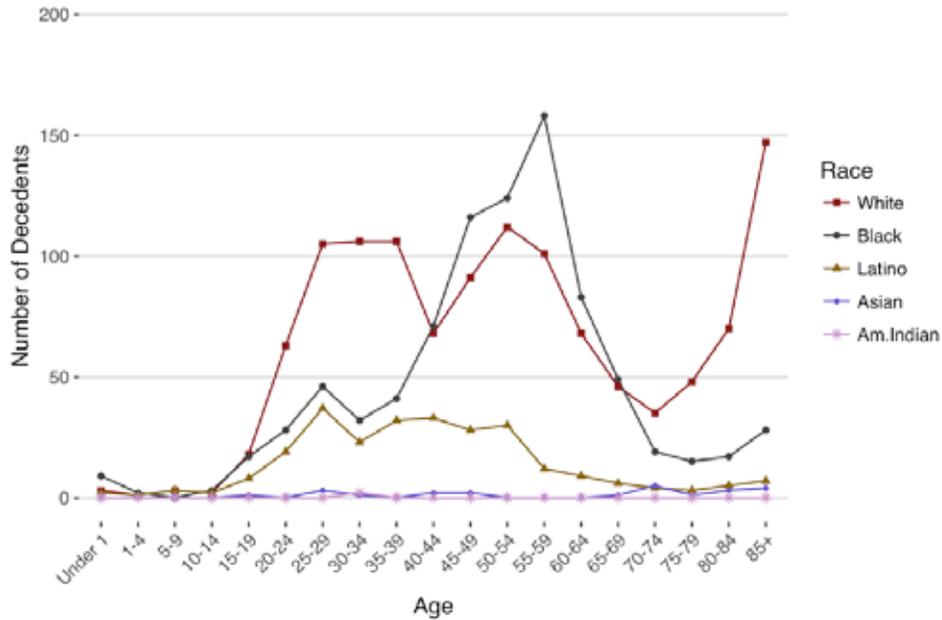
*Note: All graphs and tables do not reflect non-human remains, fetal cases, or others where no death certificate was issued. All age distribution graphs do not count cases of decedents with unknown age.

AGE DISTRIBUTION OF DECEDENTS BY RACE



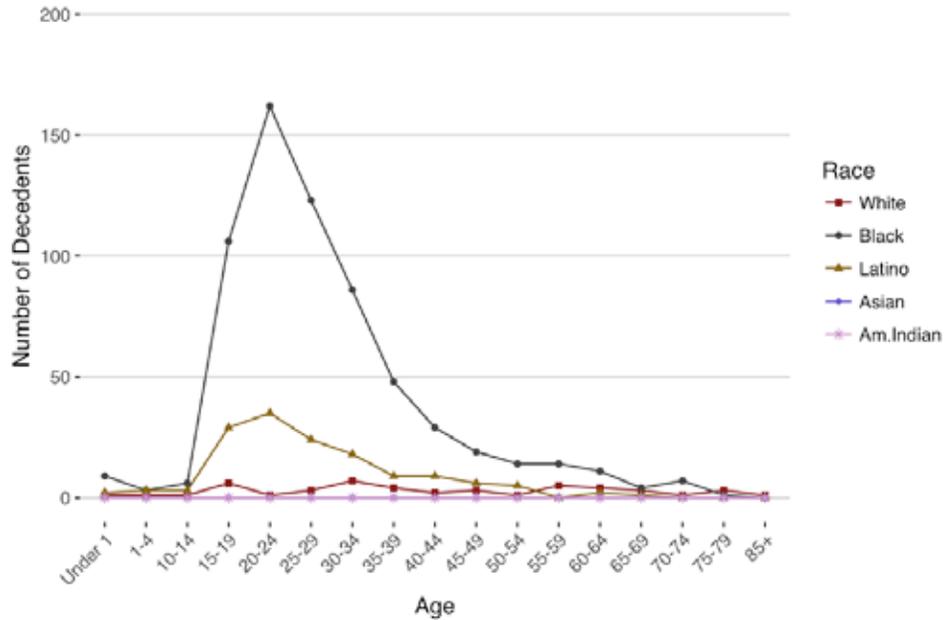
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	11	58	14	0	0	2	0	85	1.40%
1-4	5	17	4	0	0	1	0	27	0.44%
5-9	3	3	4	0	0	1	0	11	0.18%
10-14	3	14	8	0	0	0	0	25	0.41%
15-19	43	134	45	3	0	1	0	226	3.71%
20-24	90	219	67	4	0	3	0	383	6.29%
25-29	150	200	76	5	0	4	0	435	7.14%
30-34	162	159	53	2	2	0	0	378	6.21%
35-39	165	136	54	7	0	2	0	364	5.98%
40-44	139	147	63	6	0	1	0	356	5.84%
45-49	194	211	65	7	0	2	0	479	7.86%
50-54	261	236	63	4	0	2	1	567	9.31%
55-59	288	325	45	7	0	2	1	668	10.97%
60-64	266	261	27	3	0	3	0	560	9.19%
65-69	243	191	15	8	0	3	3	463	7.60%
70-74	165	95	13	10	0	2	1	286	4.70%
75-79	146	69	8	8	0	1	2	234	3.84%
80-84	133	63	8	3	0	2	0	209	3.43%
85+	245	75	8	6	0	1	0	335	5.50%
Total	2712	2613	640	83	2	33	8	6091	100.00%
Percentage	44.52%	42.90%	10.51%	1.36%	0.03%	0.54%	0.13%	100.00%	

AGE DISTRIBUTION OF DECEDENTS OF ACCIDENTS BY RACE



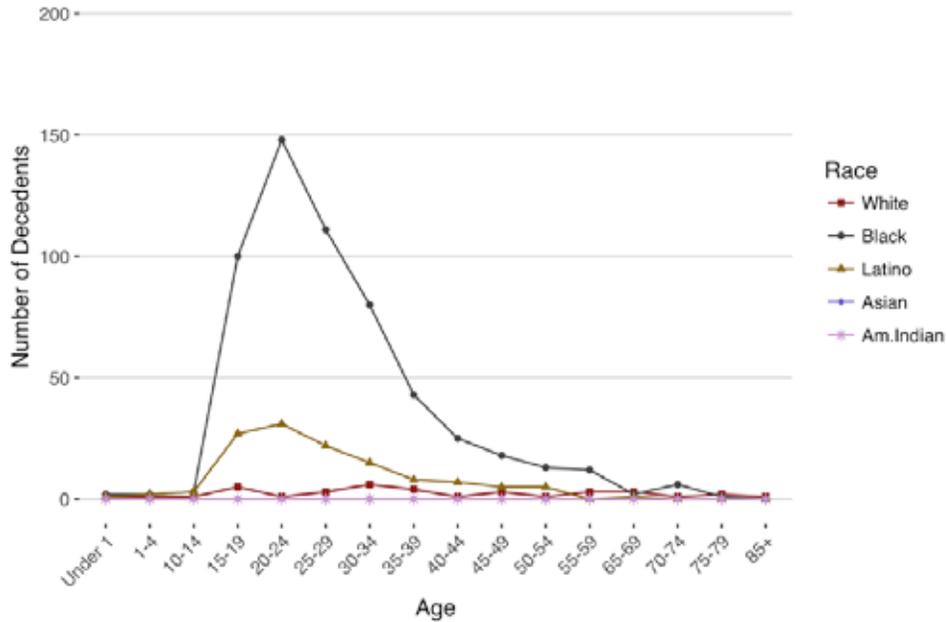
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	3	9	2	0	0	0	0	14	0.59%
1-4	1	2	1	0	0	1	0	5	0.21%
5-9	3	0	3	0	0	1	0	7	0.30%
10-14	2	3	2	0	0	0	0	7	0.30%
15-19	18	17	8	1	0	0	0	44	1.86%
20-24	63	28	19	0	0	1	0	111	4.70%
25-29	105	46	37	3	0	3	0	194	8.22%
30-34	106	32	23	1	2	0	0	164	6.95%
35-39	106	41	32	0	0	1	0	180	7.62%
40-44	68	71	33	2	0	1	0	175	7.41%
45-49	91	116	28	2	0	0	0	237	10.04%
50-54	112	124	30	0	0	0	1	267	11.31%
55-59	101	158	12	0	0	2	1	274	11.61%
60-64	68	83	9	0	0	1	0	161	6.82%
65-69	46	49	6	1	0	1	1	104	4.40%
70-74	35	19	4	5	0	1	1	65	2.75%
75-79	48	15	3	1	0	1	1	69	2.92%
80-84	70	17	5	3	0	2	0	97	4.11%
85+	147	28	7	4	0	0	0	186	7.88%
Total	1193	858	264	23	2	16	5	2361	100.00%
Percentage	50.53%	36.34%	11.18%	0.97%	0.08%	0.68%	0.21%	100.00%	

AGE DISTRIBUTION OF DECEDENTS OF HOMICIDES BY RACE



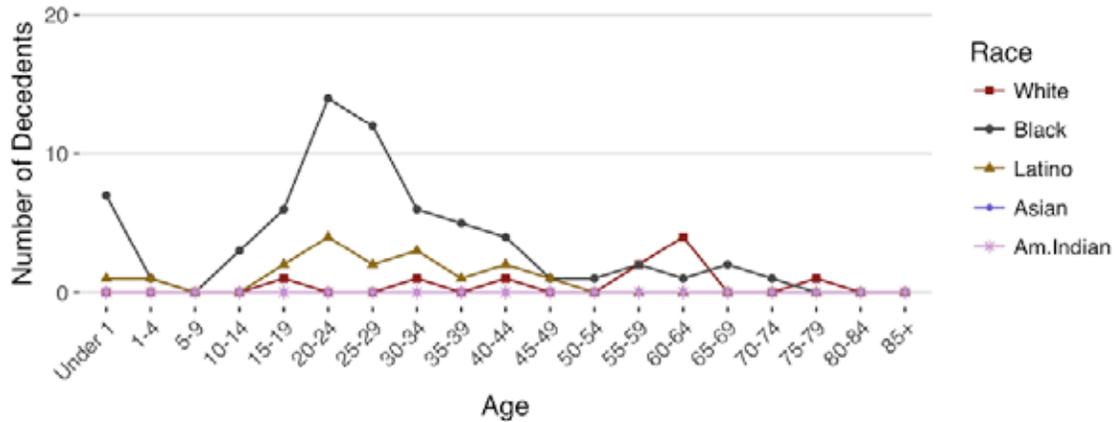
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	1	9	2	0	0	0	0	12	1.43%
1-4	1	3	3	0	0	0	0	7	0.84%
10-14	1	6	3	0	0	0	0	10	1.19%
15-19	6	106	29	0	0	1	0	142	16.95%
20-24	1	162	35	0	0	1	0	199	23.75%
25-29	3	123	24	0	0	1	0	151	18.02%
30-34	7	86	18	0	0	0	0	111	13.25%
35-39	4	48	9	0	0	0	0	61	7.28%
40-44	2	29	9	0	0	0	0	40	4.77%
45-49	3	19	6	0	0	0	0	28	3.34%
50-54	1	14	5	0	0	0	0	20	2.39%
55-59	5	14	0	0	0	0	0	19	2.27%
60-64	4	11	2	0	0	0	0	17	2.03%
65-69	3	4	1	0	0	0	0	8	0.95%
70-74	1	7	0	0	0	0	0	8	0.95%
75-79	3	1	0	0	0	0	0	4	0.48%
85+	1	0	0	0	0	0	0	1	0.12%
Total	47	642	146	0	0	3	0	838	100.00%
Percentage	5.61%	76.61%	17.42%	0.00%	0.00%	0.36%	0.00%	100.00%	

