

2019

COOK COUNTY MEDICAL EXAMINER ANNUAL REPORT

Toni Preckwinkle
President, Cook County
Board of Commissioners

Tanya S. Anthony
Chief Administrative Officer

Ponni Arunkumar, M.D.
Chief Medical Examiner



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

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

OFFICE HOURS:

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

IDENTIFICATION HOURS:

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

www.cookcountyil.gov/agency/medical-examiner

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MESSAGE FROM THE CHIEF MEDICAL EXAMINER

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

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



In 2019, the Office was awarded a federal grant¹ (\$153,093) to fund toxicology testing. The Office was also awarded the Comprehensive Opioid Abuse Site-based Program Grant (\$381,018) in 2018, funding an epidemiologist to assist with statistical analysis.

The opioid epidemic continued in Cook County in 2019 with 1,272 opioid-related deaths, an increase of 10.9 percent compared to the 2018 opioid deaths. There was a 2.6-percent decline in gun-related homicide deaths in 2019, compared to 2018. Nonetheless, gun-related homicide deaths in Cook County totaled more than those in Los Angeles and New York combined. Our forensic pathologists and staff actively participate in local and regional task forces created to address these crises. Detailed information is included in the tables and maps in this report.

The CCMEO started a new process for families and funeral directors to obtain reports and cremation permits which will lead to timely and efficient processing of these requests.

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.

The year 2020 is marked by COVID-19 pandemic deaths, along with increases in deaths due to gun violence and opioid overdoses. I am forever grateful to the tireless efforts of our staff dealing with a tremendous caseload increase and the support of Cook County Government. It has been and continues to be an honor to serve the residents of Cook County.

Respectfully,

A handwritten signature in black ink that reads "Ponni Arunkumar, M.D." in a cursive script.

Ponni Arunkumar, MD
Chief Medical Examiner

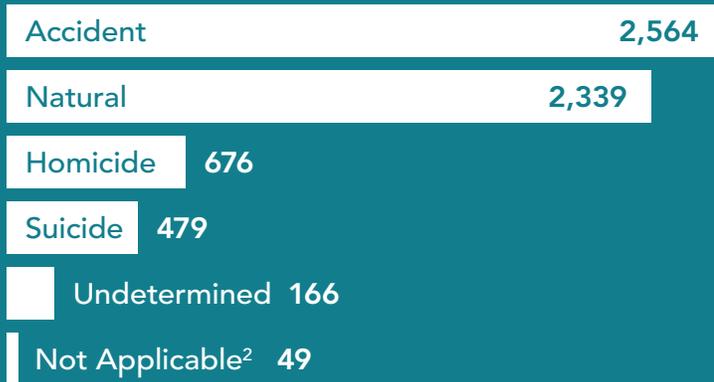
¹ Opioid-related Death Analysis Information-Sharing Program

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Number of
Medical Examiner Cases

6,274

Cases by Manner of Death:



2019

Number of Deaths
in Cook County

41,317

Number of Deaths
Investigated

13,758

Scene Visits

1,203

Number of Bodies
Transported to the Office

5,085

Number Non-Medical
Examiner Cases

7,235

Complete Autopsies

3,413

Number of Bodies
Transported by the Office

0

Partial Autopsies

147

Exhumations

2

Average Number of Bodies
in Storage per Day

249

Unclaimed Bodies

283

Unidentified Autopsied

9

² These are cases with no manner of death- these would be fetal deaths, non-human bones, and human remains where a death certificate was already issued.

COOK COUNTY MEDICAL EXAMINER CASES AT A GLANCE

Homicides Autopsied	676
Suicides Autopsied	167
Non Motor Vehicle Accident Deaths Certified	2,283
Motor Vehicle Accident Deaths Certified	282
Motor Vehicle Accidents Autopsied	57
Non-MVA Accidents Autopsied	1,573
Naturals Autopsied	886
Undetermined Autopsied	160
Unidentified Autopsied	8
Opioid-Related Deaths	1,273
Gun-Related Homicides	584
Latino	80
White (<i>Non-Latino</i>)	28
Black (<i>Non-Latino</i>)	472
Asian (<i>Non-Latino</i>)	1
American Indian (<i>Non-Latino</i>)	2
Other (<i>Non-Latino</i>)	1
External Examinations	2,280
By Physician	1,724
By Investigator	556
Hospital Autopsies under ME Jurisdiction	0
Cases Where Toxicology Was Performed	3,493
Bodies Unidentified After Examination	8
Organ Donations	119
Tissue Donations	177
Cornea Donations	67
Microscopic Studies	981
Formal Neuropathology Studies	93
Formal Cardiac Pathology Studies	65

THE OFFICE OF THE COOK COUNTY MEDICAL EXAMINER



ROBERT J. STEIN INSTITUTE OF FORENSIC MEDICINE

Robert J. Stein, M.D. was appointed as the first Medical Examiner in 1976 and served until his retirement in 1993. The Cook County Institute of Forensic Medicine, completed in 1983, was renamed the Robert J. Stein Institute of Forensic Medicine in February 1994.

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

HISTORY OF THE MEDICAL EXAMINER'S OFFICE

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

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

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

In Cook County, the President of the Board of Commissioners, with the advice and consent of the Board of Commissioners, appoints the medical examiner.

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



MEDICAL EXAMINER'S OFFICE OPERATIONS

JURISDICTION

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

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

DEPARTMENTS

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

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

PRIMARY MEDICAL EXAMINER FUNCTIONS

Death Investigations

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

MEDICAL EXAMINER'S OFFICE OPERATIONS

Autopsies and Postmortem Examinations

Forensic pathologists perform complete autopsy examinations or external examinations as necessary to determine cause and manner of death. Forensic pathologists also provide expert testimony in criminal and civil matters at deposition or trial. Forensic pathologists meet with law enforcement, state's attorneys, public defenders and family as appropriate. Finally, forensic pathologies provide prompt notification to respective agencies, such as the Department of 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 forensic pathologists can assist family members trying to understand how the death occurred. In some situations, the Medical Examiner will not be able to discuss details of the case until the autopsy report is issued.

Autopsies and External Examinations

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

Requesting an Autopsy Report

Families may request copies of postmortem reports through the Medical Examiner's Office, Medical Records Department.

MEDICAL EXAMINER'S OFFICE OPERATIONS

Information related to Pending Cases

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

Death Certificate

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

Recovering Property of 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 may contact the Medical Examiners' Office Investigations Department regarding matching one of the unidentified bodies to the identity of a missing person.

Unclaimed Persons

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

2019 HIGHLIGHTS

NATIONAL ASSOCIATION OF COUNTIES ACHIEVEMENT AWARD

The National Association of Counties (NACo) recognized the Cook County Medical Examiner's Office for its indigent burial program in the Human Services category. The goal of the indigent burial program is to provide a dignified burial to constituents in Cook County.

Typically these families do not have the funds to make arrangements or the indigent does not have family to make arrangements for them. "The indigent burial program provides a vital service to some of the neediest residents of Cook County," Cook County Board President Toni Preckwinkle said. "This program reflects the values of the Medical Examiner's Office, Cook County Government and our constituents throughout the County."



MISSING PERSONS DAY

On Saturday, May 18, 2019, the CCMEO in partnership with National Missing and Unidentified Persons System, the Cook County Sheriff's Office, the Chicago Police Department, Illinois State Police and coroners throughout the region for its third annual Missing Persons Day. Those with friends and family missing for more than one month could 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 to the community that attended the event. The CCMEO maintains updated information about unidentified remains on its website with the goal of identifying the deceased with information obtained from the public.



2019 HIGHLIGHTS

THREE FELLOWS GRADUATED

Fellows Katrina Thompson, John Walsh and Reema Khan finished their one-year forensic pathology fellowship at the CCMEO on June 30, 2019. Dr. Thompson went on to become an Assistant Medical Examiner in Syracuse, New York. Dr. Walsh has continued his service with the United States Navy and Dr. Khan continued on as Assistant Medical Examiner at our Office. We salute them for their excellent work ethic and wish them well as they embark on their careers.



INDIGENT BURIAL: DIGNIFIED FINAL DISPOSITION

In 2014, the CCMEO transitioned from burying indigent decedents to utilizing cremation for dignified final disposition. In 2015 a full-time indigent coordinator was hired to manage this indigent disposition process. Since its inception in 2014, the indigent cremation program has cremated more than 3,000 indigent decedents and streamlined the process. This is made possible through partnerships with support agencies such as U.S. Department of Veterans Affairs, Cook County Public Administrator, Cook County Sheriff's Police Department, Cook County Funeral Director Association, Archdiocese of Catholic Cemeteries, foreign consulates, faith organizations and community support. In 2018, the CCMEO started a new process for burying unclaimed veterans by utilizing a county contract to enlist the services of local funeral homes who transport unclaimed veterans to Abraham Lincoln National Cemetery. This has led to the timely and respectful burial of indigent and unclaimed veterans with a 37 percent decrease in overall time held at the CCMEO. As the CCMEO looks forward, we will continue to cremate indigent decedents, strive to eliminate unnecessary wait in disposition and provide a dignified final disposition option for indigents.

THANK YOU

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 CCMEO in 2019:

<u>Funeral Home</u>	<u>Director</u>
AA Rayner & Son	Charles Childs
Aqua Green Dispositions	Ryan Cattoni
Cage Memorial	Anna Talaga
Evanston Funeral Home	Gail Keefe & Thompson Fh
Hultgren Funeral Home	Tim Hultgren
Johnson Funeral Home	Cathleen Johnson & Linda Brooks
Laura Sambrano Fh	Laura Sambrano
Maher Funeral Home	Eric Hoffman
Northwest Funeral Care	James Vanecko & Leonard Zielinski
Perez Franco Fh	Yadira Perez
Petkus Lemont Funeral Home	Donald Petkus & Dale Mikols
Steurle Funeral Home	Hank Ebling
Tatum Funeral Service	Mildred Poe
Ygee Funeral Service	Yvette Green

COLLABORATIVE EFFORTS

LOCAL MEDICAL EDUCATION AGREEMENTS

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

- 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

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 agreements 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 pathologist 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 facilitate the donation of indigent bodies for use by mortuary students to further their study of mortuary science. These agreements are in accordance with the Illinois Cadaver Act and generate lab-use fees to the Medical Examiner's Office.

COLLABORATIVE EFFORTS

GRIEF COUNSELING

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

PUBLIC POLICY

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

ILLINOIS VIOLENT DEATH REPORTING SYSTEM

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

ORGAN/TISSUE DONATION

Anatomical Gift Association of Illinois

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

Gift of Hope

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

CONSULTATIONS

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

A LOOK AHEAD

The Medical Examiner's Office has the following initiatives in 2020:

- Increase the number of assistant medical examiners to reduce the average caseload per pathologist.
- 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.

CHARTS AND GRAPHS FOR 2019 COOK COUNTY MEDICAL EXAMINER OFFICE DATA



1. OVERVIEW OF CASES

Overview of Cases Reported and Investigated. A total of 41,317 deaths occurred in Cook County in 2018 as reported in Cook County Vital Statistics³. Fifteen percent of these deaths were accepted by CCMEO. The following is a breakdown of admitted cases.

Cases Admitted. CCMEO admitted 6,523 cases, of which 62 percent were autopsied. The average number of autopsies per pathologist was 284.

Investigation Case Reports. The total number of investigation case reports was 13,758. Average number of cases per investigator was 48.

Storage Cases. CCMEO stored an average of 249 bodies per day in 2019.

Cremation Permits. CCMEO issued 1,119 cremation permits.

Table 1. Overview of Cases Reported and Investigated

Total Number of Cases	# of Cases
Number of deaths in Cook County	41,317
Number of cases referred to CCMEO	13,238
Number of scenes attended by CCMEO	1,203
Total number of investigation case reports	13,758 ⁴
Average number of cases per investigator	48
Total number of autopsies	3,560
Average number of autopsies per pathologist	284
Average number of storage cases per day	249
Total number of cremation permits issued	1,119

³Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2018 on CDC WONDER Online Database, released in 2020. Data are from the Multiple Cause of Death Files, 1999-2018, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Sep 11, 2020. The 2019 Cook County death has not been published yet.

⁴Total number of investigation case reports is greater than admitted cases because medical examiner accepted funeral home cases as well.

1. OVERVIEW OF CASES

Table 2. Overview of Cases Accepted and Investigated

Total Number of Cases	# of Cases
Total Number of Autopsies	
Full	3,413
Head	147
External	1,724
Records Review	374
Cases with Toxicology Examination	3,493
Donations	
Organ	119
Tissue	171
Cornea	67
Unclaimed Bodies	283

Total Number of Autopsies. The breakdown of autopsies is shown in Table 2. Almost all autopsies (96%) were full.

Records Review. CCMEO reviewed 374 medical records to determine cause and manner of death.