AGE DISTRIBUTION OF MALE DECEDENTS OF HOMICIDES BY RACE



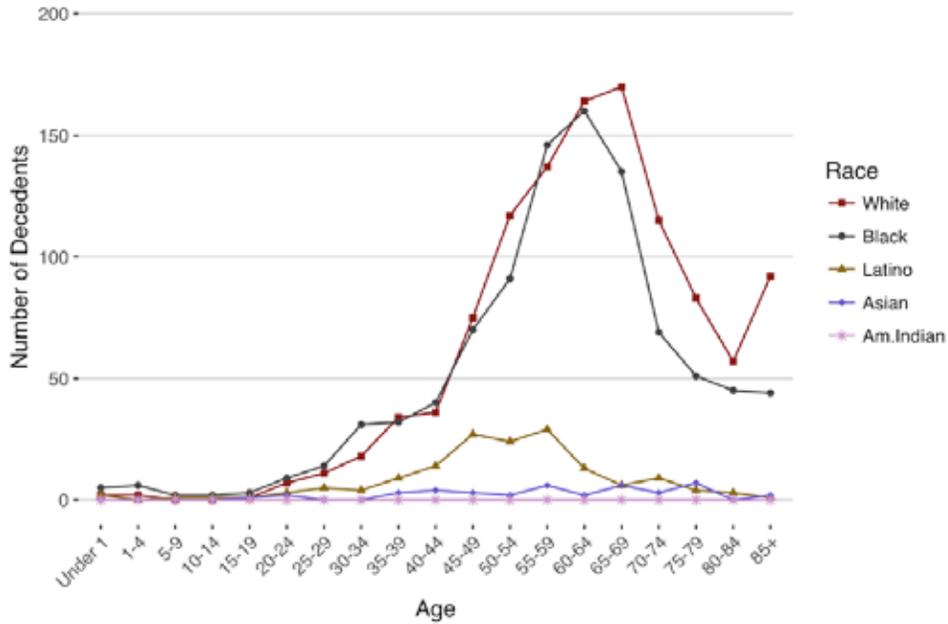
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	1	2	1	0	0	0	0	4	0.55%
1-4	1	2	2	0	0	0	0	5	0.68%
10-14	1	3	3	0	0	0	0	7	0.95%
15-19	5	100	27	0	0	1	0	133	18.14%
20-24	1	148	31	0	0	1	0	181	24.69%
25-29	3	111	22	0	0	1	0	137	18.69%
30-34	6	80	15	0	0	0	0	101	13.78%
35-39	4	43	8	0	0	0	0	55	7.50%
40-44	1	25	7	0	0	0	0	33	4.50%
45-49	3	18	5	0	0	0	0	26	3.55%
50-54	1	13	5	0	0	0	0	19	2.59%
55-59	3	12	0	0	0	0	0	15	2.05%
65-69	3	2	1	0	0	0	0	6	0.82%
70-74	1	6	0	0	0	0	0	7	0.95%
75-79	2	1	0	0	0	0	0	3	0.41%
85+	1	0	0	0	0	0	0	1	0.14%
Total	37	566	127	0	0	3	0	733	100.00%
Percentage	5.05%	77.22%	17.33%	0.00%	0.00%	0.41%	0.00%	100.00%	

AGE DISTRIBUTION OF FEMALE DECEDENTS OF HOMICIDES BY RACE



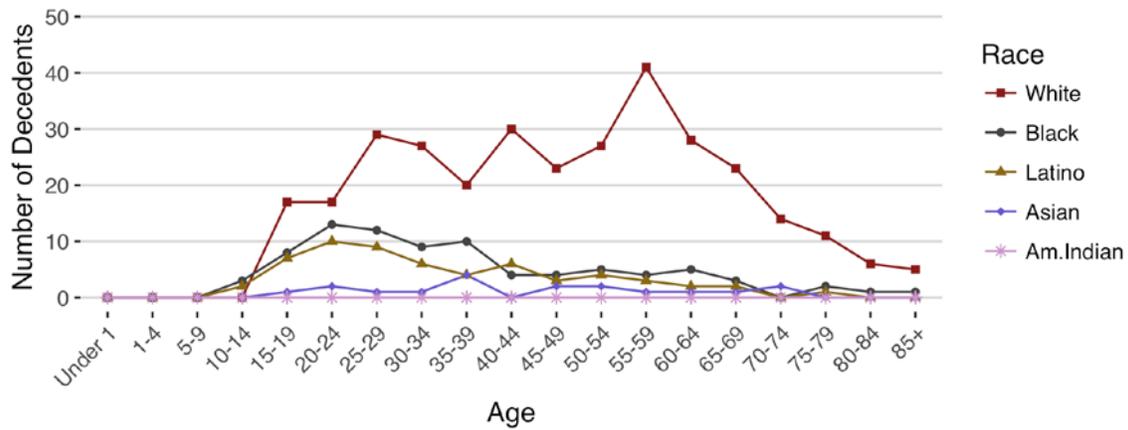
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	0	7	1	0	0	0	0	8	8.60%
1-4	0	1	1	0	0	0	0	2	2.15%
5-9	0	0	0	0	0	0	0	0	0.00%
10-14	0	3	0	0	0	0	0	3	3.23%
15-19	1	6	2	0	0	0	0	9	9.68%
20-24	0	14	4	0	0	0	0	18	19.35%
25-29	0	12	2	0	0	0	0	14	15.05%
30-34	1	6	3	0	0	0	0	10	10.75%
35-39	0	5	1	0	0	0	0	6	6.45%
40-44	1	4	2	0	0	0	0	7	7.53%
45-49	0	1	1	0	0	0	0	2	2.15%
50-54	0	1	0	0	0	0	0	1	1.08%
55-59	2	2	0	0	0	0	0	4	4.30%
60-64	4	1	0	0	0	0	0	5	5.38%
65-69	0	2	0	0	0	0	0	2	2.15%
70-74	0	1	0	0	0	0	0	1	1.08%
75-79	1	0	0	0	0	0	0	1	1.08%
80-84	0	0	0	0	0	0	0	0	0.00%
85+	0	0	0	0	0	0	0	0	0.00%
Total	10	66	17	0	0	0	0	93	100.00%
Percentage	10.75%	70.97%	18.28%	0.00%	0.00%	0.00%	0.00%	100.00%	

AGE DISTRIBUTION OF DECEDENTS OF NATURAL CAUSES BY RACE



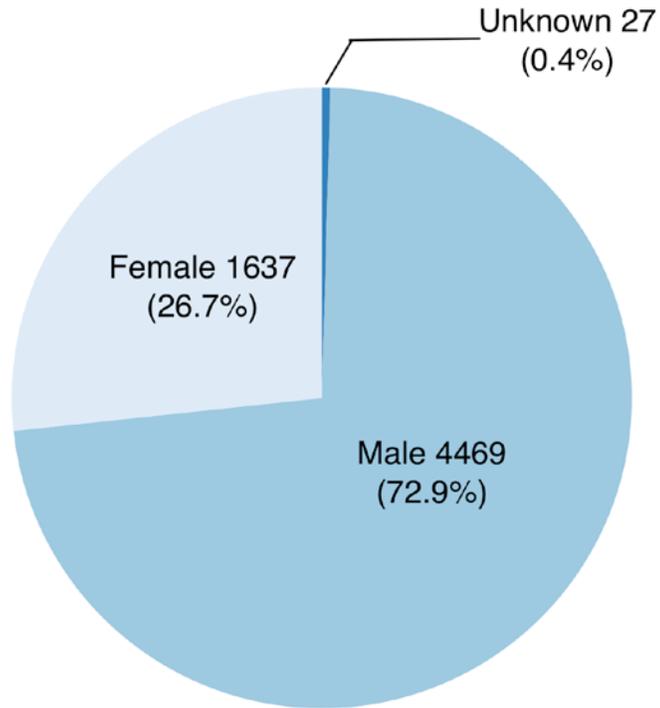
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	2	5	2	0	0	0	0	9	0.39%
1-4	2	6	0	0	0	0	0	8	0.35%
5-9	0	2	1	0	0	0	0	3	0.13%
10-14	0	2	1	0	0	0	0	3	0.13%
15-19	1	3	1	1	0	0	0	6	0.26%
20-24	7	9	3	2	0	0	0	21	0.92%
25-29	11	14	5	0	0	0	0	30	1.31%
30-34	18	31	4	0	0	0	0	53	2.32%
35-39	34	32	9	3	0	0	0	78	3.42%
40-44	36	40	14	4	0	0	0	94	4.12%
45-49	75	70	27	3	0	1	0	176	7.71%
50-54	117	91	24	2	0	2	0	236	10.34%
55-59	137	146	29	6	0	0	0	318	13.94%
60-64	164	160	13	2	0	2	0	341	14.94%
65-69	170	135	6	6	0	2	0	319	13.98%
70-74	115	69	9	3	0	1	0	197	8.63%
75-79	83	51	4	7	0	0	0	145	6.35%
80-84	57	45	3	0	0	0	0	105	4.60%
85+	92	44	1	2	0	1	0	140	6.13%
Total	1121	955	156	41	0	9	0	2282	100.00%
Percentage	49.12%	41.85%	6.84%	1.80%	0.00%	0.39%	0.00%	100.00%	