Cases with Toxicology. CCMEO tested postmortem specimen for 3,493 cases.

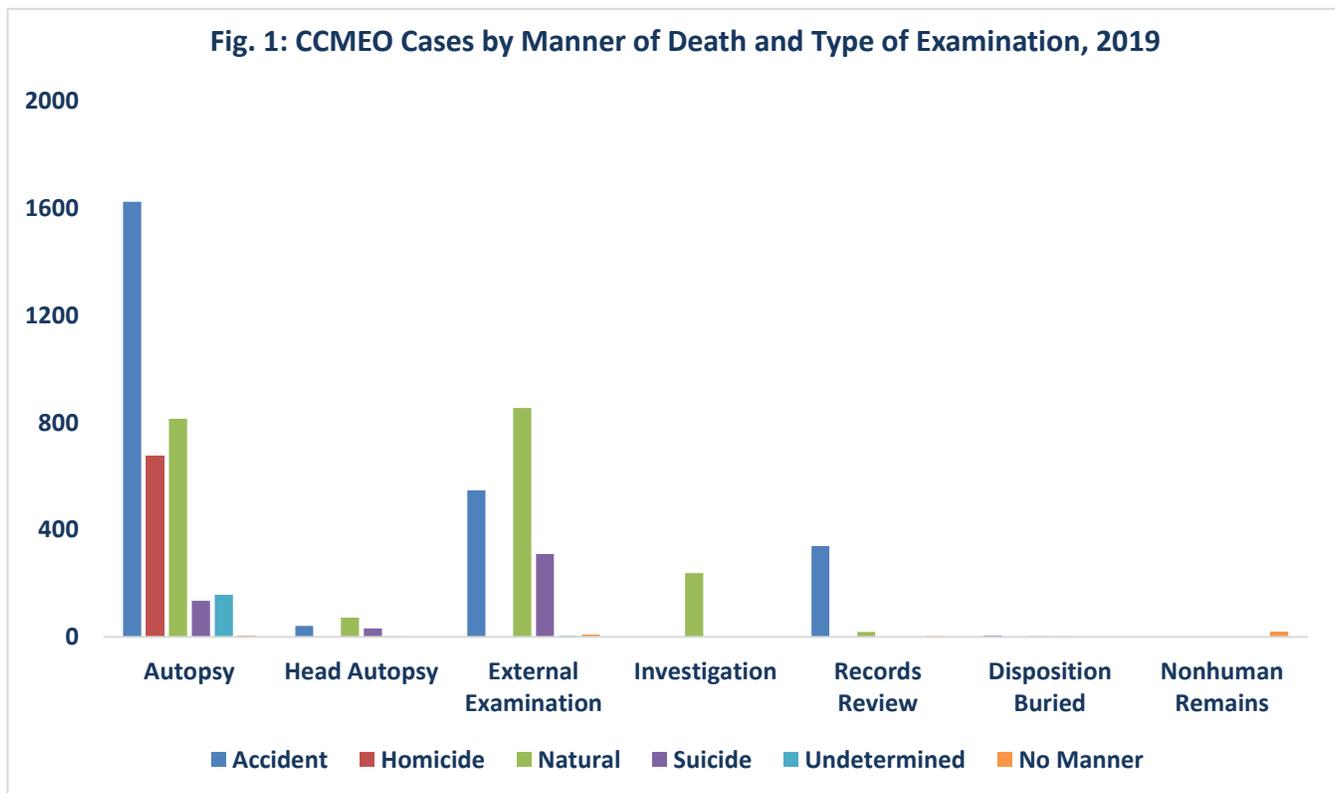
Organ Donation. CCMEO authorized donation of 357 organs, tissue and cornea in 2019. Almost half of the donations (47%) were tissue donations.

1. OVERVIEW OF CASES

Table 3. CCMEO Cases by Manner of Death⁵ and Exam Type, 2019.

Manner	Autopsy	Head Autopsy	External Examination	Investigation	Records Review	Disposition Buried	Nonhuman Remains	Total
Accident	1,624	41	547	0	344	5	0	2,561
Homicide	676	0	0	0	0	0	0	676
Natural ⁶	814	72	854	238	18	3	0	2,339
Suicide	135	32	310	0	0	2	0	479
Undetermined	158	2	4	0	0	0	0	166
No Manner ⁷	6	0	9	1	12	1	20	49
Total	3,413	147	1,724	239	374	11	20	

Fig. 1: CCMEO Cases by Manner of Death and Type of Examination, 2019



⁵ Randy Hanzlick, John C. Hunsaker, Gregory J. Davis. (2020). A Guide for Manner of Death Classification. Atlanta: National Association of Medical Examiners.

⁶ Exam type for 340 cases of natural manner of death were funeral home cases.

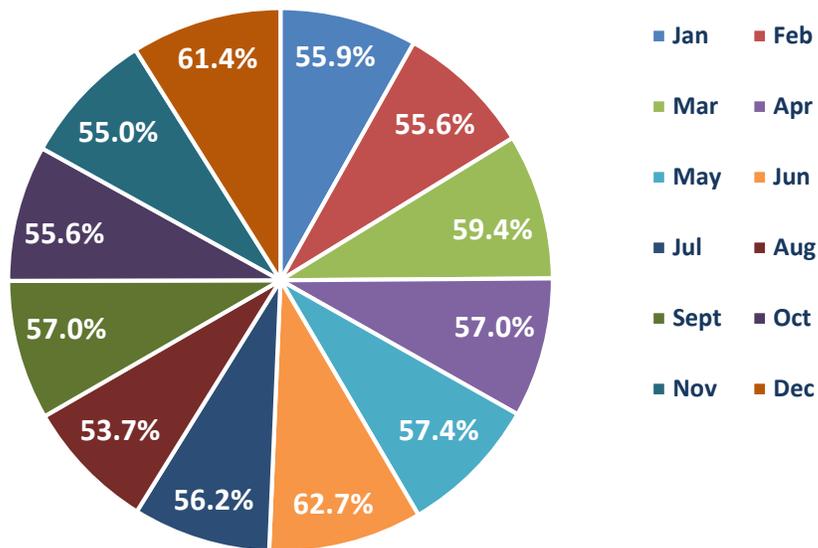
⁷ These are the cases with no manner of death- these would be fetal deaths, non-human bones, and human remains where a death certificate was already issued.

1. OVERVIEW OF CASES

Table 4. Breakdown of CCMEO Cases and Autopsies by Month, 2019.

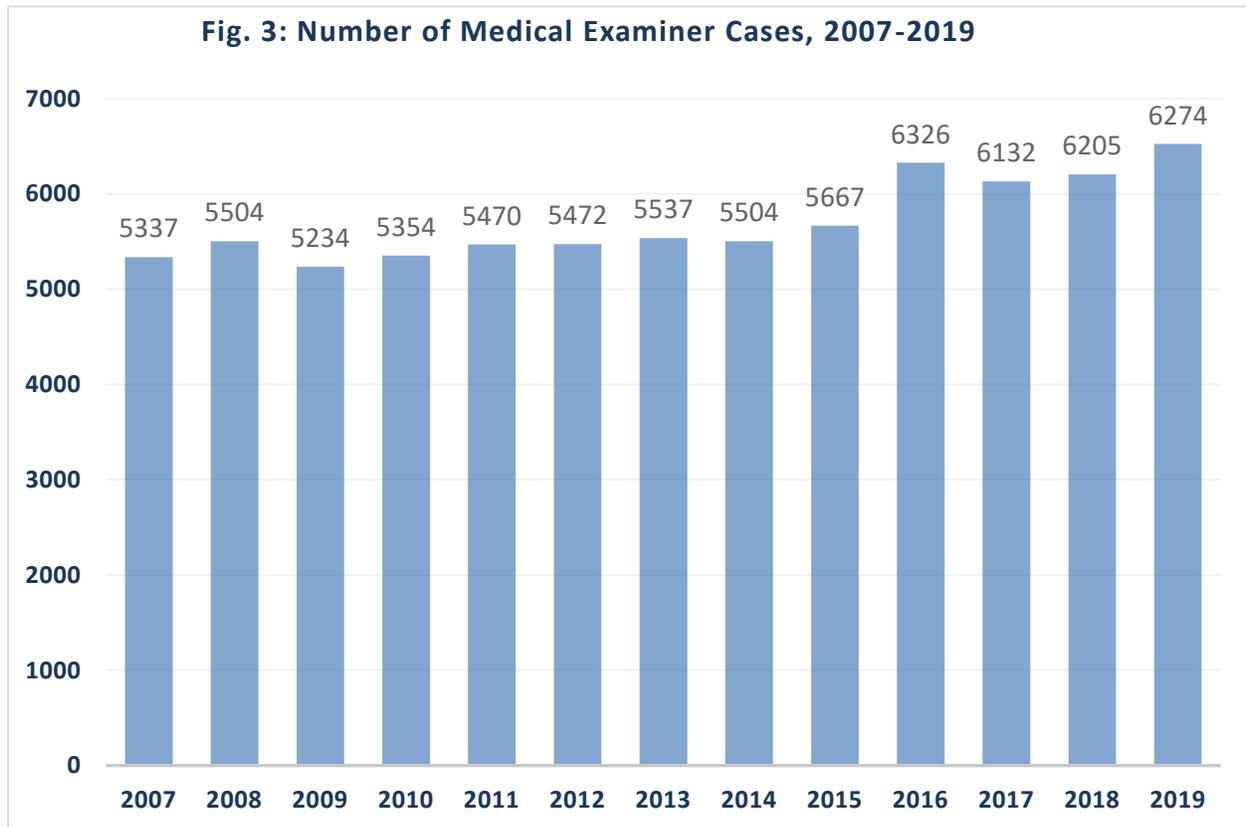
Month	Accepted Cases	Autopsies
January	495	288
February	468	271
March	466	296
April	499	276
May	622	299
June	656	307
July	620	309
August	629	273
September	555	297
October	550	285
November	513	301
December	450	358

Fig. 2: CCMEO Autopsy (%) by Month, 2019



1. OVERVIEW OF CASES

CHANGES IN TOTAL NUMBER OF CASES



1. OVERVIEW OF CASES

COOK COUNTY POPULATION ESTIMATE AND DEATH

The table below provides information on Cook County total population, total number of deaths reported to Vital Records and CCMEC cases by race.

Table 5. Cook County Population, Death and CCMEC Cases by Race and Ethnicity, 2019

Race	2018 Population Estimate ⁸	2018 Death Report ⁹	Total CCMEC Cases	Acc.	Hom.	Nat.	Sui.	Und.	Non
Latino	1,323,017		730	333	103	189	78	27	0
NL White	2,171,754	26,072 ¹⁰	2,676	1,178	48	1,082	313	43	12
NL Black	1,182,899	13,551	2,625	967	520	989	57	86	6
NL Asian	386,900	1,473	167	66	1	67	28	4	1
NL Other	108,266	NA	23	10	2	9	2	0	
NL American Indian and Alaskan Native	6,276	37	6	2	2	2	0	0	0
NL Native Hawaiian and Other Pacific Islander	1,381	NA	0	0	0	0	0	0	0
NL Unknown	0	0	46	8	0	1	1	6	30
Total Population	5,180,493	41,133	6,274¹¹	2,564	676	2,339	479	166	49

⁸ Census Bureau, U. S. (2018). American Community Survey, Cook County. Retrieved from: <https://data.census.gov/cedsci/table?q=Population%20Total&g=0500000US17031&tid=ACSDP1Y2018.DP05&hidePreview=true>

⁹ Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2018 on CDC WONDER Online Database, released in 2020. Data are from the Multiple Cause of Death Files, 1999-2018, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Sep 11, 2020. Race categories in CDC WONDER Database is different from American Community Survey. Therefore, the rows under death show the total number of mortality in Whites, Blacks, Asians, American Indian.