AGE DISTRIBUTION OF DECEDENTS OF SUICIDE BY RACE



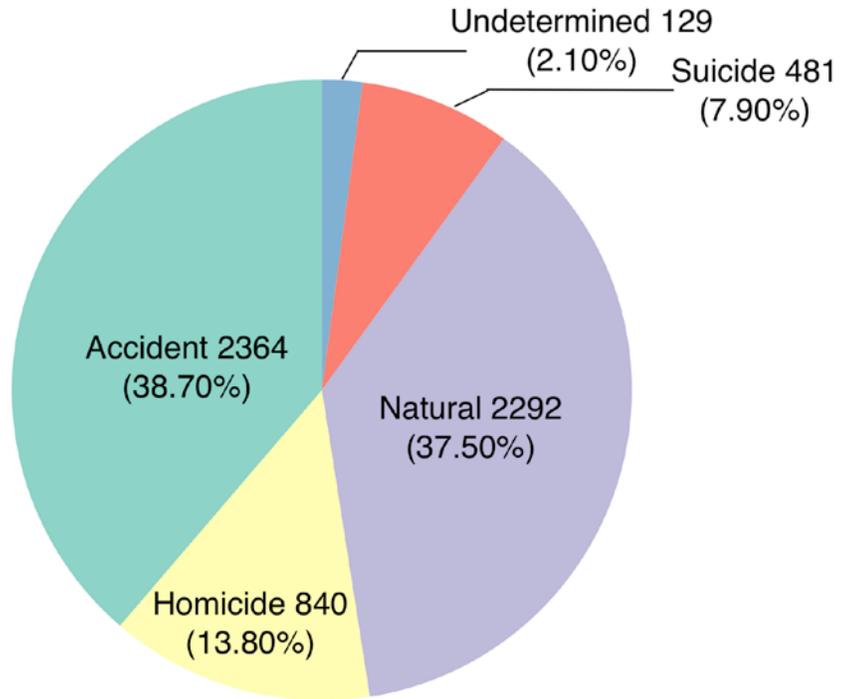
Age	White	Black	Latino	Asian	Am.Indian	Other	Unknown	Total	Percentage
Under 1	0	0	0	0	0	0	0	0	0.00%
1-4	0	0	0	0	0	0	0	0	0.00%
5-9	0	0	0	0	0	0	0	0	0.00%
10-14	0	3	2	0	0	0	0	5	1.04%
15-19	17	8	7	1	0	0	0	33	6.86%
20-24	17	13	10	2	0	1	0	43	8.94%
25-29	29	12	9	1	0	0	0	51	10.60%
30-34	27	9	6	1	0	0	0	43	8.94%
35-39	20	10	4	4	0	1	0	39	8.11%
40-44	30	4	6	0	0	0	0	40	8.32%
45-49	23	4	3	2	0	0	0	32	6.65%
50-54	27	5	4	2	0	0	0	38	7.90%
55-59	41	4	3	1	0	0	0	49	10.19%
60-64	28	5	2	1	0	0	0	36	7.48%
65-69	23	3	2	1	0	0	0	29	6.03%
70-74	14	0	0	2	0	0	0	16	3.33%
75-79	11	2	1	0	0	0	0	14	2.91%
80-84	6	1	0	0	0	0	0	7	1.46%
85+	5	1	0	0	0	0	0	6	1.25%
Total	318	84	59	18	0	2	0	481	100.00%
Percentage	66.11%	17.46%	12.27%	3.74%	0.00%	0.42%	0.00%	100.00%	

GENDER DISTRIBUTION OF ALL DECEDENTS



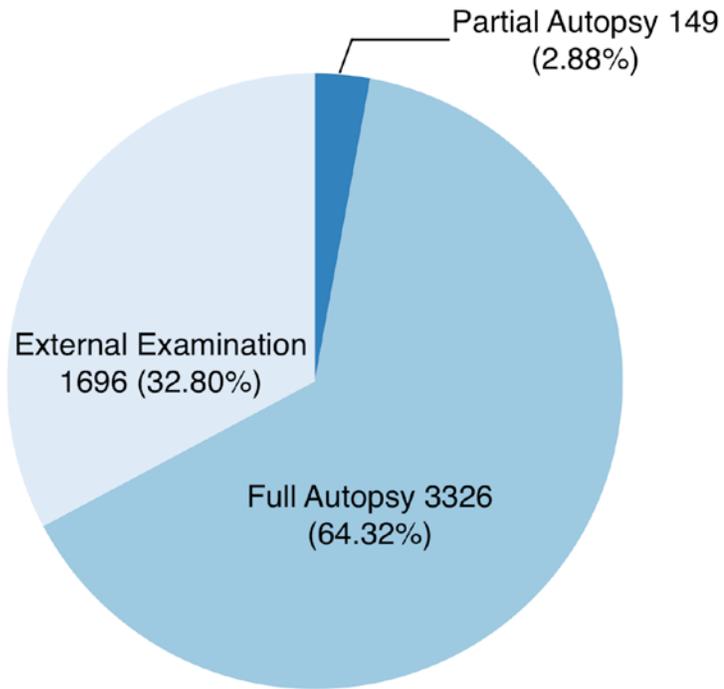
Gender	Decedents	Percentage
Female	1637	26.7%
Male	4469	72.9%
Unknown	27	0.4%

MANNER OF DEATH



Manner	Decedents	Percentage
Accident	2364	38.70%
Homicide	840	13.80%
Natural	2292	37.50%
Suicide	481	7.90%
Undetermined	129	2.10%

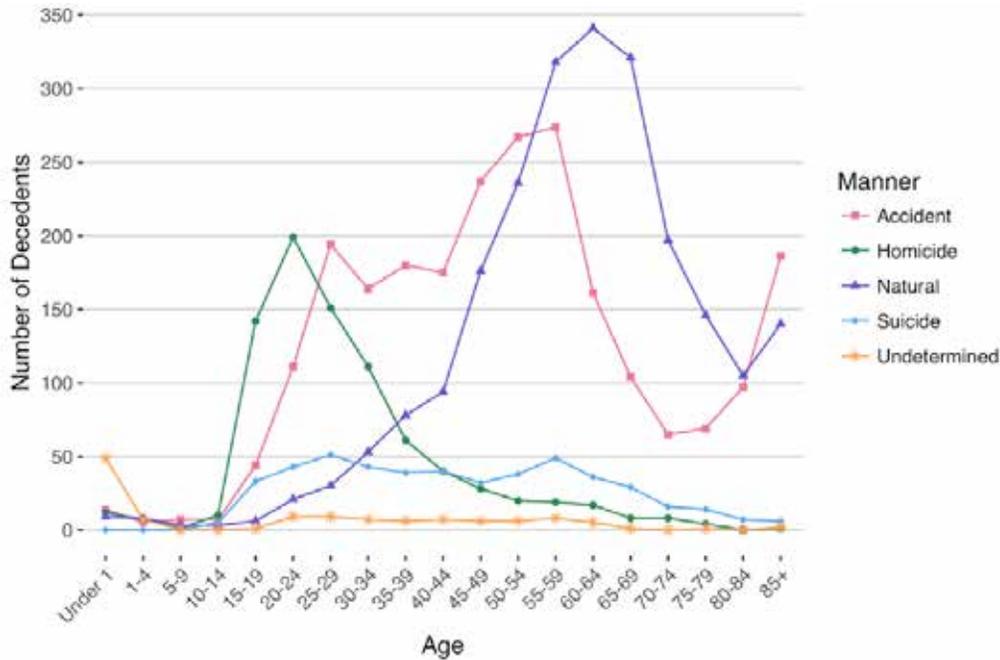
AUTOPSY STATUS



Autopsy Status	Incidents	Percentage
Full autopsy	3326	64.32%
Partial autopsy	149	2.88%
External examination	1696	32.80%

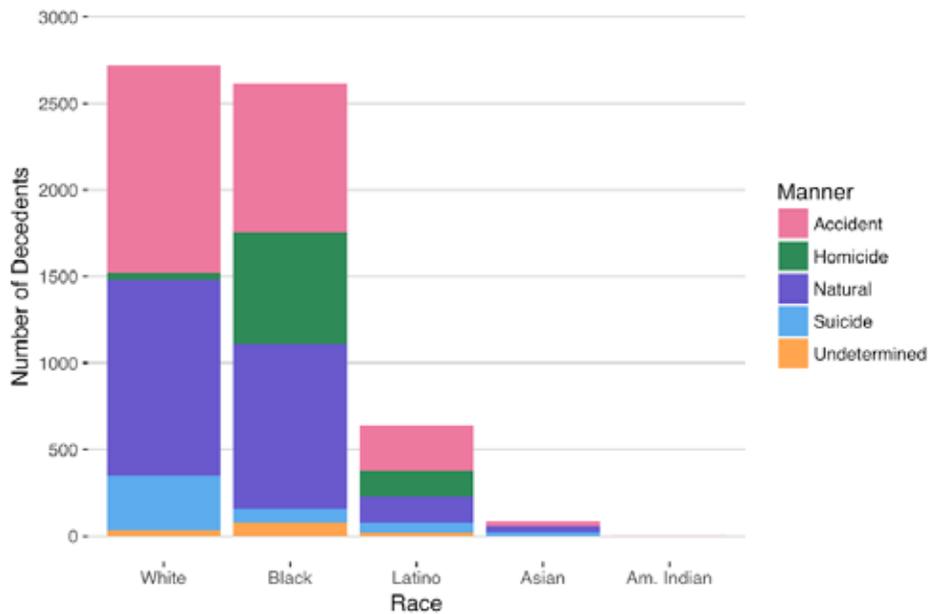
Work-related	Incidents	Percentage
Yes	45	0.73%
No	6088	99.27%