¹¹ All cases by manner of death (including one pending case)

1. OVERVIEW OF CASES

SUMMARY OF MOST COMMON DRUGS

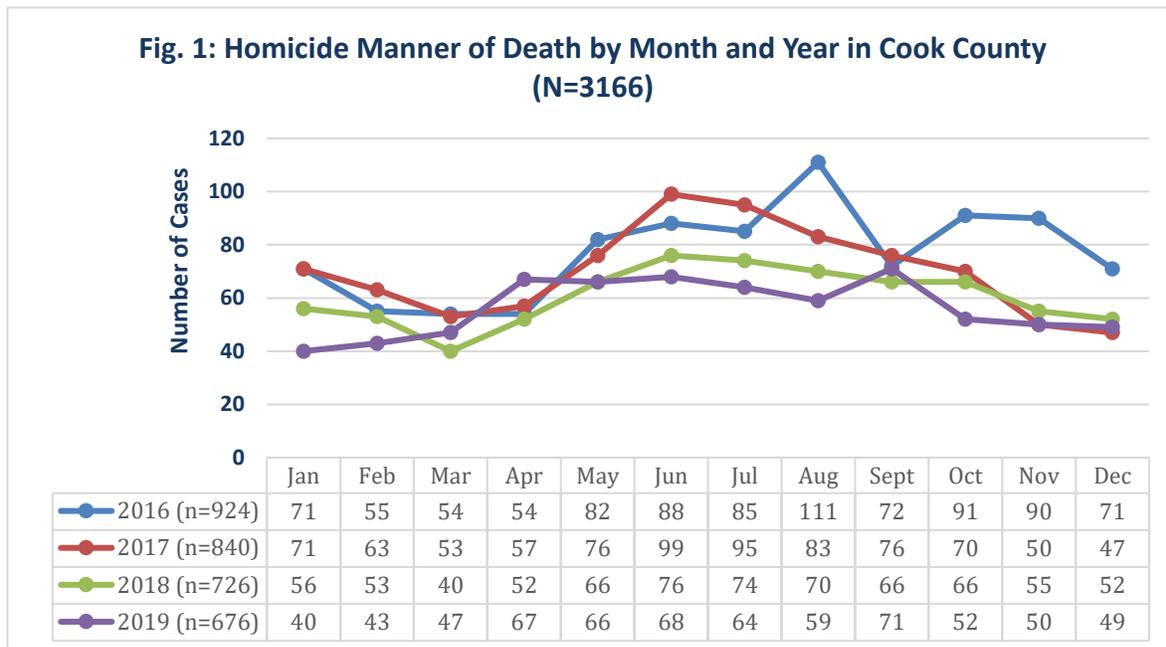
All postmortem specimens received either basic or expanded toxicological testing. Basic toxicological testing is performed on motor-vehicle accidents and homicide cases where overdose is not suspected. Expanded toxicological testing is performed on possible drug overdose cases. In 2019, CCMEO tested postmortem specimen for 3,493 cases.

Table 6. Top 20 Prevalent Drugs in CCMEO Postmortem Cases, 2019

Drug Name	Number of Cases	% of Cases
Fentanyl	1,079	30.9%
Ethanol	982	28.1%
Cannabinoids	851	24.4%
Morphine	750	21.5%
Diphenhydramine	641	18.4%
6-MAMM	572	16.4%
COC/BE	561	16.1%
Naloxone	526	15.1%
Acetyl Fentanyl	326	9.3%
Codeine	231	6.6%
Quinine	228	6.5%
Alprazolam	173	5.0%
Methadone	127	3.6%
Amphetamine	113	3.2%
Hydrocodone	113	3.2%
Methamphetamine	110	3.1%
Clonazepam	103	2.9%
MDMA	87	2.5%
Gabapentin	80	2.3%
Acetaminophen	76	2.2%

2. MANNER AND CAUSE OF DEATH

2.1. Homicide Trend. CCMEO investigated 676¹² homicides in 2019. Of the 676 cases investigated, 86.4 percent had gunshot, 6.2 percent had sharp injuries, 1.3 percent had blunt force injuries, 1.3 percent had multiple injuries, and 4.7 percent had other primary cause of death. The number of homicides in August 2016 (n=111) was higher than any other month over the last four years. Homicides showed a consistent decreasing trend over the last four years. The average number of homicides was 77 per month in 2016, decreased consistently over time and reached an average number of 56 per month in 2019. Homicides decreased by 27 percent from 2016 (n=924) to 2019 (n=676).

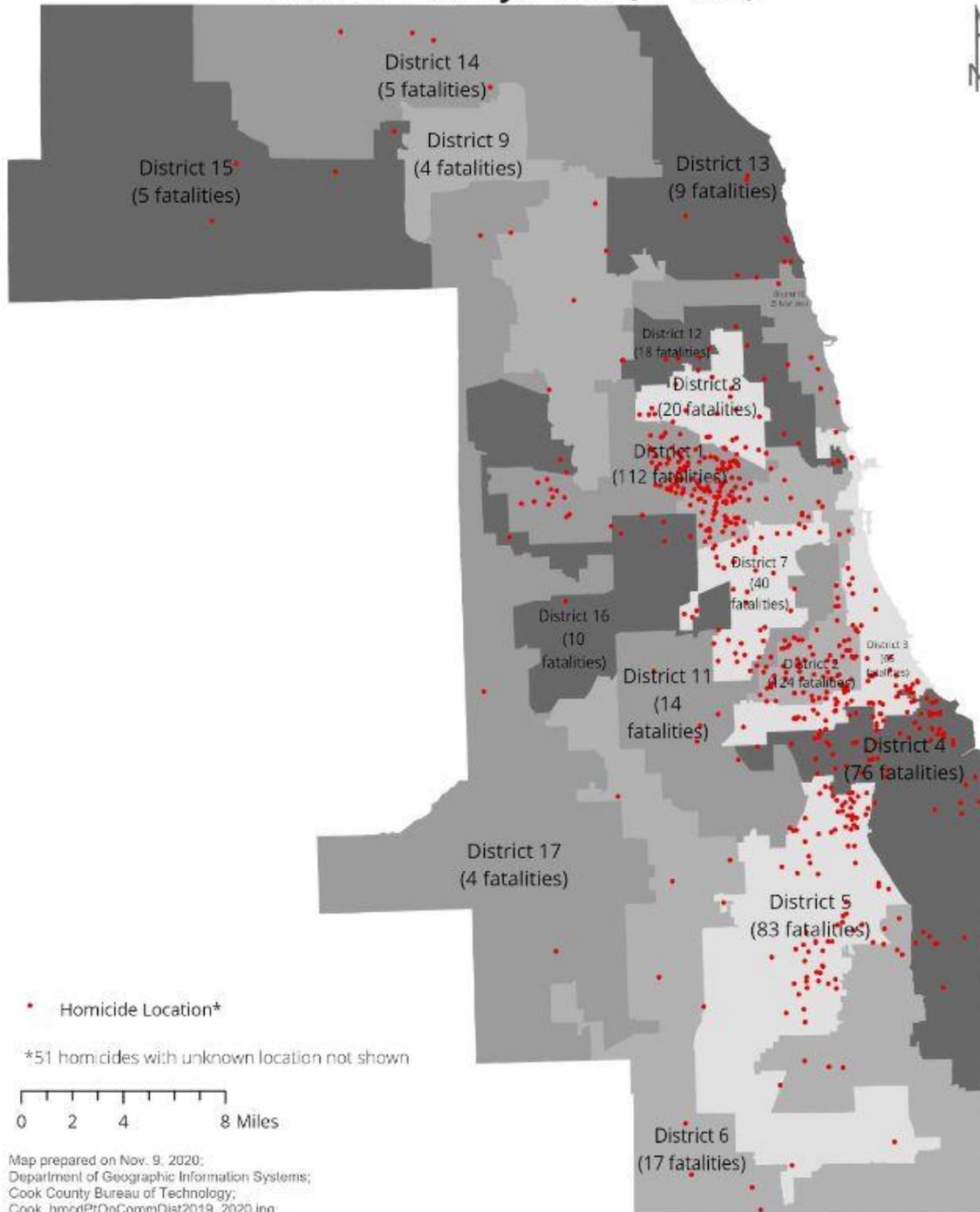


Homicide did not show a consistent trend in 2019. In 2019, the highest and lowest homicide was in months of September (n=70) and January (n=40).

¹²Difference with N on the GIS map is due to available zipcodes

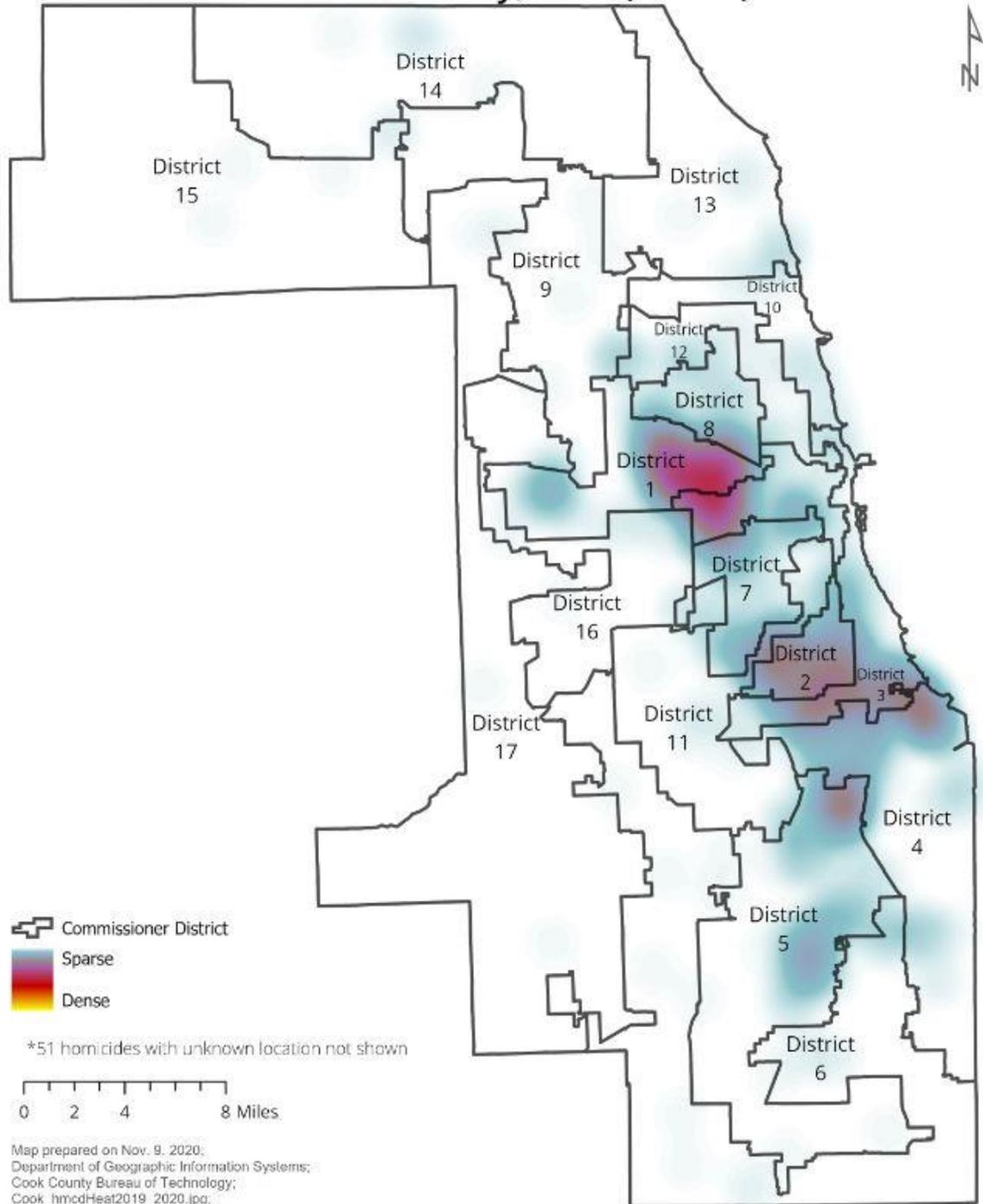
2. MANNER AND CAUSE OF DEATH

Homicide Manner of Death Incident Locations in Cook County, 2019 (N=662)



2. MANNER AND CAUSE OF DEATH

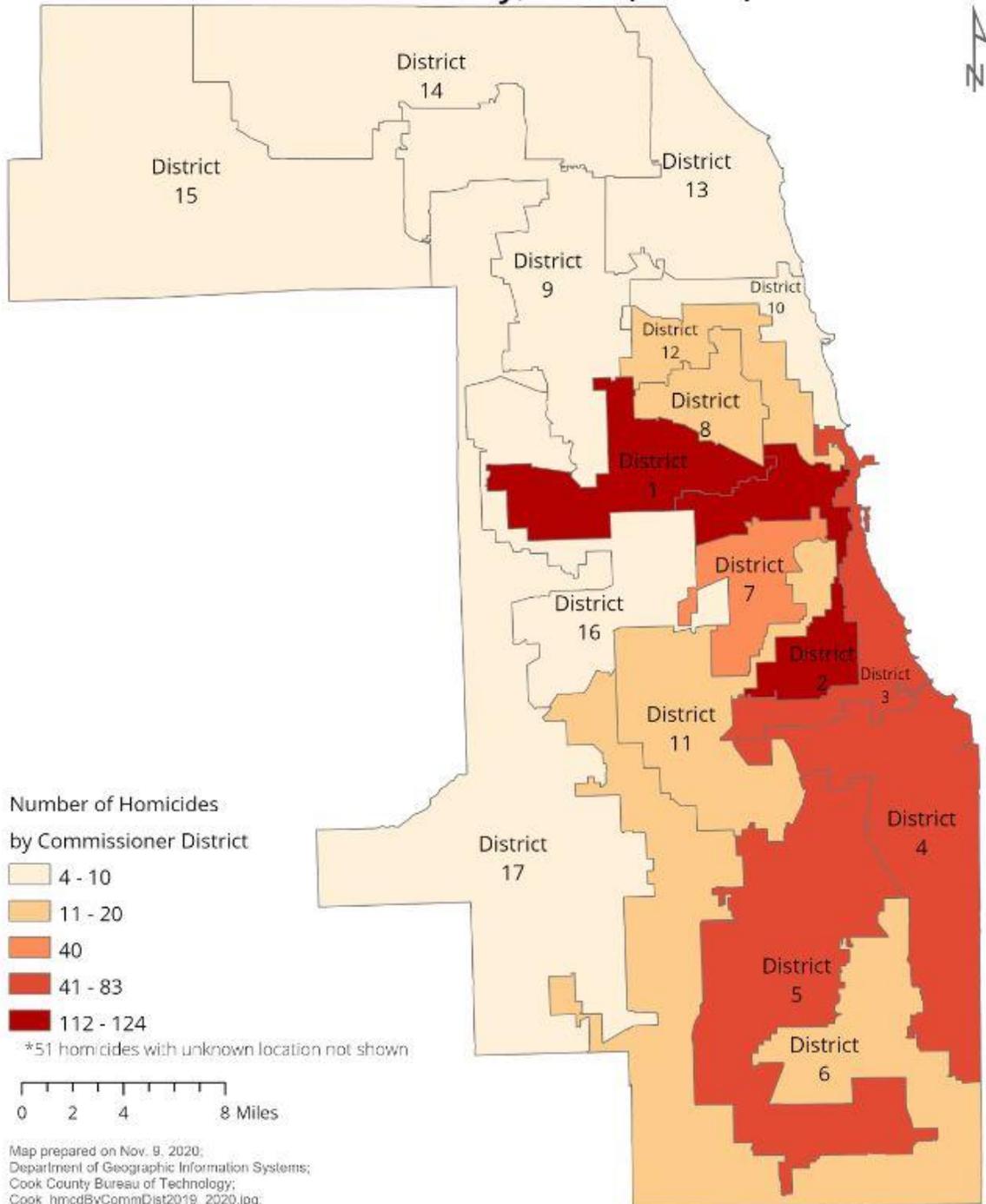
Homicide Manner of Death Concentration in Cook County, 2019 (N=662)



Map prepared on Nov. 9, 2020.
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Cook County Bureau of Technology;
Cook_hmcdHeat2019_2020.jpg;
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2. MANNER AND CAUSE OF DEATH

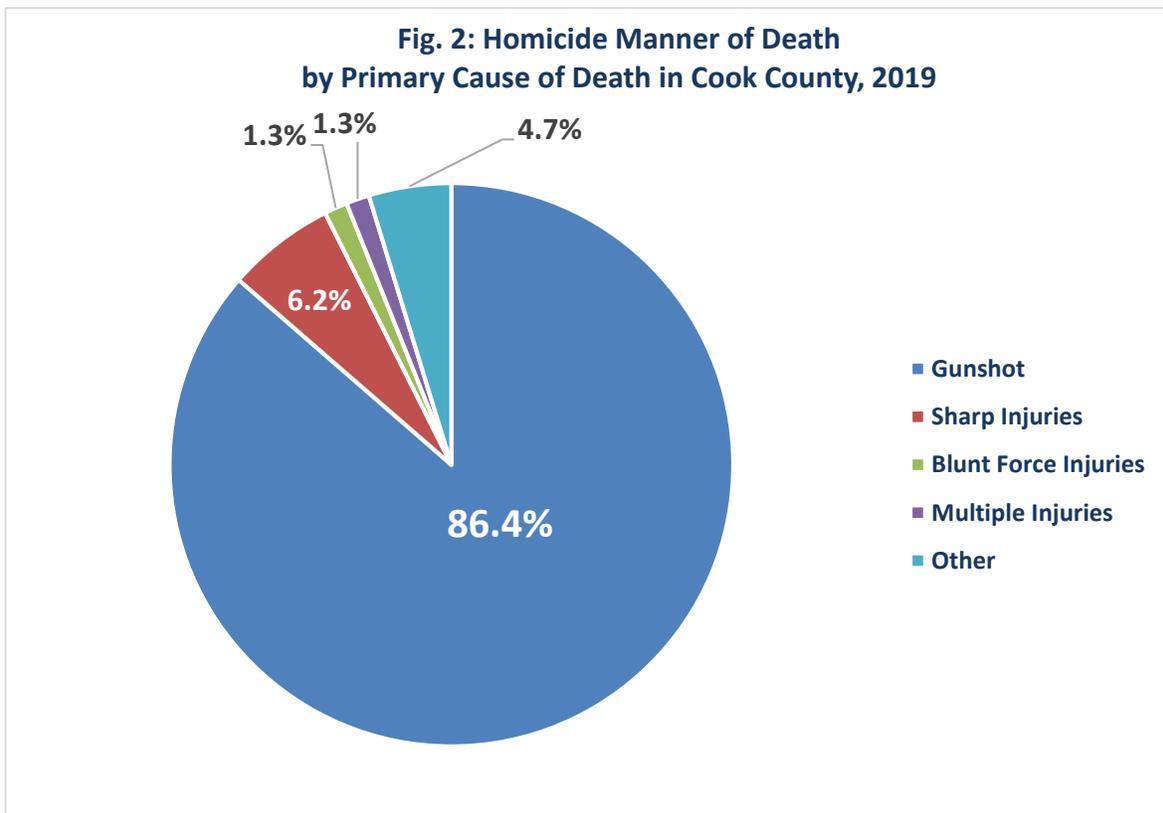
Homicide Manner of Death by Commissioner District in Cook County, 2019 (N=662)



2. MANNER AND CAUSE OF DEATH

Table 1. Homicide Manner of Death by Primary Cause of Death in Cook County, 2019

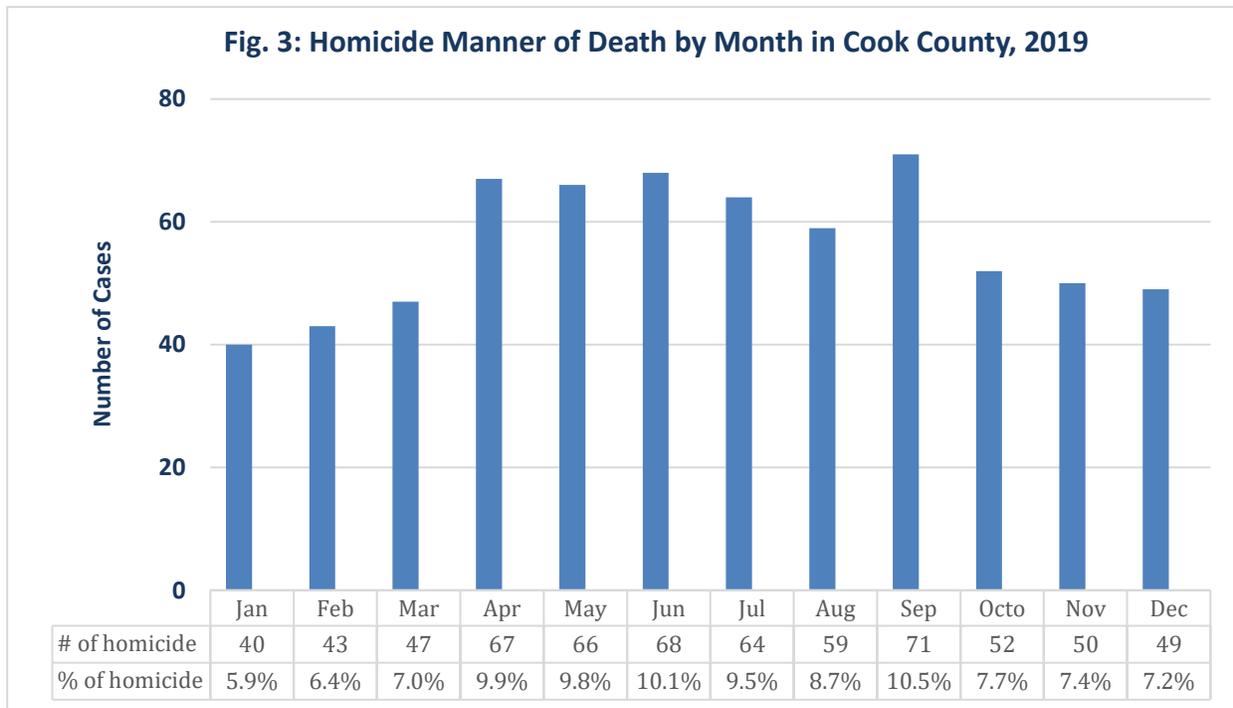
Primary Cause of Death	Number of Homicides	% of Total Homicides
Gunshot	584	86.4%
Sharp Injuries	42	6.2%
Blunt Force Injuries	9	1.3%
Multiple Injuries	9	1.3%
Hanging	7	1.0%
Other Injuries	6	0.9%
Asphyxia	4	0.6%
Assault	3	0.4%
Drowning	3	0.4%
Intoxication	2	0.3%
Thermal Injuries	2	0.3%
Other	5	0.7%
Total	676	100%



2. MANNER AND CAUSE OF DEATH

Table 2. Homicide Manner by Month in Cook County, 2019

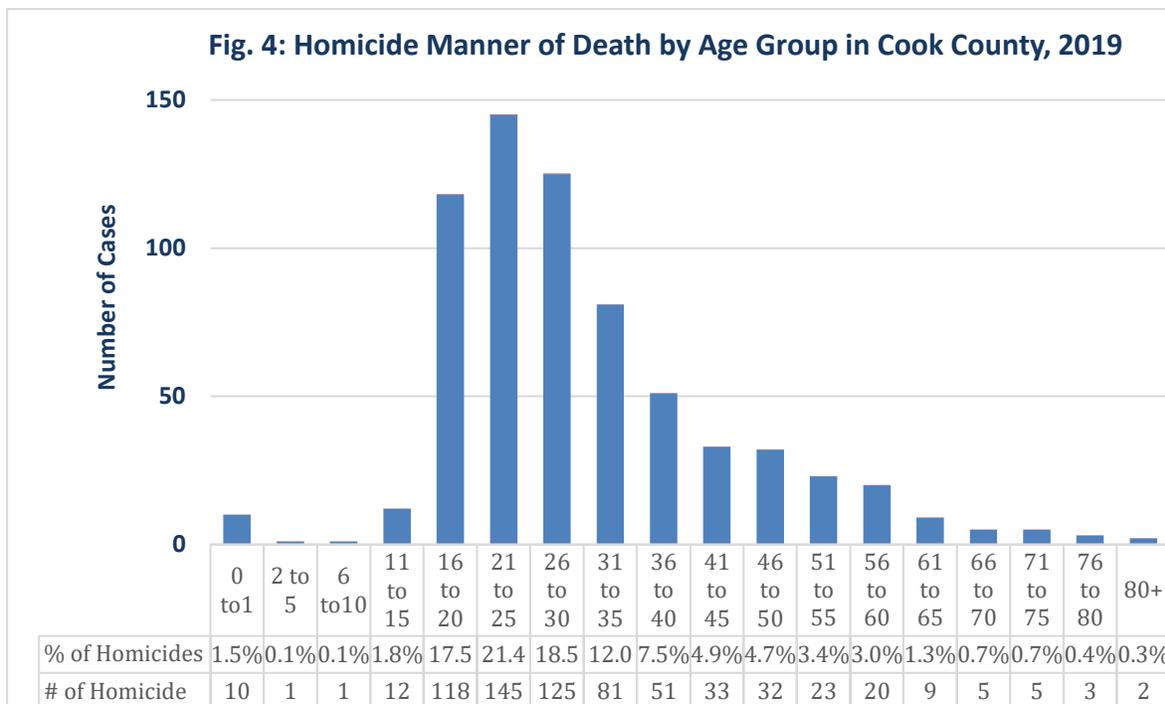
Month	Number of Homicide	% of Homicide
January	40	5.9%
February	43	6.4%
March	47	6.9%
April	67	9.9%
May	66	9.7%
June	68	10.0%
July	64	9.5%
August	59	8.7%
September	71	10.5%
October	52	7.7%
November	50	7.4%
December	49	7.2%
Total	676	100%