AGE DISTRIBUTION OF DECEDENTS BY MANNER



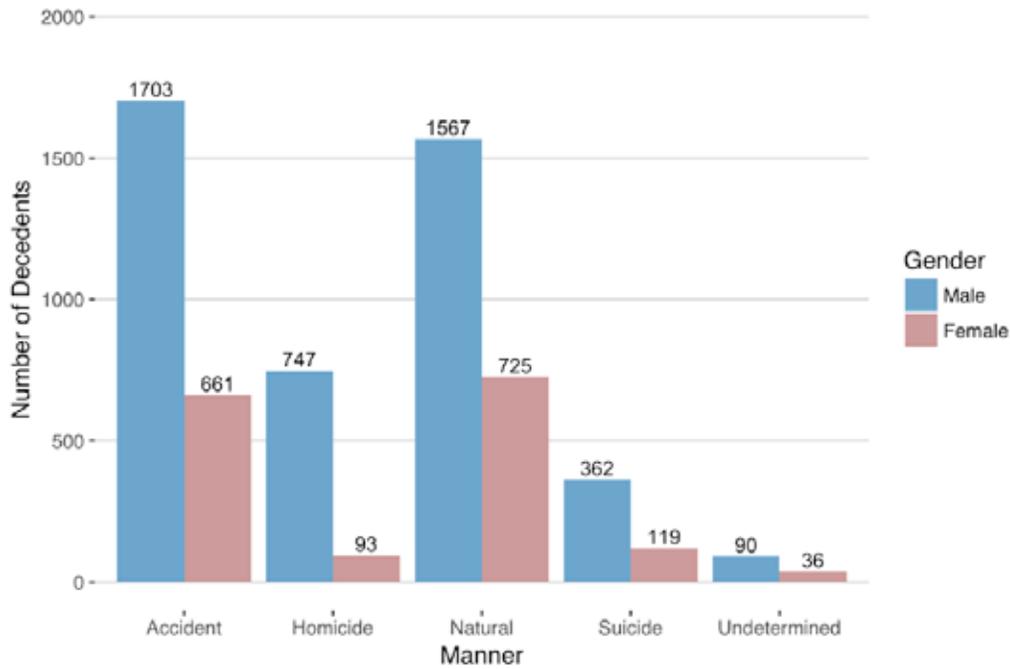
Age	Accident	Homicide	Natural	Suicide	Undetermined	Other	Total	Percentage
Under 1	14	12	9	0	49	0	84	1.38%
1-4	5	7	8	0	7	0	27	0.44%
5-9	7	1	3	0	0	0	11	0.18%
10-14	7	10	3	5	0	0	25	0.41%
15-19	44	142	6	33	1	0	226	3.71%
20-24	111	199	21	43	9	1	384	6.30%
25-29	194	151	30	51	9	0	435	7.14%
30-34	164	111	53	43	7	0	378	6.20%
35-39	180	61	78	39	6	1	365	5.99%
40-44	175	40	94	40	7	0	356	5.84%
45-49	237	28	176	32	6	0	479	7.86%
50-54	267	20	236	38	6	0	567	9.31%
55-59	274	19	318	49	8	0	668	10.97%
60-64	161	17	341	36	5	0	560	9.19%
65-69	104	8	321	29	1	0	463	7.60%
70-74	65	8	197	16	0	0	286	4.69%
75-79	69	4	146	14	1	0	234	3.84%
80-84	97	0	105	7	0	0	209	3.43%
85+	186	1	140	6	2	0	335	5.50%
Total	2361	839	2285	481	124	2	6092	100.00%
Percentage	38.76%	13.77%	37.51%	7.90%	2.04%	0.03%	100.00%	

MANNER OF DEATH BY RACE



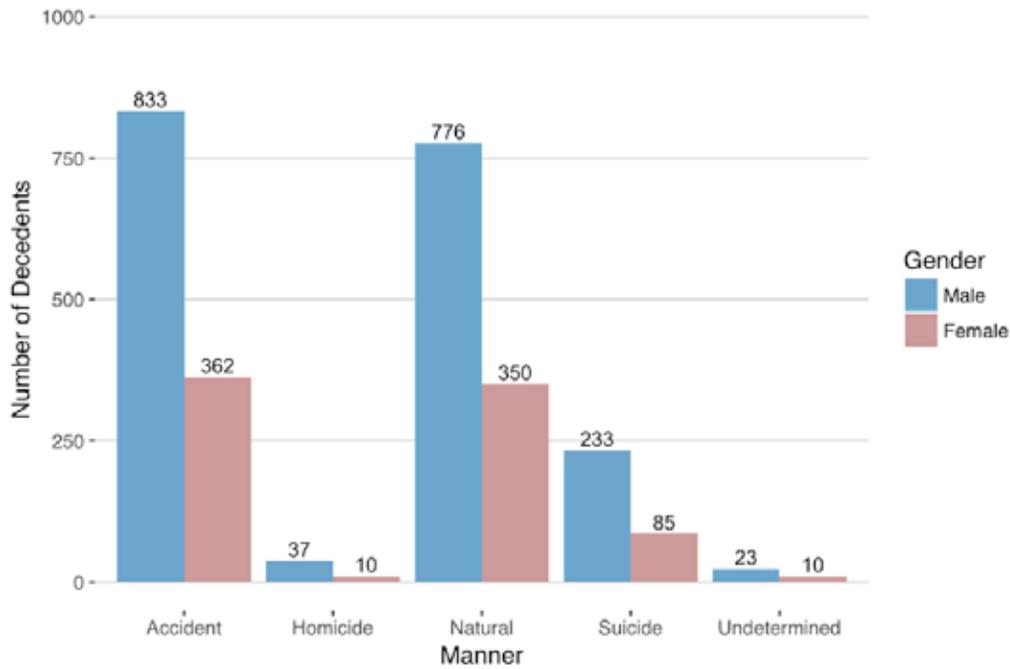
Manner	White	Black	Latino	Asian	Am. Indian	Other	Unknown	Total	Percentage
Accident	1195	858	264	23	2	16	6	2364	38.72%
Homicide	47	644	146	0	0	3	0	840	13.76%
Natural	1126	955	156	42	0	9	4	2292	37.54%
Suicide	318	84	59	18	0	2	0	481	7.88%
Undetermined	33	74	15	1	0	3	3	129	2.11%
Total	2719	2615	640	84	2	33	13	6106	100.00%
Percentage	44.53%	42.83%	10.48%	1.38%	0.03%	0.54%	0.21%	100.00%	

MANNER OF DEATH BY GENDER



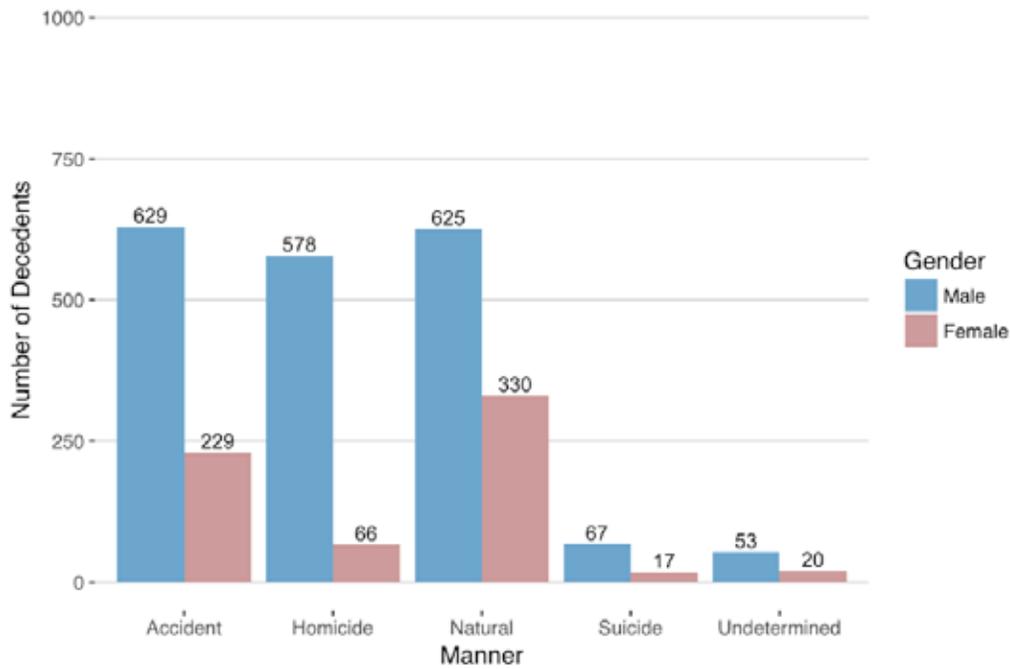
Gender	Accident	Homicide	Natural	Suicide	Undetermined	Total	Percentage
Male	1703	747	1567	362	90	4469	73.19%
Female	661	93	725	119	36	1634	26.76%
Unknown	0	0	0	0	3	3	0.05%
Total	2364	840	2292	481	129	6106	100.00%
Percentage	38.72%	13.76%	37.54%	7.88%	2.11%	100.00%	

MANNER OF DEATH FOR WHITE DECEDENTS BY GENDER



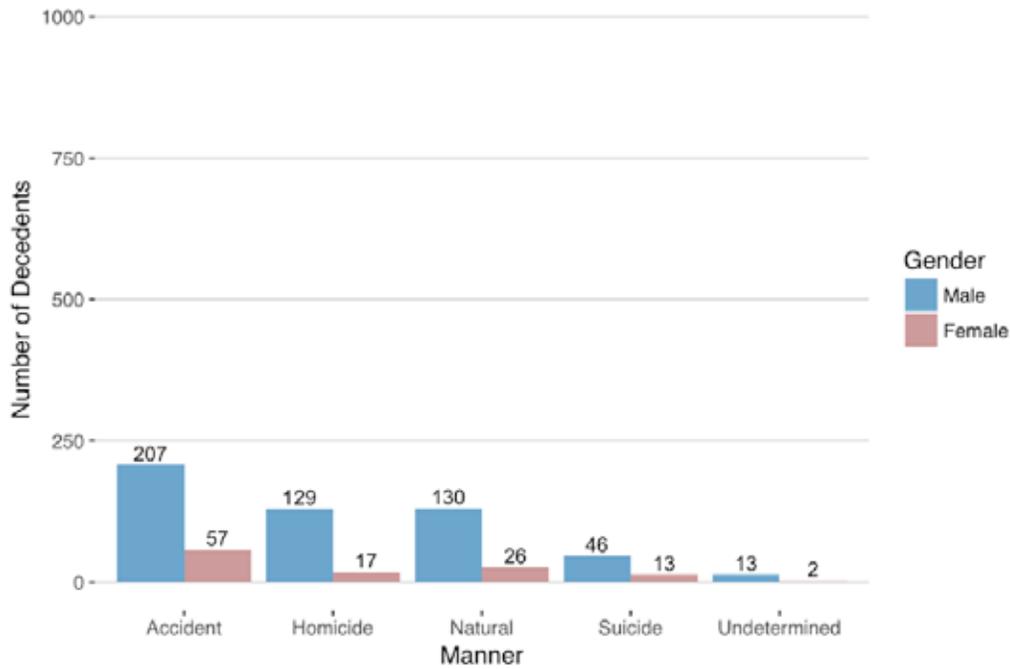
Gender	Accident	Homicide	Natural	Suicide	Undetermined	Total	Percentage
Male	833	37	776	233	23	1902	69.95%
Female	362	10	350	85	10	817	30.05%
Total	1195	47	1126	318	33	2719	100.00%
Percentage	43.95%	1.73%	41.41%	11.70%	1.21%	100.00%	

MANNER OF DEATH FOR BLACK DECEDENTS BY GENDER



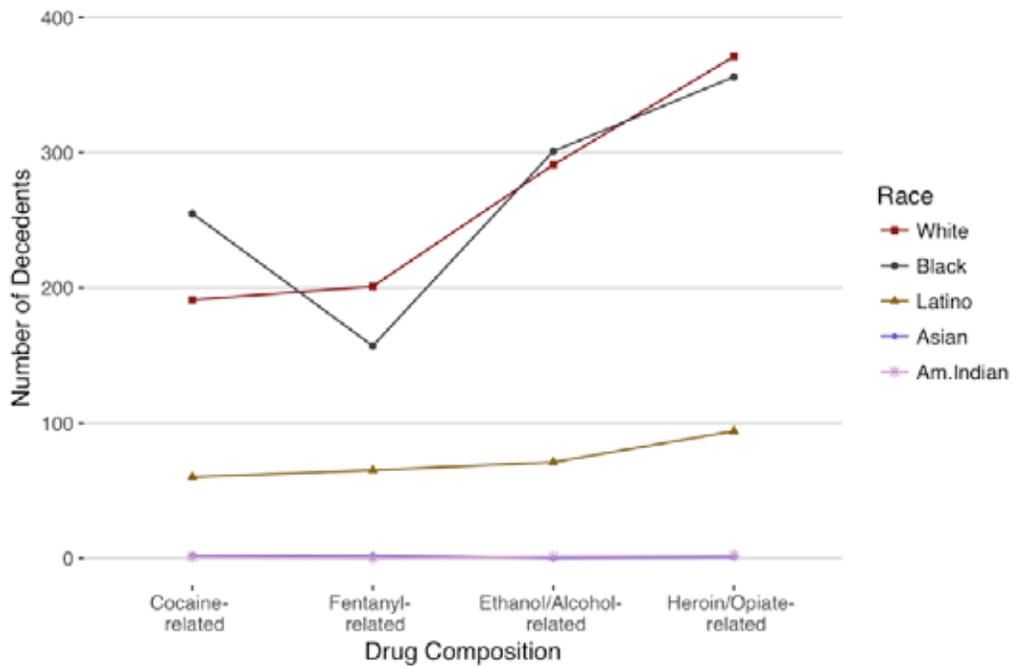
Gender	Accident	Homicide	Natural	Suicide	Undetermined	Total	Percentage
Male	629	578	625	67	53	1952	74.65%
Female	229	66	330	17	20	662	25.32%
Unknown	0	0	0	0	1	1	0.04%
Total	858	644	955	84	74	2615	100.00%
Percentage	32.81%	24.63%	36.52%	3.21%	2.83%	100.00%	

MANNER OF DEATH FOR LATINO DECEDENTS BY GENDER



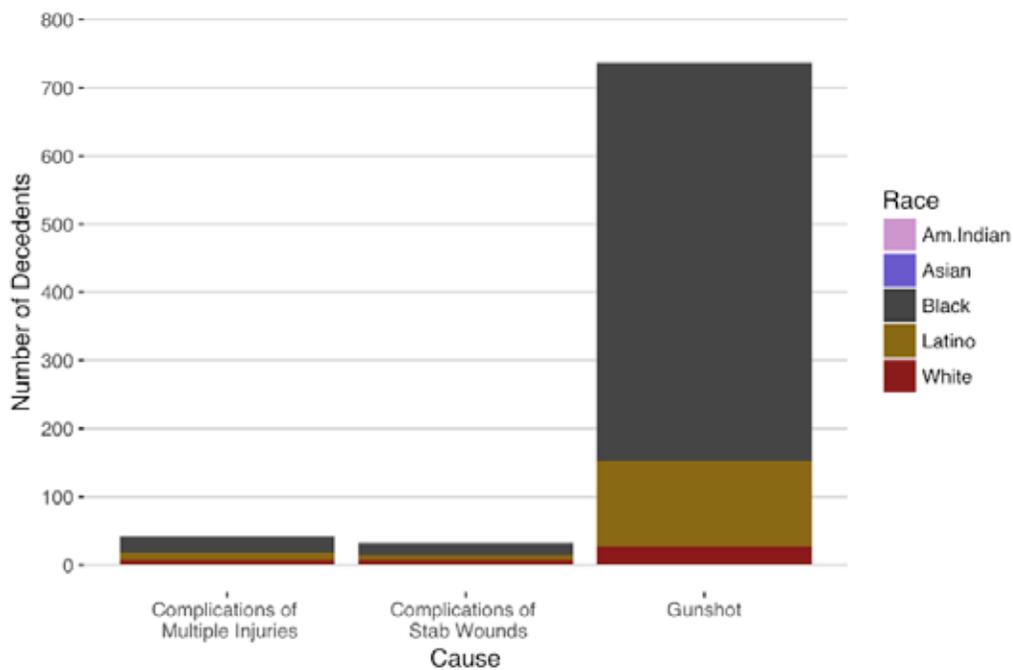
Gender	Accident	Homicide	Natural	Suicide	Undetermined	Total	Percentage
Male	207	129	130	46	13	525	82.03%
Female	57	17	26	13	2	115	17.97%
Total	264	146	156	59	15	640	100.00%
Percentage	41.25%	22.81%	24.38%	9.22%	2.34%	100.00%	

DRUG COMPOSITION OF ACCIDENTAL DRUG OVERDOSE BY RACE



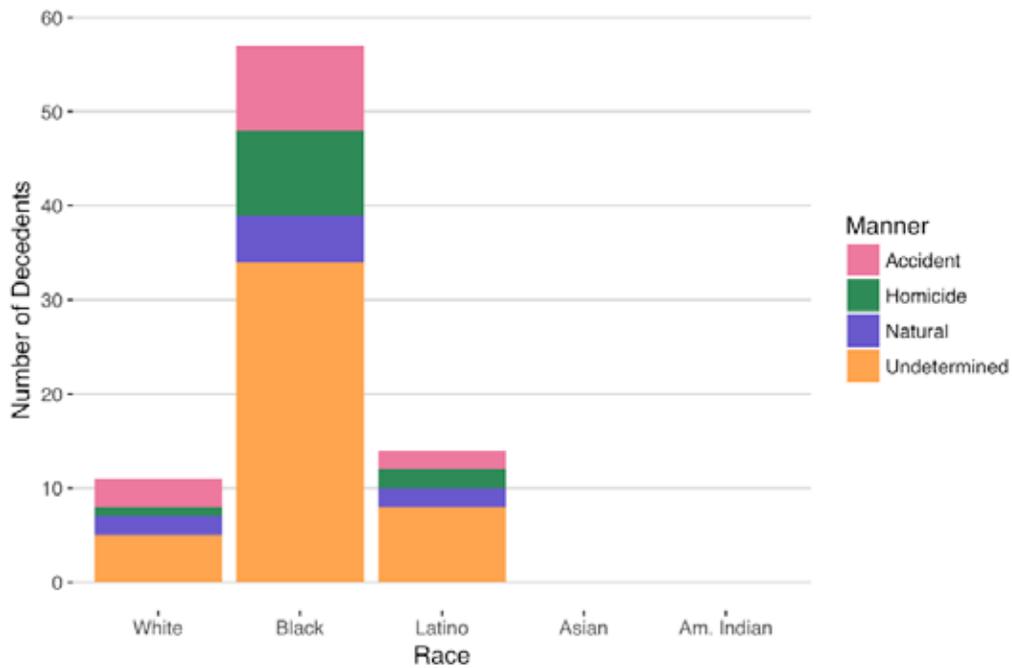
Race	Cocaine-related	Fentanyl-related	Ethanol/Alcohol-related	Heroin/Opiate-related
White	191	291	201	371
Black	255	301	157	356
Latino	60	71	65	94
Asian	2	0	2	1
Am. Indian	1	1	0	2
Other	1	1	1	1
Unknown	2	1	2	1

TOP THREE CAUSES OF HOMICIDE DEATH BY RACE



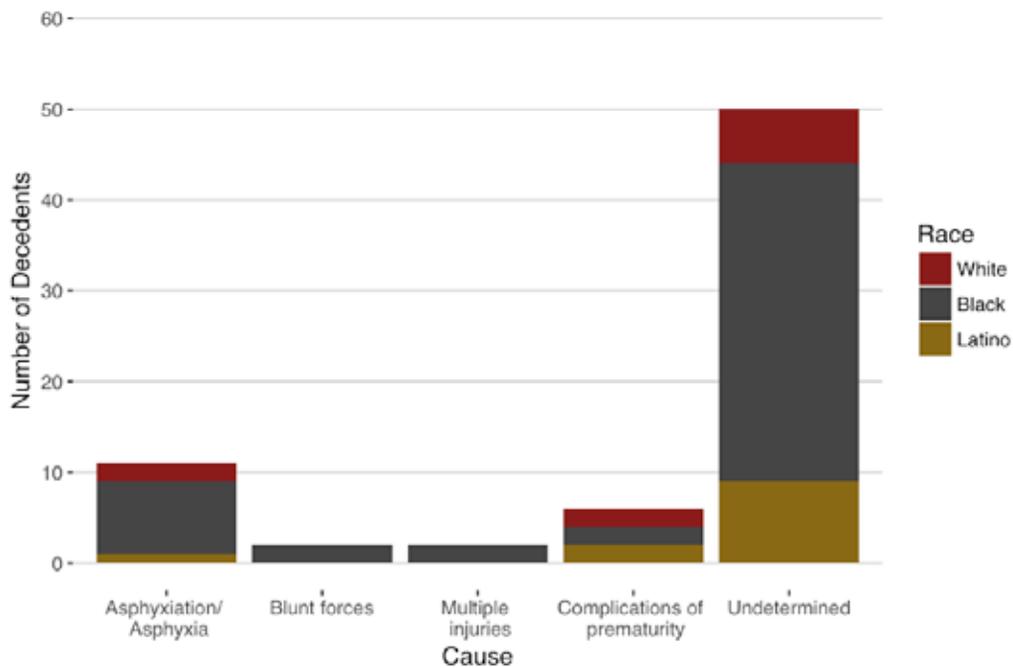
Race	Complications of Multiple Injuries	Complications of stab wounds	Gunshot
White	7	7	27
Black	23	18	589
Latino	11	7	125
Asian	0	0	0
Am.Indian	0	0	0

MANNER OF INFANT DEATH BY RACE



Manner	White	Black	Latino	Other	Total	Percentage
Accident	3	9	2	0	14	16.67%
Homicide	1	9	2	0	12	14.29%
Natural	2	5	2	0	9	10.71%
Undetermined	5	34	8	2	49	58.33%
Total	11	57	14	2	84	100.00%
Percentage	13.10%	67.86%	16.67%	2.38%	100.00%	