2. MANNER AND CAUSE OF DEATH

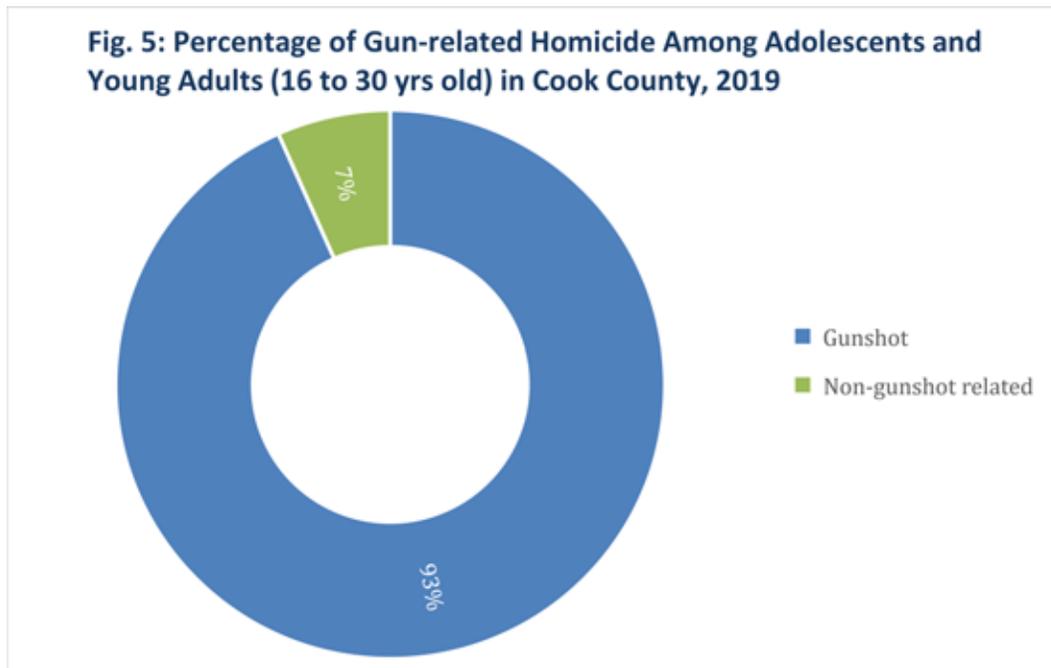
Table 3. Homicide Manner of Death by Age Group in Cook County, 2019

Age Group	Number of Homicide	% of Homicide
0 to 1	10	1.5%
2 to 5	1	0.1%
6 to 10	1	0.1%
11 to 15	12	1.8%
16 to 20	118	17.5%
21 to 25	145	21.4%
26 to 30	125	18.5%
31 to 35	81	12.0%
36 to 40	51	7.5%
41 to 45	33	4.9%
46 to 50	32	4.7%
51 to 55	23	3.4%
56 to 60	20	3.0%
61 to 65	9	1.3%
66 to 70	5	0.7%
71 to 75	5	0.7%
76 to 80	3	0.4%
80+	2	0.3%
Total	676	100%



2. MANNER AND CAUSE OF DEATH

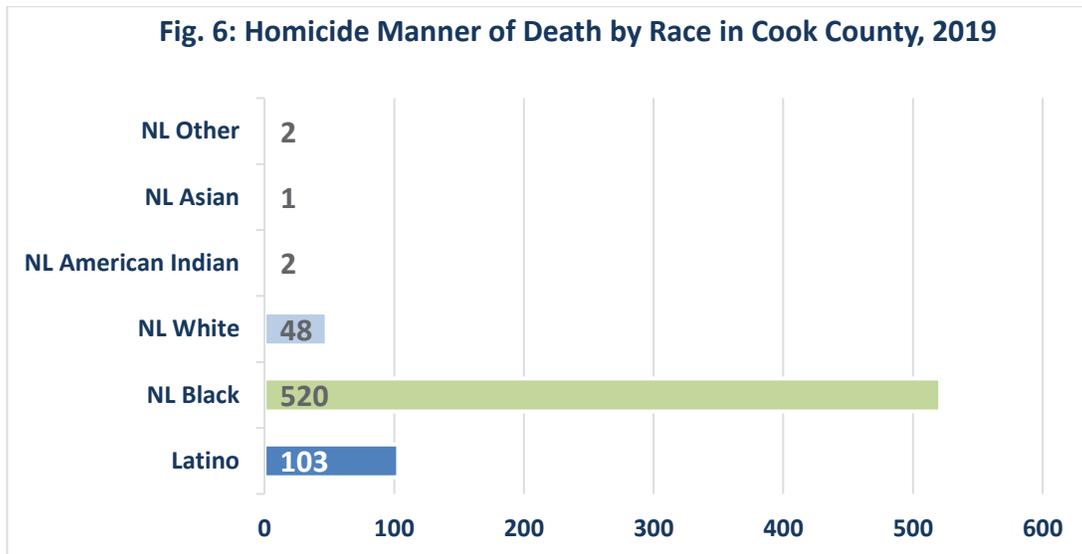
Most homicides observed in age group of 16-35-year-olds (70%) (Fig. 4, 5). Age group of 21-30-year-olds contributes the most to this number. As seen in Fig. 5, more than 90 percent of homicide cases were gunshot-related in age group of 16-30-year-olds.



2. MANNER AND CAUSE OF DEATH

Table 4. Homicide Manner of Death by Race and Ethnicity in Cook County, 2019

Race/Ethnicity	Number of Homicide	% of Homicide
Latino	103	15.2%
NL Black	520	76.9%
NL White	48	7.1%
NL American Indian	2	0.3%
NL Asian	1	0.1%
NL Other	2	0.3%
Total	676	100%



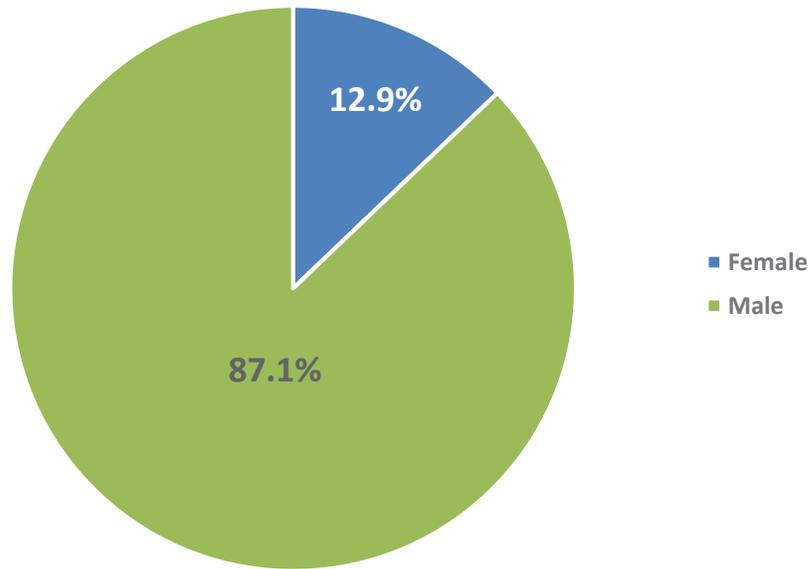
Percent of homicide was higher among non-Latino than Latinos (85% vs. 15%) in 2019. Among non-Latinos, homicide was higher in Blacks (77%) than Whites (7%).

2. MANNER AND CAUSE OF DEATH

Table 5. Homicide Manner of Death by Sex in Cook County, 2019

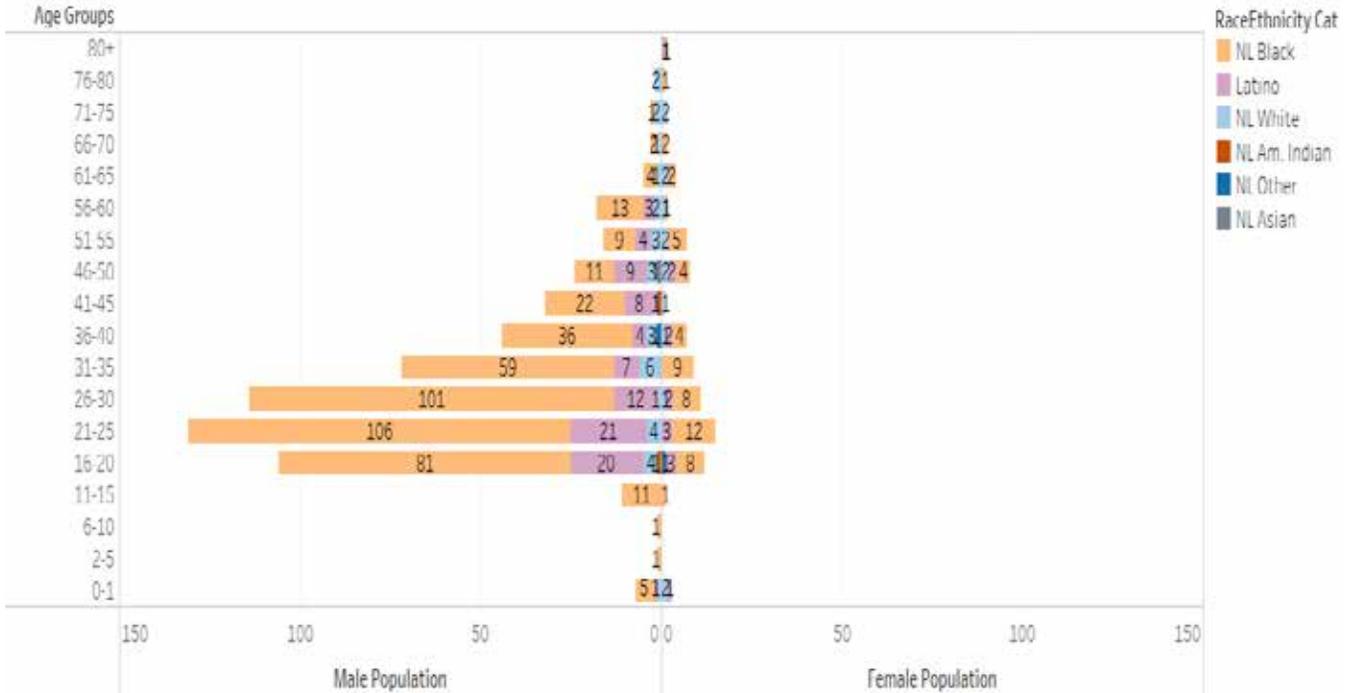
Sex	Number of Homicide	% of Homicide
Female	87	12.9%
Male	589	87.1%
Total	676	100%

Fig. 7: Homicide Manner of Death by Sex in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

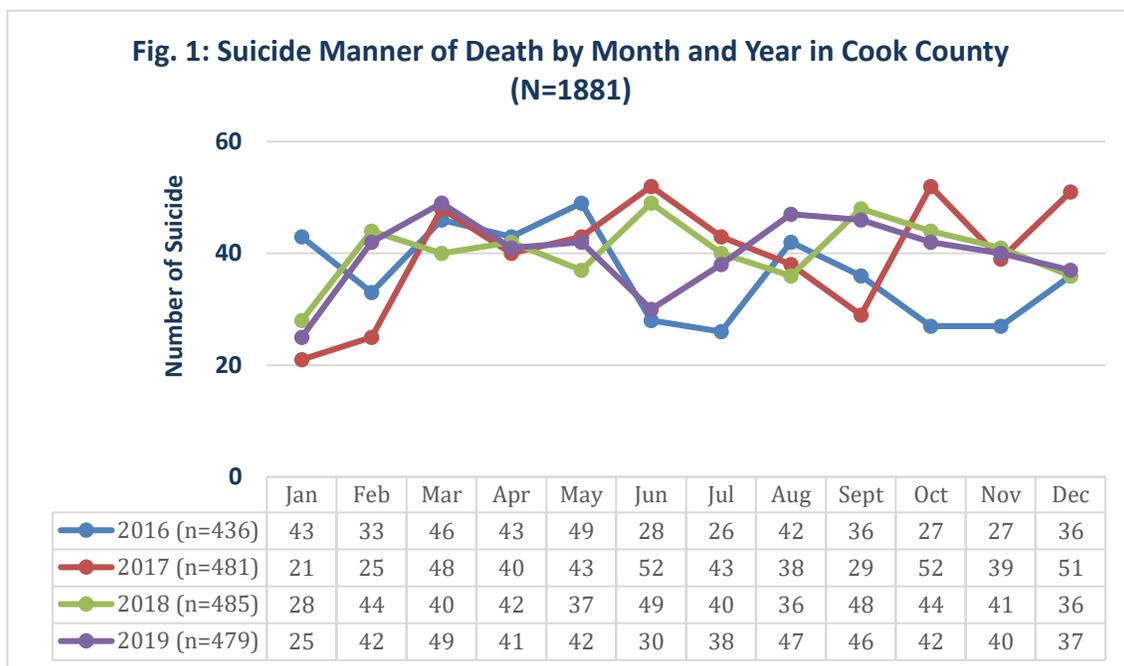
Fig. 8: Homicide Manner of Death by Sex, Race/Ethnicity and Age Groups in Cook County, 2019



As shown in Fig. 7, the number of homicides was higher among males than females (87.1% vs. 13%). Homicide was highest in age group of 16-35-year-olds among males and females. Another notable finding is most homicides observed among NL Black males in age group of 16-40-year-olds. The data also revealed that number of homicides among NL Black males and females is higher than other races/ethnicities in almost all age groups (Fig. 8).