FREQUENT CAUSES OF INFANT DEATH BY RACE



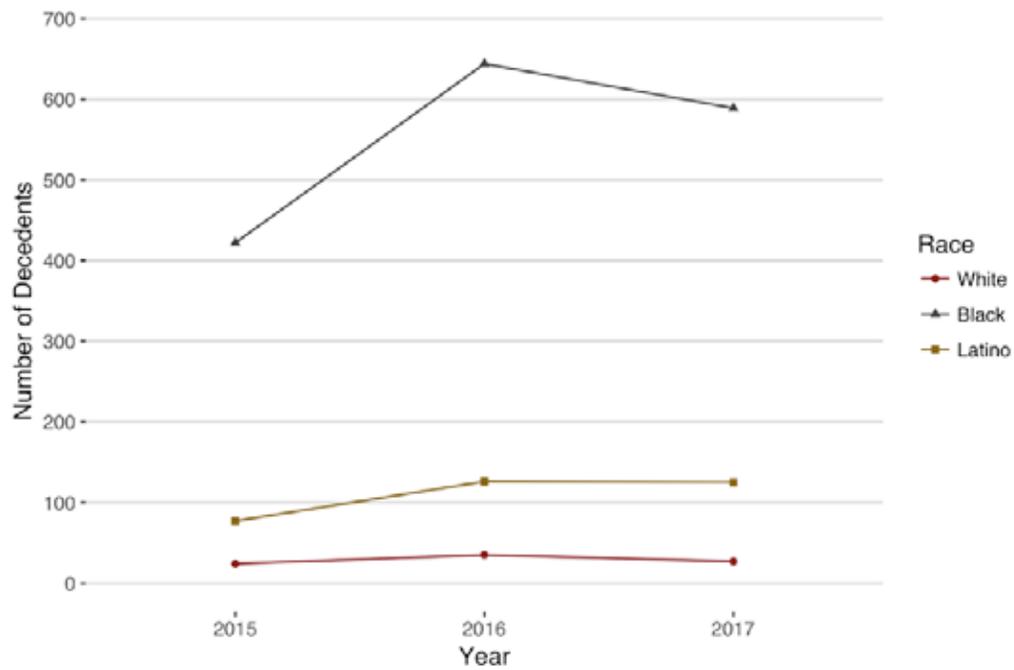
d

Race	Asphyxiation /Asphyxia	Blunt forces	Complications of prematurity	Multiple injuries	Undetermined	Total	Percentage
Black	8	2	2	2	35	49	67.12%
Latino	1	0	0	2	9	12	16.44%
Other	0	0	0	0	2	2	2.74%
White	2	0	0	2	6	10	13.70%
Total	11	2	2	6	52	73	100.00%
Percentage	15.07%	2.74%	2.74%	8.22%	71.23%	100.00%	

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.

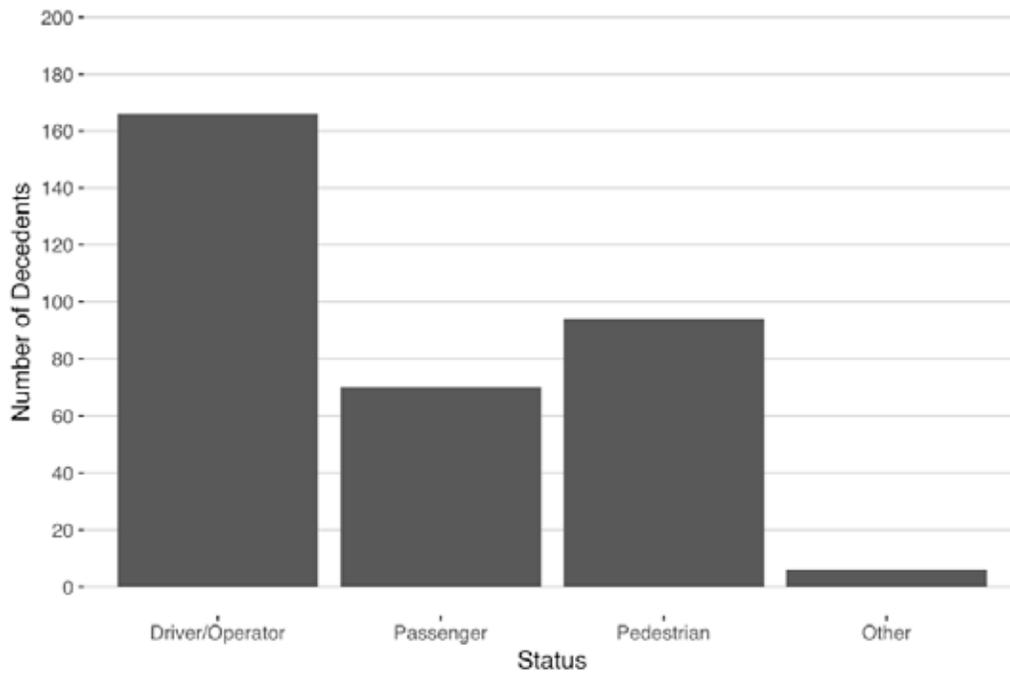
¹ <http://apps.who.int/classifications/icd10/browse/2016/en#/R96>

GUN HOMICIDES BY RACE 2015-2017



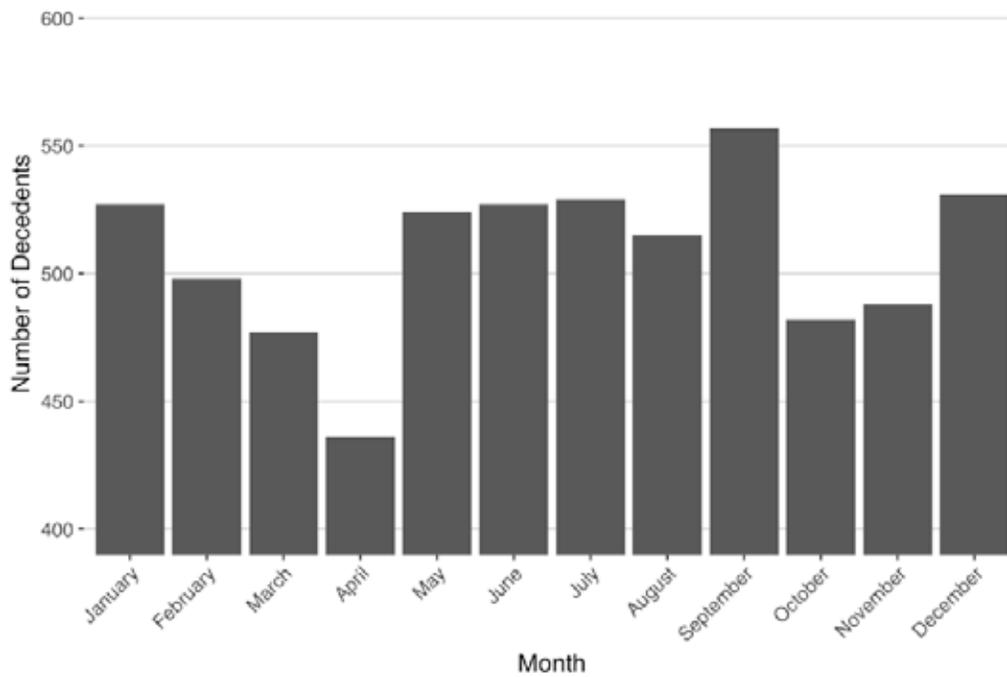
Race	Decedents in 2015	Decedents in 2016	Decedents in 2017	Total
White	25	35	27	87
Black	421	641	589	1651
Latino	77	125	125	327

MOTOR VEHICLE ACCIDENTS



Status	Decedents	Percentage
Driver/Operator	166	49.40%
Passenger	70	20.83%
Pedestrian	94	27.98%
Other	6	1.79%
Total	336	100.00%

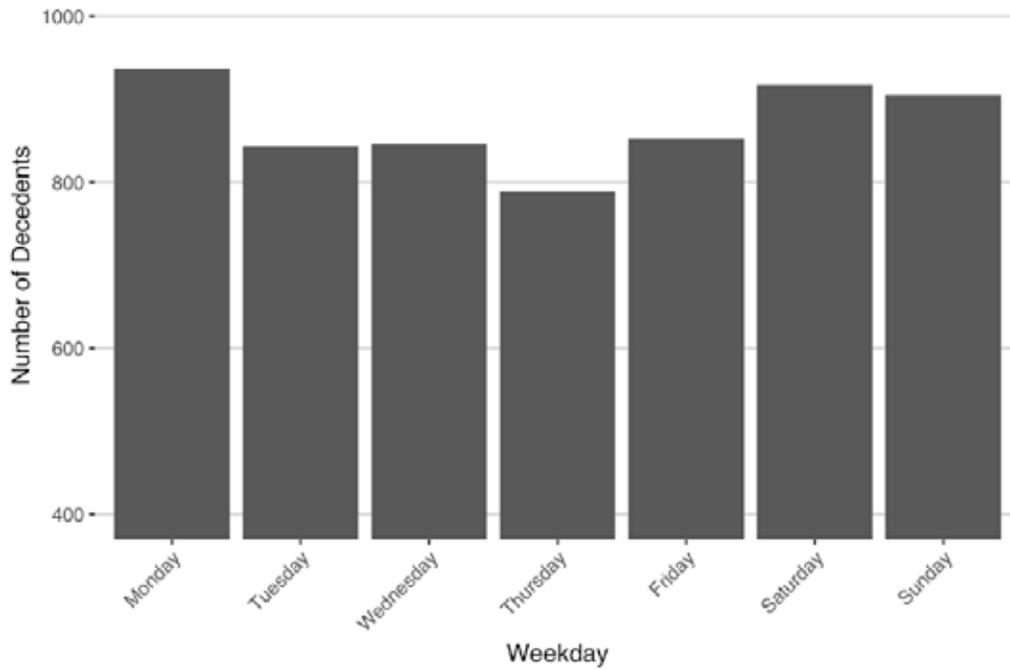
MONTH WHEN INCIDENT OCCURRED



Month	Decedents	Percentage
January	527	8.65%
February	498	8.18%
March	477	7.83%
April	436	7.16%
May	524	8.60%
June	527	8.65%
July	529	8.68%
August	515	8.46%
September	557	9.14%
October	482	7.91%
November	488	8.01%
December	531	8.72%
Total	6091	100.00%

Note: Vertical axis of graph starts at 400 cases. This graph has omitted 42 cases with unknown incident date.