2. MANNER AND CAUSE OF DEATH

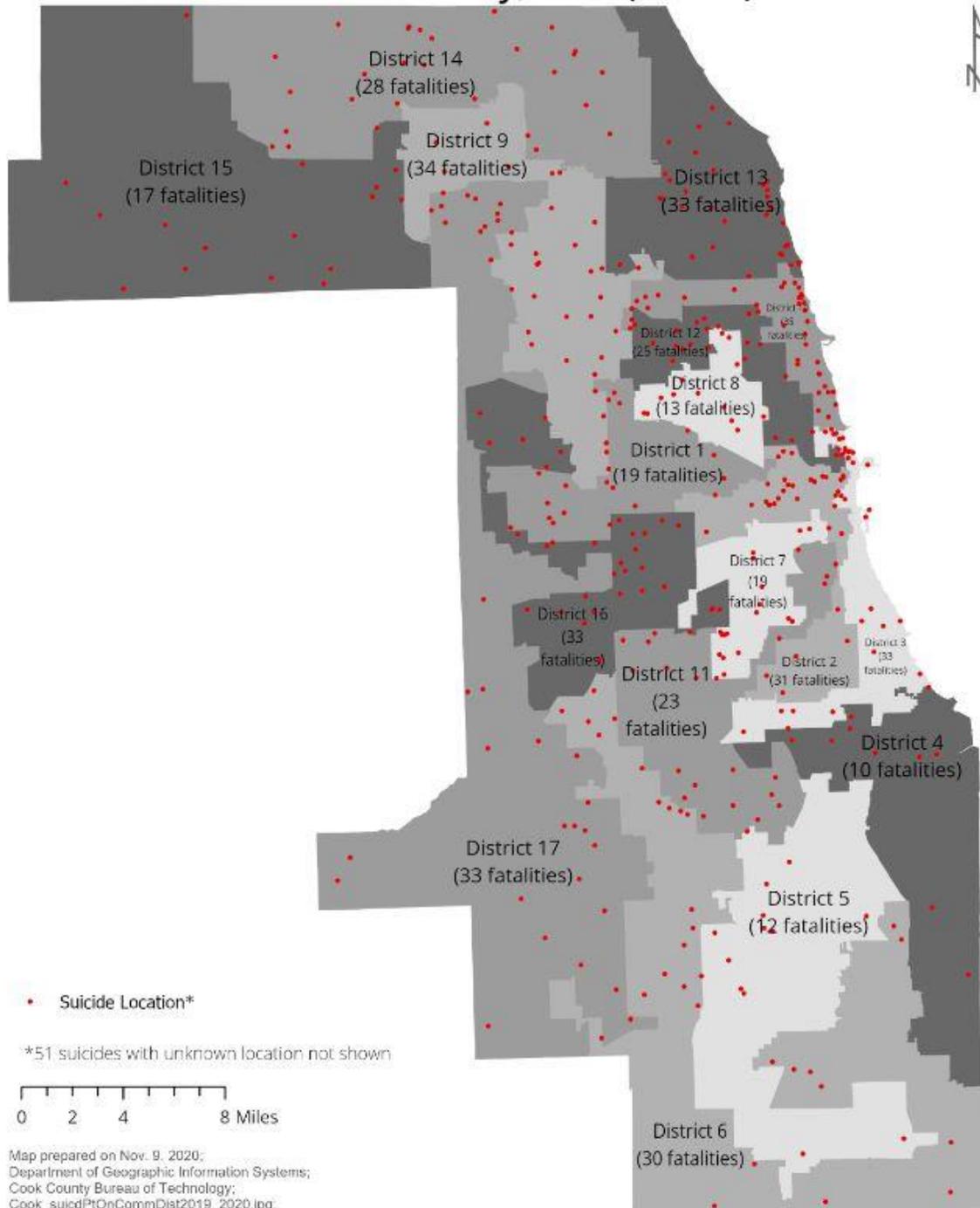
2.2. Suicide Trend. CCMEO investigated 479 suicides in 2019. Of the 479 cases investigated, 29 percent had hanging, 28.2 percent had gunshot, 12.19 percent had asphyxia, 7.9 percent had drug and/or alcohol, 5.4 percent had blunt force injuries and 5.4 percent had intoxication as the primary cause of death (Fig. 2). The number of suicides in June 2017 (n=52) was higher than any other month over the last four years. Suicide did not show a consistent trend over the last four years. The average number of suicides was 36 per month in 2016 and increased to an average number of 40 per month in 2017-2019. Despite a 10 percent increase in number of suicides from 2016 (n=436) to 2019 (n=479), the number of suicides decreased by 1.2 percent from 2018 (n=485) to 2019 (n=479).



Suicide did not show a consistent trend in 2019. In 2019, the lowest and highest number of suicides was in January (n=25) and March (n=49).

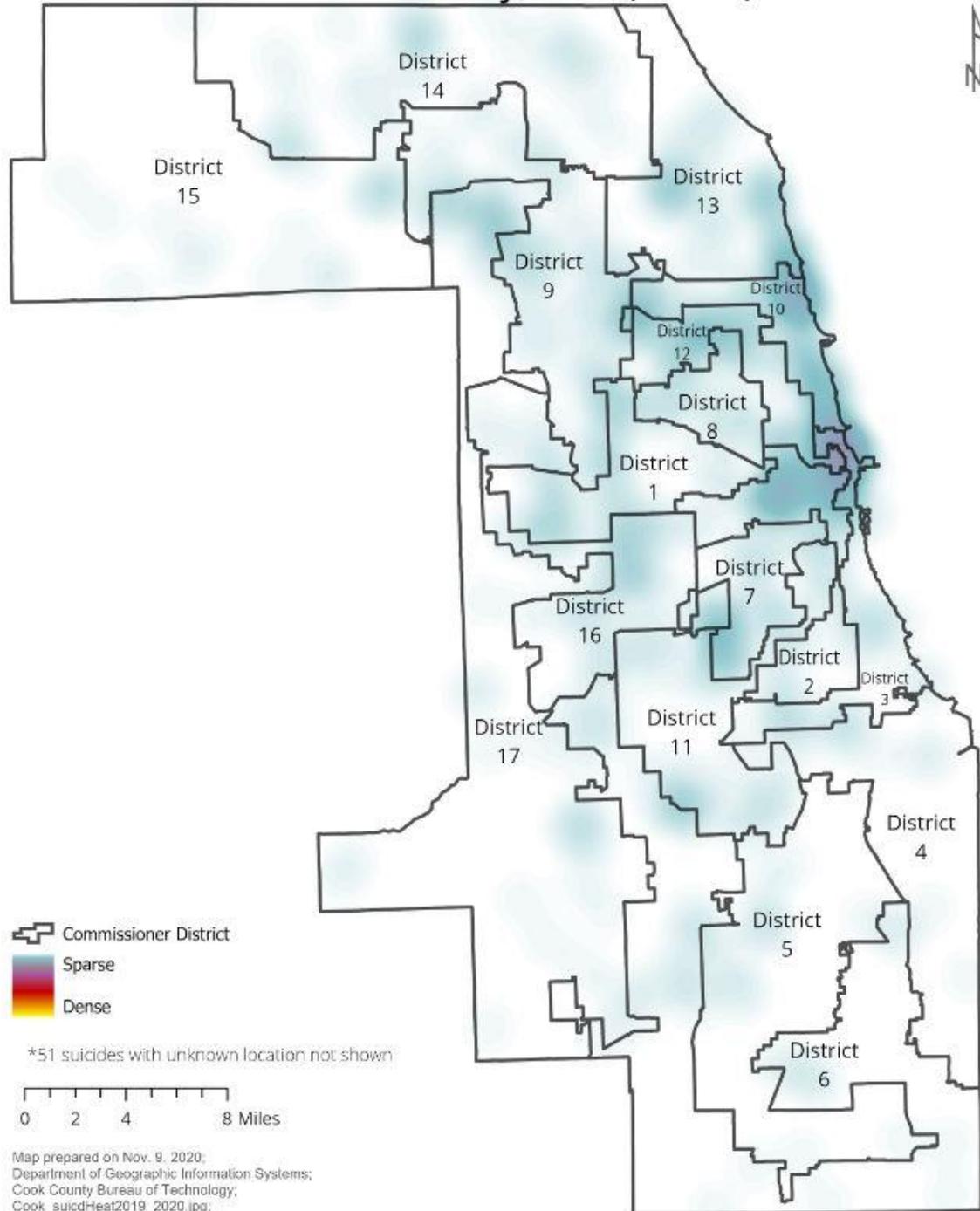
2. MANNER AND CAUSE OF DEATH

Suicide Manner of Death Incident Locations in Cook County, 2019 (N=479)



2. MANNER AND CAUSE OF DEATH

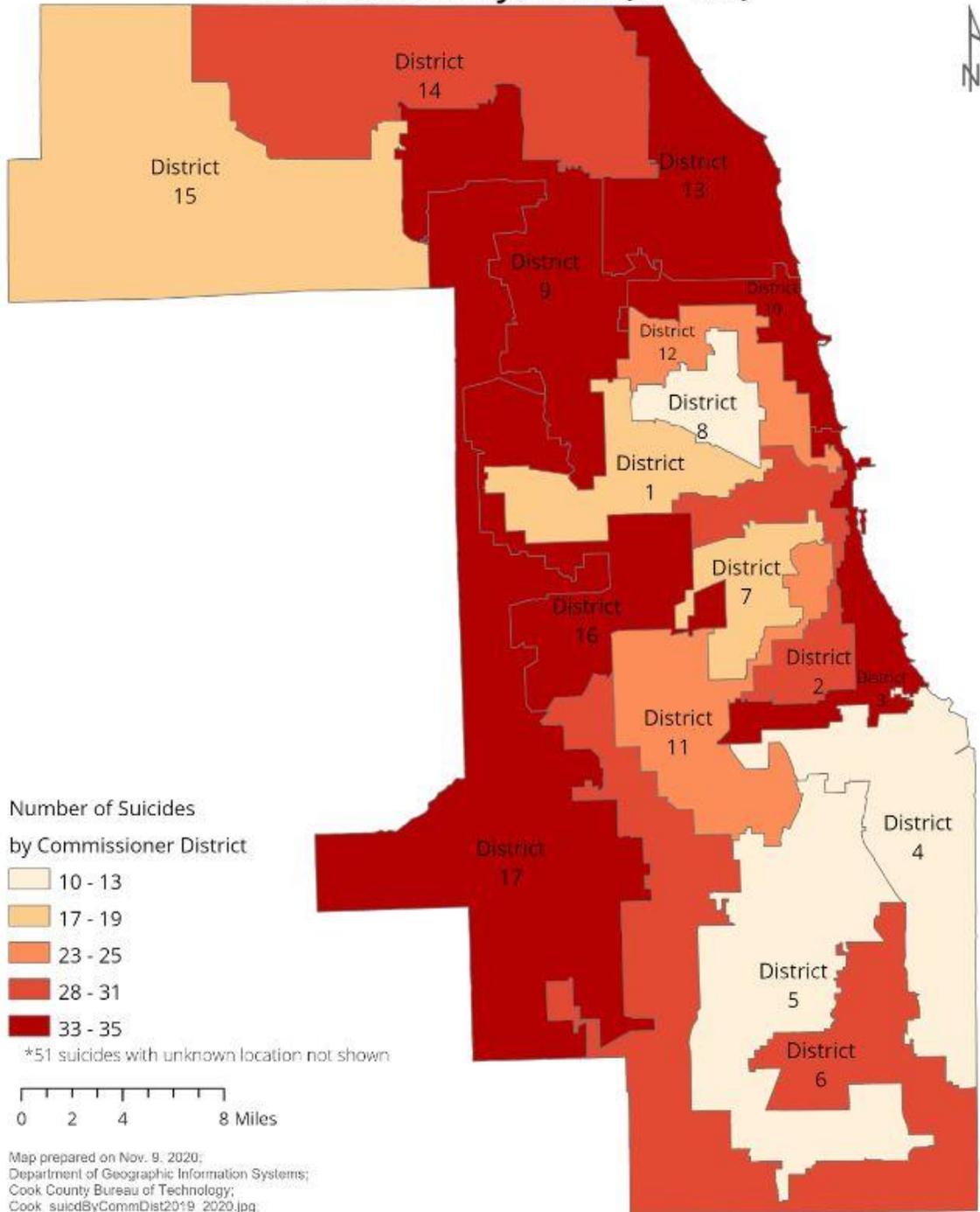
Suicide Manner of Death Concentration in Cook County, 2019 (N=479)