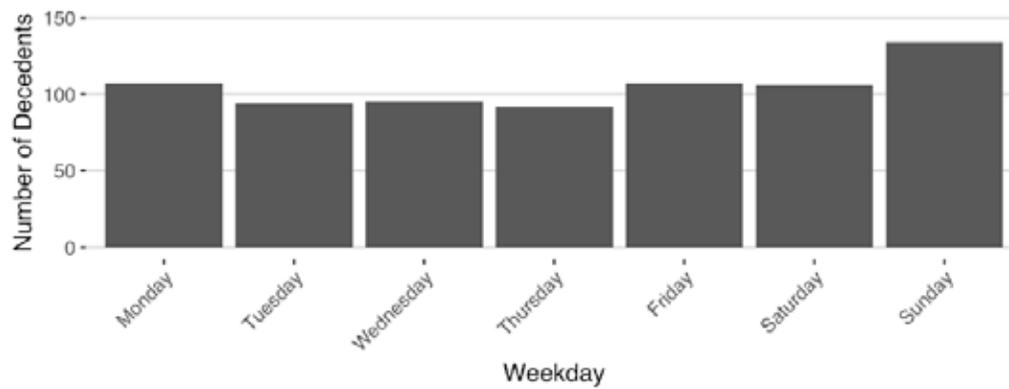
WEEKDAY WHEN INCIDENT OCCURRED



Weekday	Decedents	Percentage
Monday	937	15.38%
Tuesday	843	13.84%
Wednesday	846	13.89%
Thursday	789	12.95%
Friday	853	14.00%
Saturday	918	15.07%
Sunday	905	14.86%
Total	6091	100.00%

Note: Vertical axis of graph starts at 400 cases. This graph has omitted 42 cases with unknown incident date.

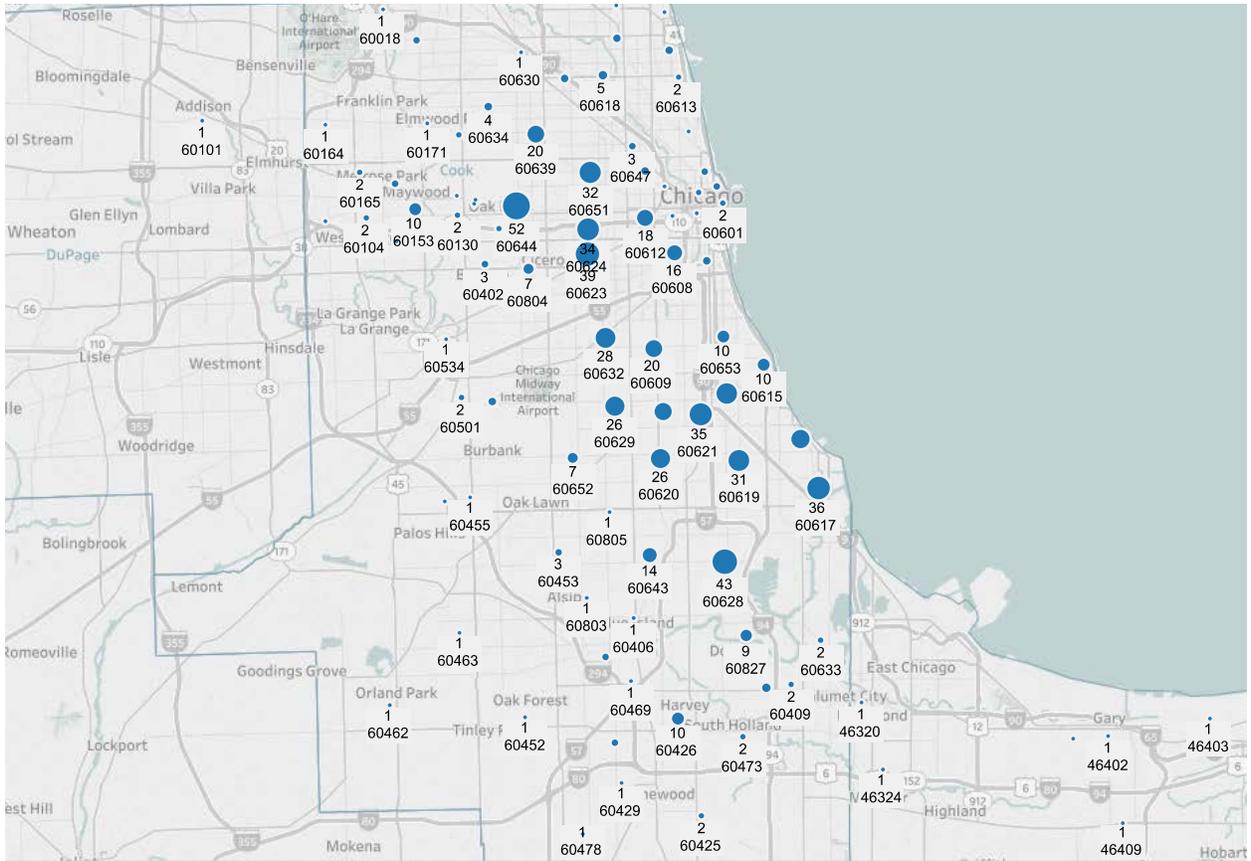
WEEKDAY WHEN GUN HOMICIDE OCCURRED



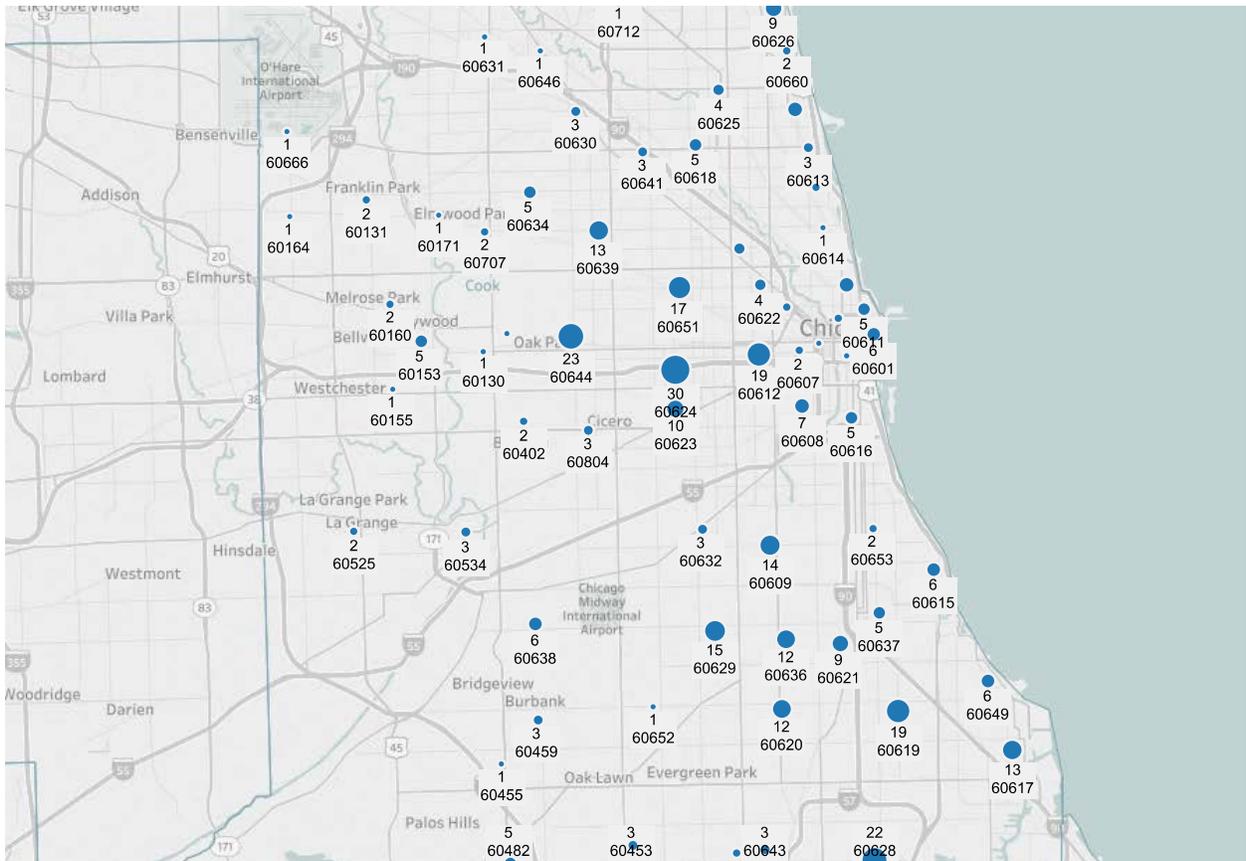
Weekday	Decedents	Percentage
Monday	107	14.56%
Tuesday	94	12.79%
Wednesday	95	12.93%
Thursday	92	12.52%
Friday	107	14.56%
Saturday	106	14.42%
Sunday	134	18.23%
Total	735	100.00%

Note: This graph omitted cases with unknown incident date.