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Cook County Bureau of Technology;
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2. MANNER AND CAUSE OF DEATH

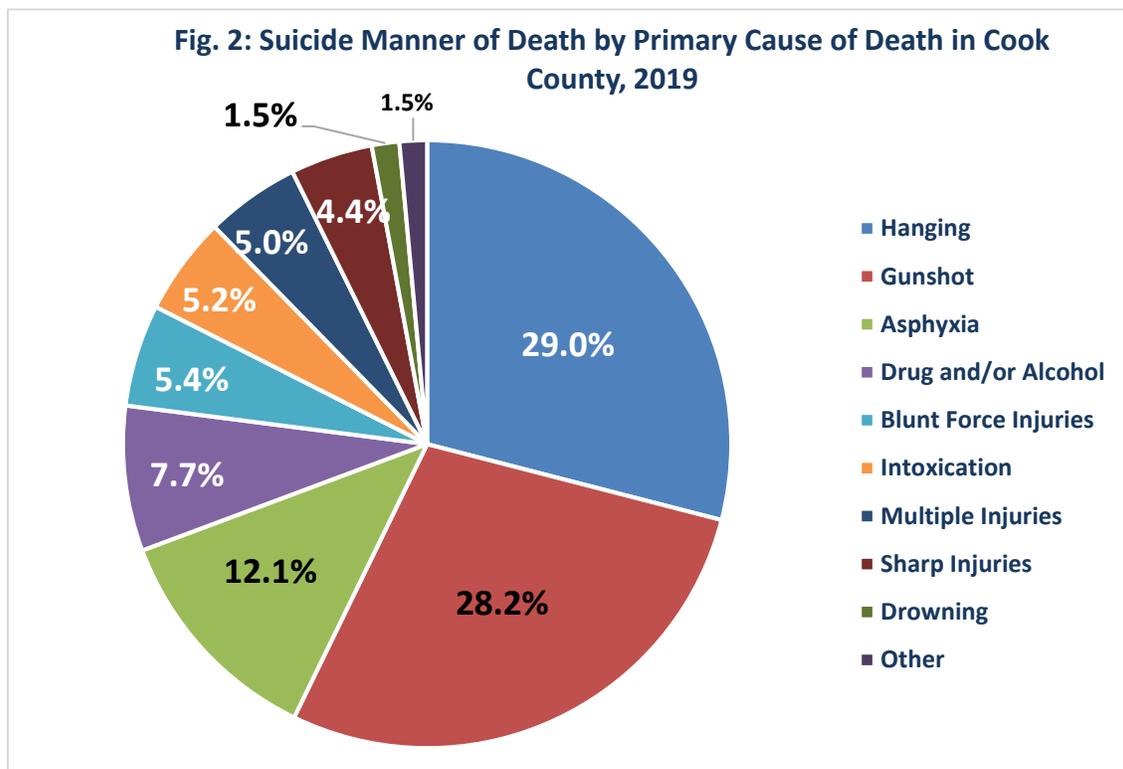
Suicide Manner of Death by Commissioner District in Cook County, 2019 (N=479)



2. MANNER AND CAUSE OF DEATH

Table 1. Suicide Manner of Death by Primary Cause of Death in Cook County, 2019

Primary Cause of Death	Number of Suicide	% of Total Suicides
Hanging	139	29.0%
Gunshot	135	28.2%
Asphyxia	58	12.1%
Drug and/or Alcohol	37	7.7%
Blunt Force Injuries	26	5.4%
Intoxication	25	5.2%
Multiple Injuries	24	5.0%
Sharp Injuries	21	4.4%
Drowning	7	1.5%
Thermal Injuries	3	0.6%
Exsanguination	1	0.2%
Other	3	0.6%
Total	479	100%

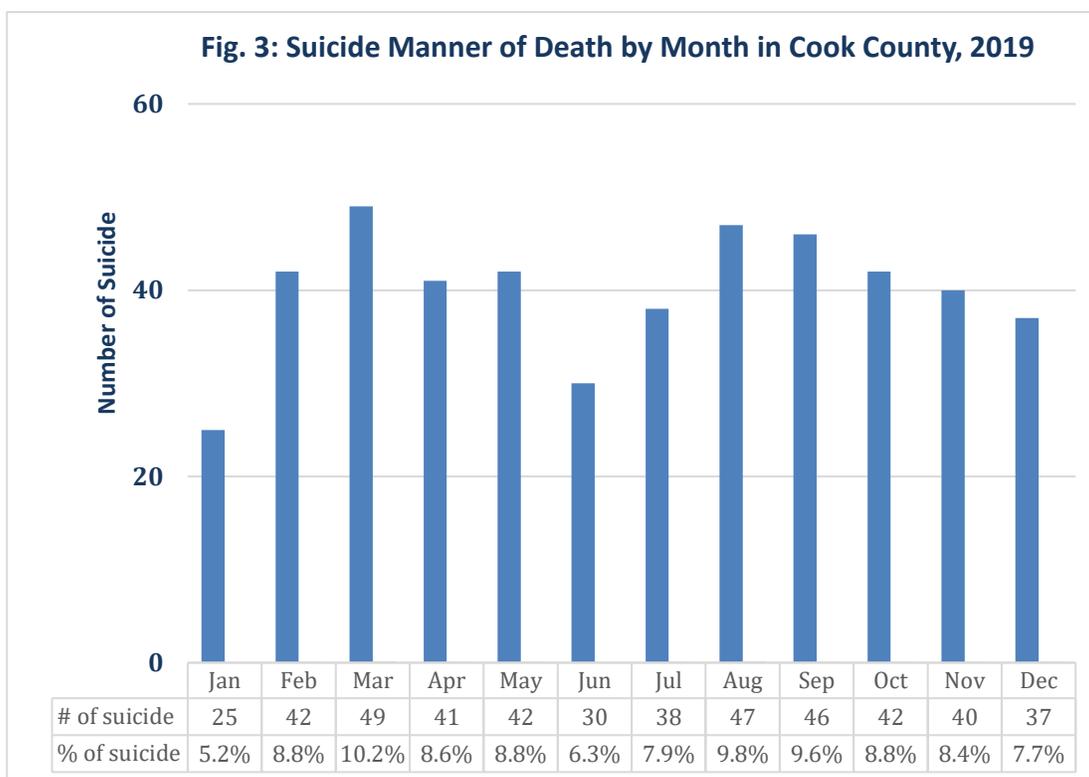


In 2019, 77.1 percent of asphyxia cases were due to

2. MANNER AND CAUSE OF DEATH

Table 2. Suicide Manner of Death by Month in Cook County, 2019

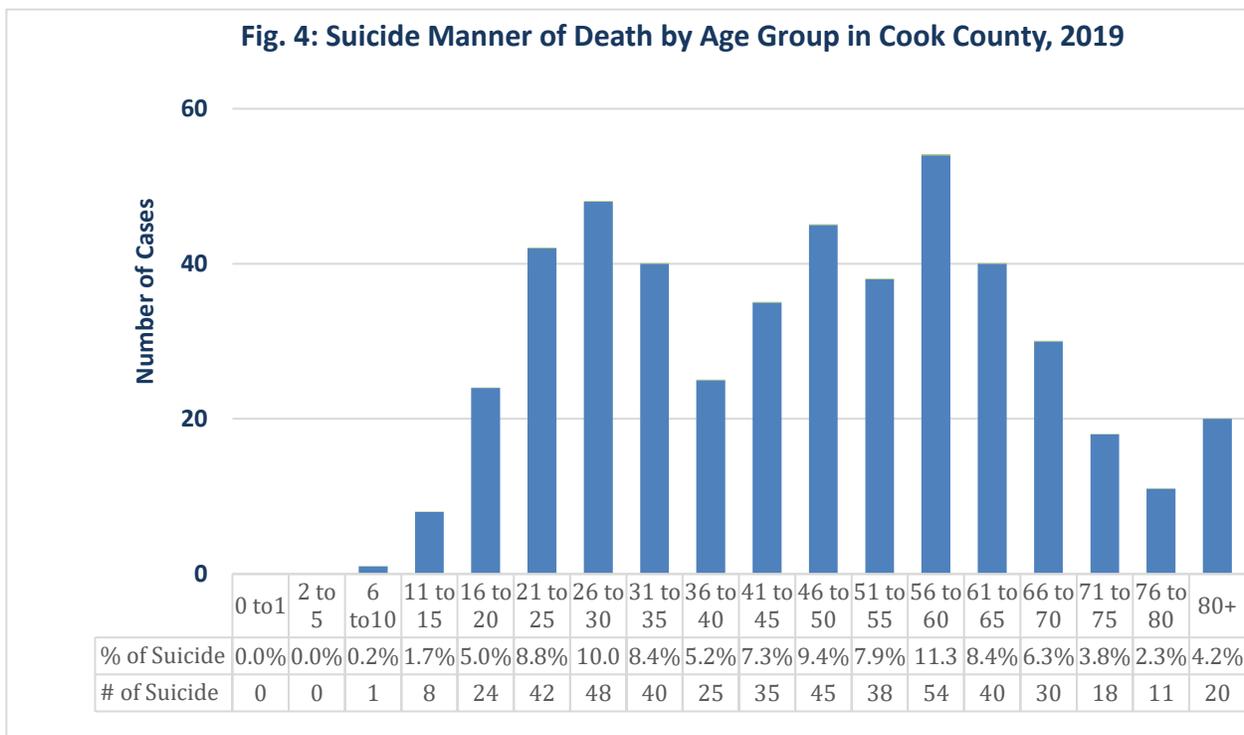
Month	Number of Suicide	% of Suicides
January	25	5.2%
February	42	8.8%
March	49	10.2%
April	41	8.6%
May	42	8.8%
June	30	6.3%
July	38	7.9%
August	47	9.8%
September	46	9.6%
October	42	8.8%
November	40	8.4%
December	37	7.7%
Total	479	100%



2. MANNER AND CAUSE OF DEATH

Table 3. Suicide Manner of Death by Age Group in Cook County, 2019

Age Group	Number of Suicide	% of Suicide
0 to 1	0	0.0%
2 to 5	0	0.0%
6 to 10	1	0.2%
11 to 15	8	1.7%
16 to 20	24	5.0%
21 to 25	42	8.8%
26 to 30	48	10.0%
31 to 35	40	8.4%
36 to 40	25	5.2%
41 to 45	35	7.3%
46 to 50	45	9.4%
51 to 55	38	7.9%
56 to 60	54	11.3%
61 to 65	40	8.4%
66 to 70	30	6.3%
71 to 75	18	3.8%
76 to 80	11	2.3%
80+	20	4.2%
Total	477	100%



2. MANNER AND CAUSE OF DEATH

Most of suicides observed in age group of 16-35-year-olds (82%) (Fig. 4). Age group of 21-30 and 56-60-year-olds contributes the most to this number. Gunshot-related suicides among age groups are shown in Fig. 5 and 6. Number of gunshot-related suicides was highest among age groups of 61-65 and 80+ year-olds.