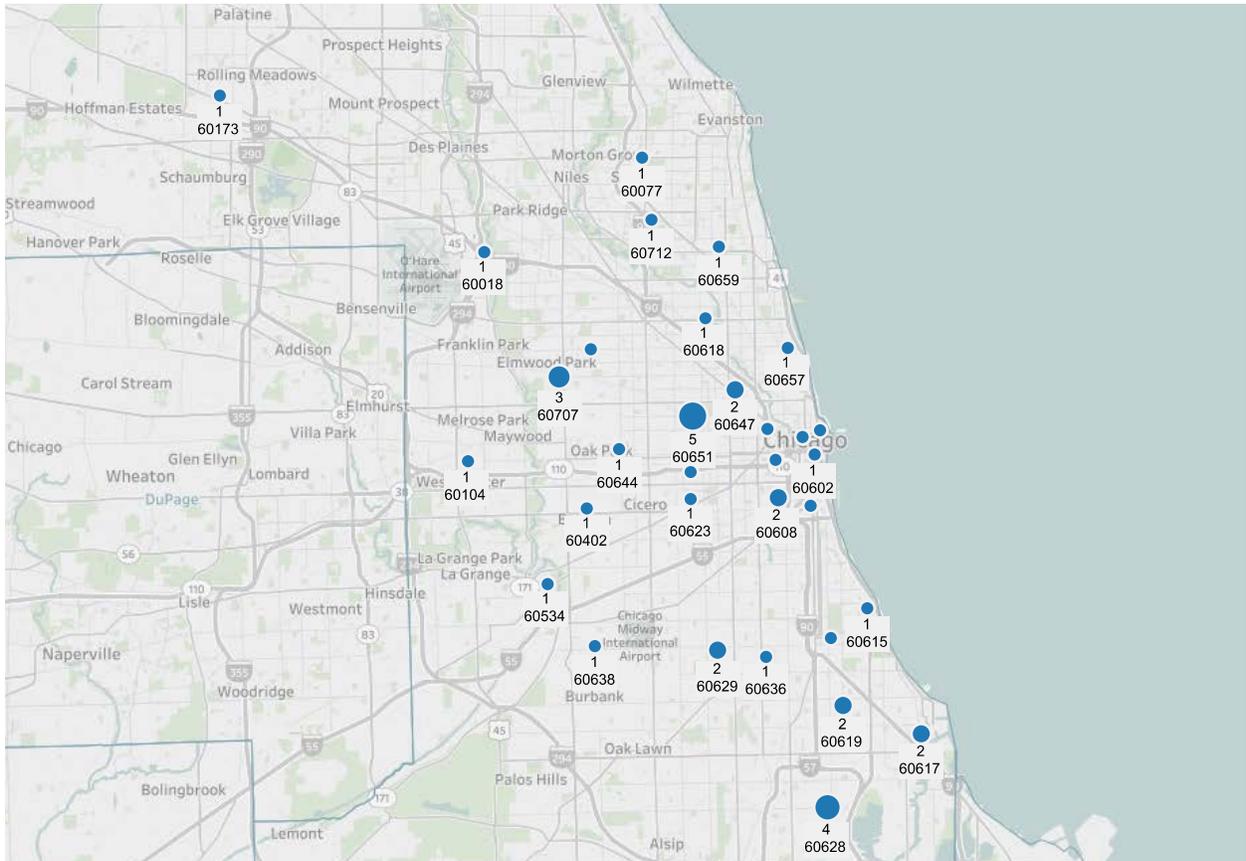
HOMICIDE MAP



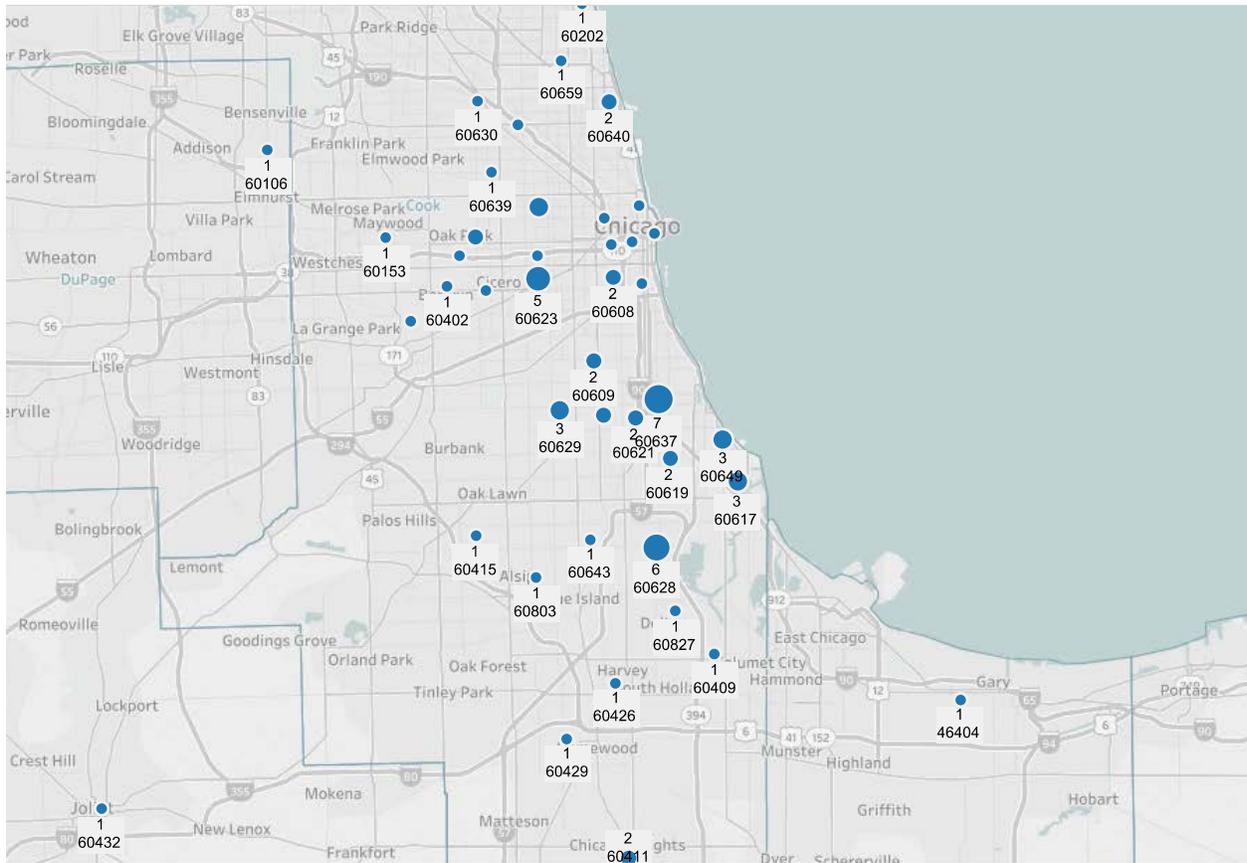
COCAINE MAP



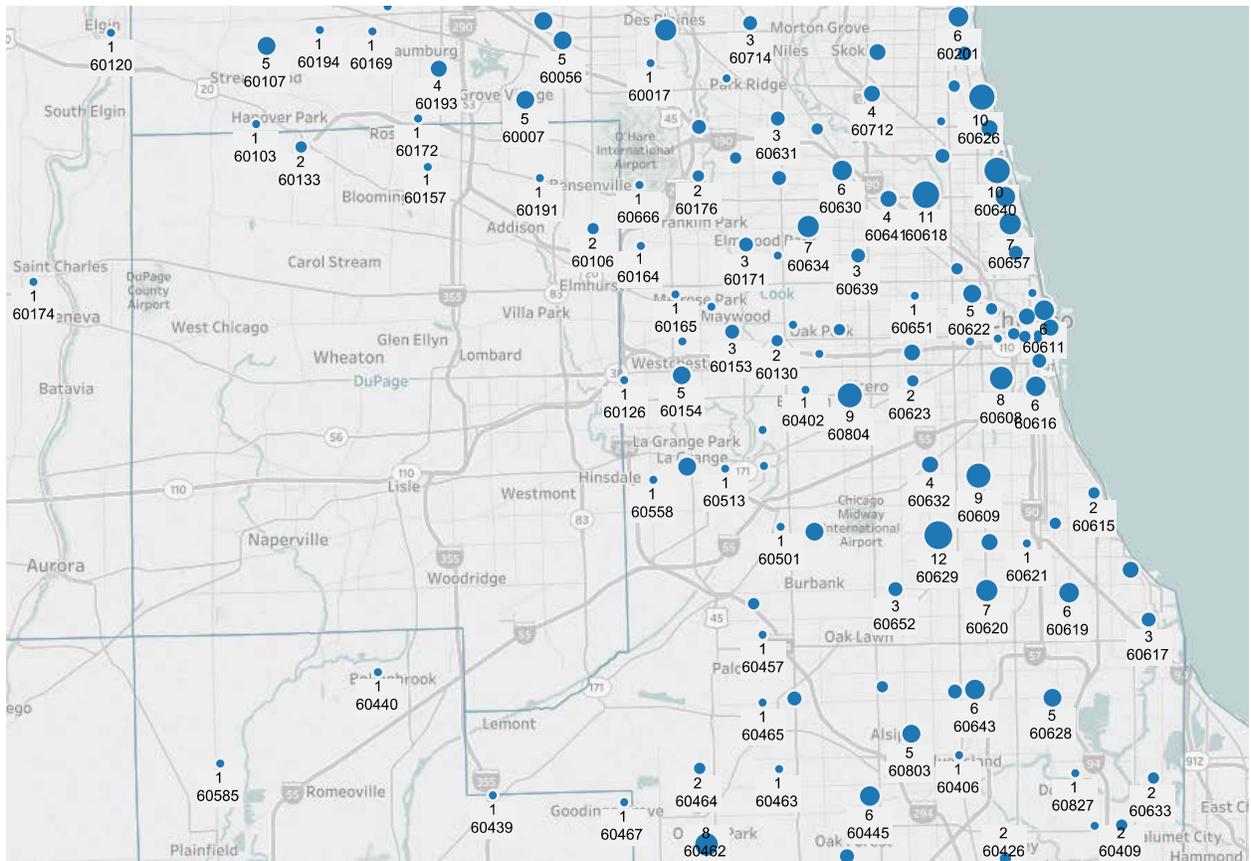
COLD RELATED MAP



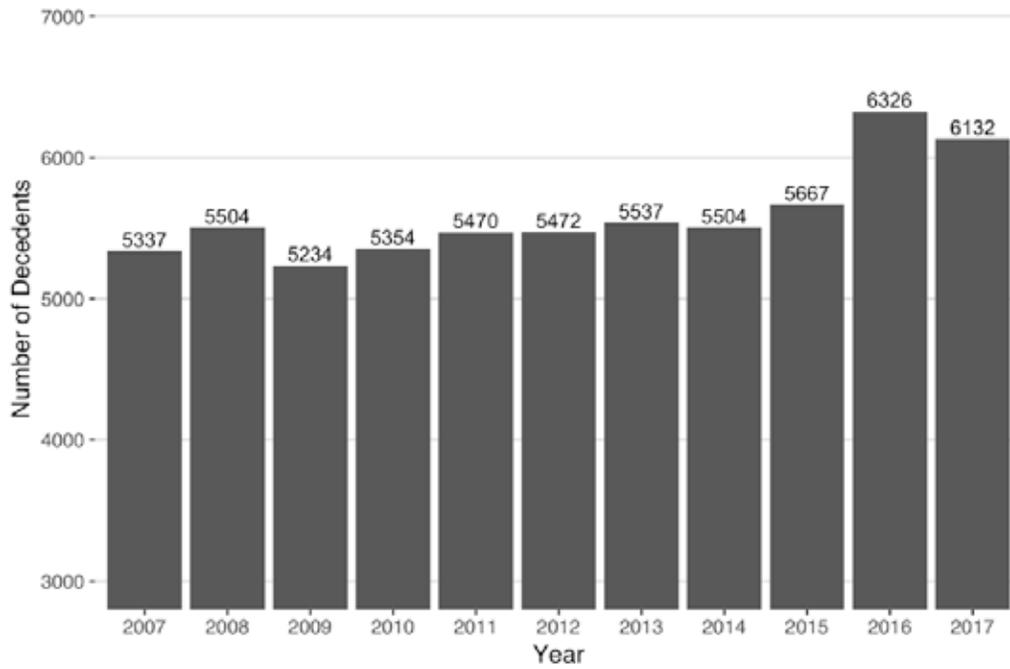
INFANT DEATH MAP



SUICIDE MAP



NUMBER OF ME CASES PER YEAR



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Medical Professor

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RABBI MOSHE WOLF

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