Fig. 5: Percentage of Gunshot-related Suicide Among Adolescents and Young Adults (16 to 35 yrs old) in Cook County, 2019

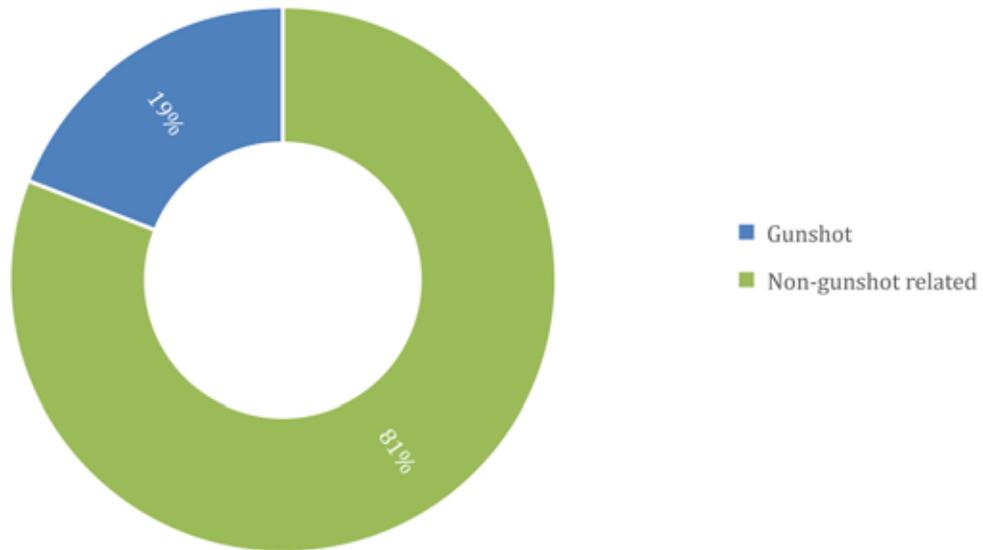
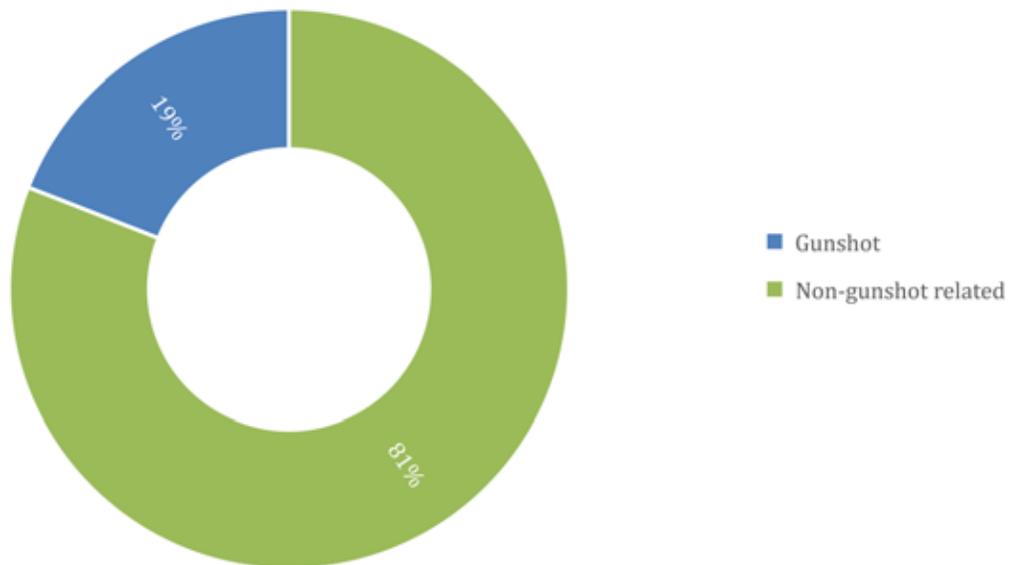


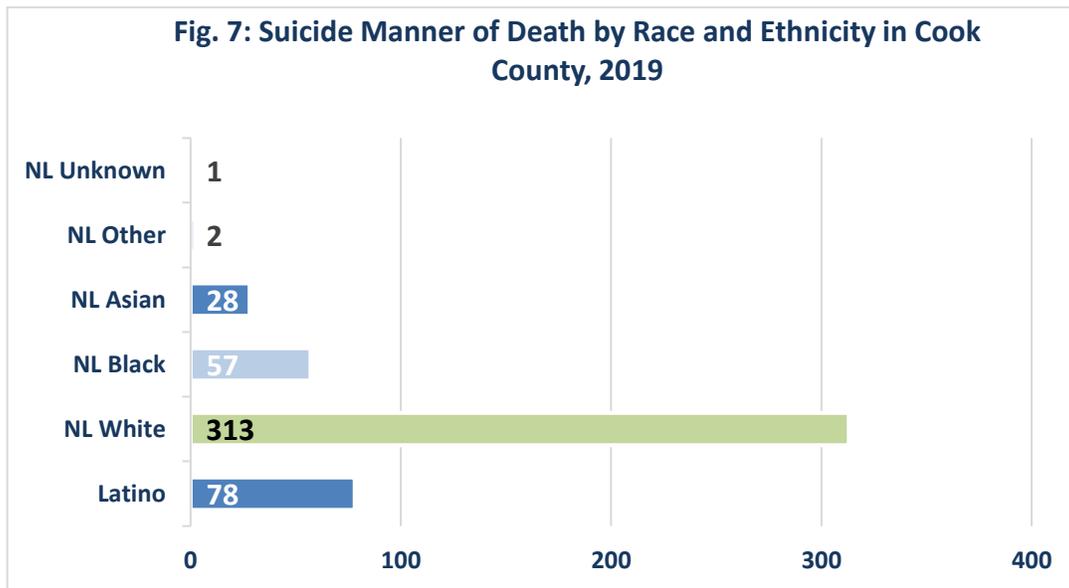
Fig. 6: Percentage of Gunshot-related Suicide Among Adults (56 to 80+ year old) in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

Table 4. Suicide Manner of Death by Race and Ethnicity in Cook County, 2019

Race/Ethnicity	Number of Suicide	% of Suicide
Latino	78	16.3%
NL White	313	65.5%
NL Black	57	11.7%
NL Asian	28	5.9%
NL Other	2	0.4%
NL Unknown	1	0.2%
Total	478	100%



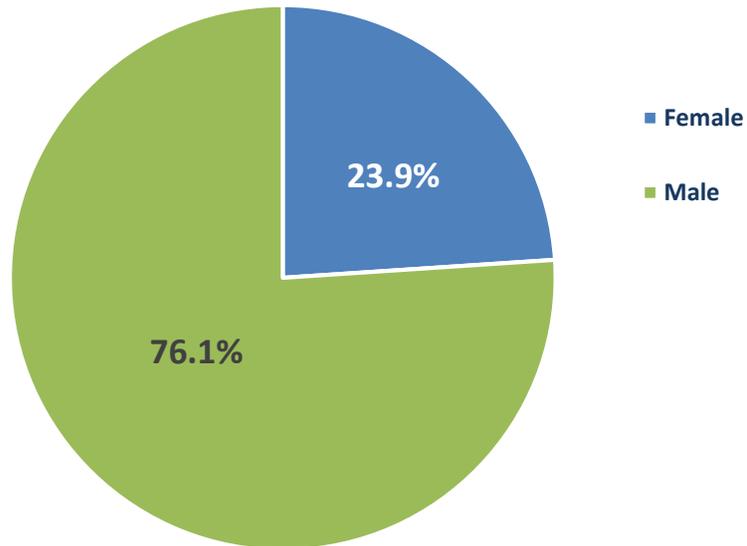
Suicide was more prevalent among non-Latinos than Latinos (84% vs. 16%) in 2019. Among non-Latinos, suicide was higher in Whites (65%) than Blacks (12%). (Fig 7.).

2. MANNER AND CAUSE OF DEATH

Table 5. Suicide Manner of Death by Sex in Cook County, 2019

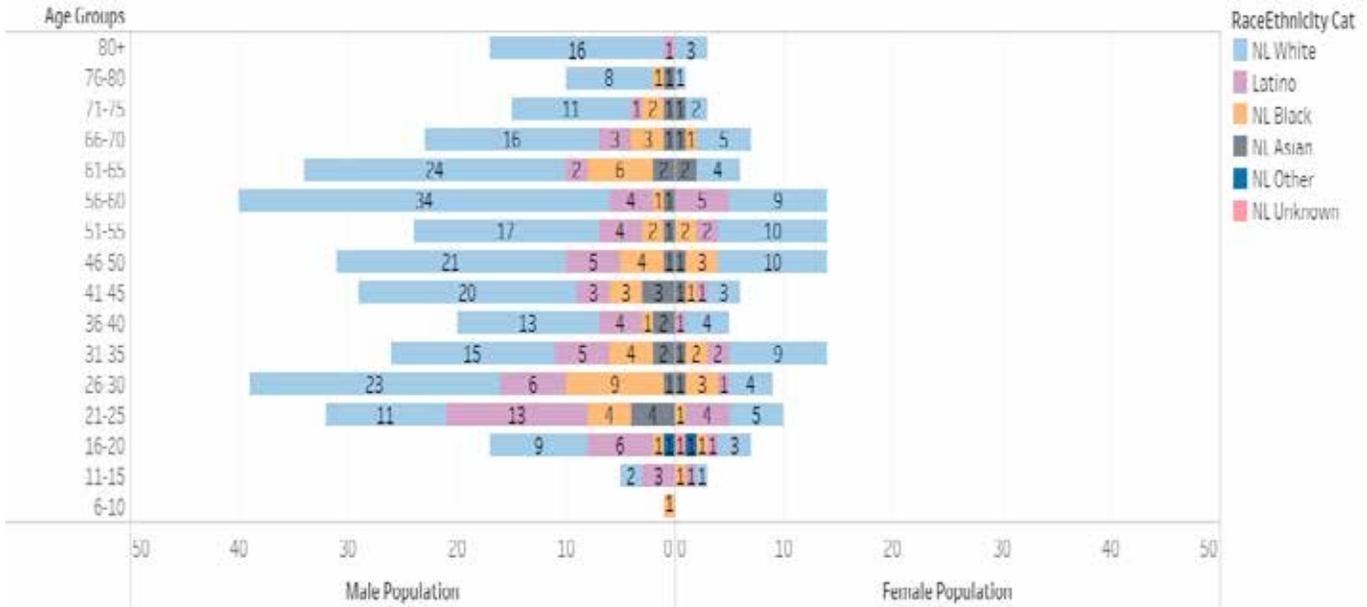
Sex	Number of Suicide	% of Suicide
Female	116	24.2%
Male	363	75.8%
Total	479	100%

Fig. 8: Suicide Manner of Death by Age Group in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

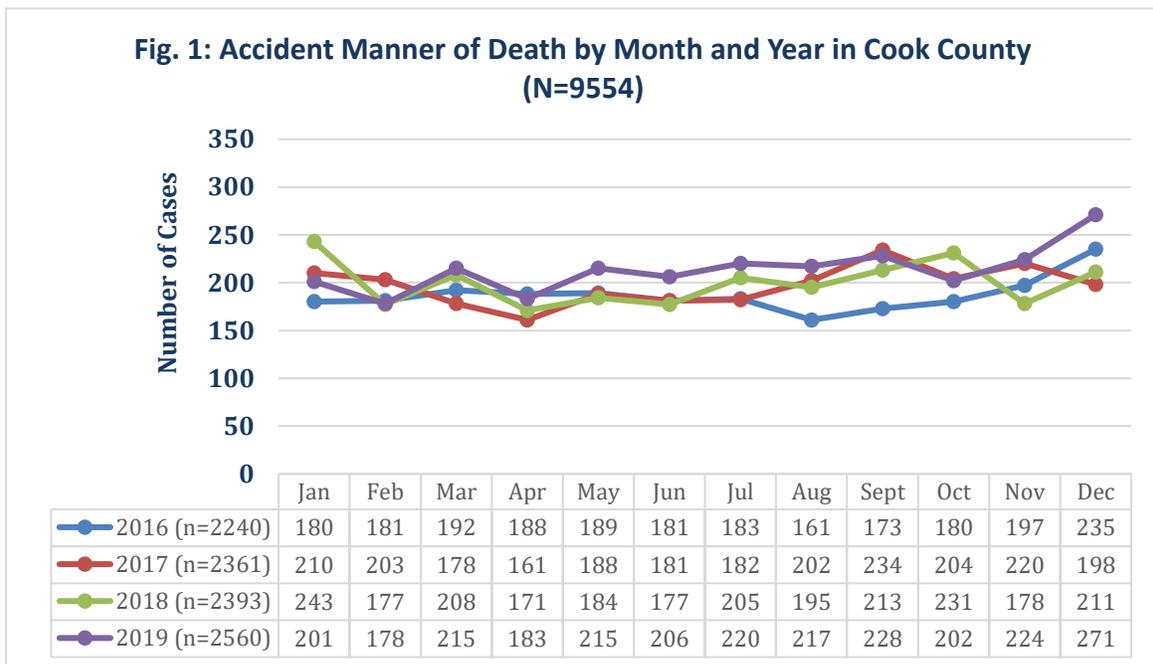
Fig. 9: Suicide Manner of Death by Sex, Race/Ethnicity, and Age Group in Cook County, 2019



As shown in Fig. 8, suicide is more prevalent among males than females (76% vs. 24%). In males, suicide was highest in age groups of 26-30 and 56-60-year-olds. In females, suicide was highest in age groups of 51-55 and 56-60. Number of suicides in all age groups was higher among males than females. Figure 9 shows that number of suicides among White males and females is higher than other races in almost all age groups. A notable finding is higher number of suicides among Latino males in age group of 21-25-year-olds than any other race/ethnicity (Fig. 9).

2. MANNER AND CAUSE OF DEATH

2.3. Accident Trend. CCMEO investigated 2,560¹³ cases with accident as manner of death in 2019. Of the 2,560 cases investigated, 53 percent had drug and/or alcohol, 14 percent had blunt force injuries, 10 percent had multiple injuries, 5 percent had external causes and 4 percent had diseases of circulatory system as the primary cause of death. The number of accident manners of death in December 2019 (n=271) was higher than any other month over the last four years. Accident manner of death showed a consistent increasing trend from 2016 to 2019. The average number of accident manner of death per month consistently increased from 2016 (n=187) to 2019 (n=213).

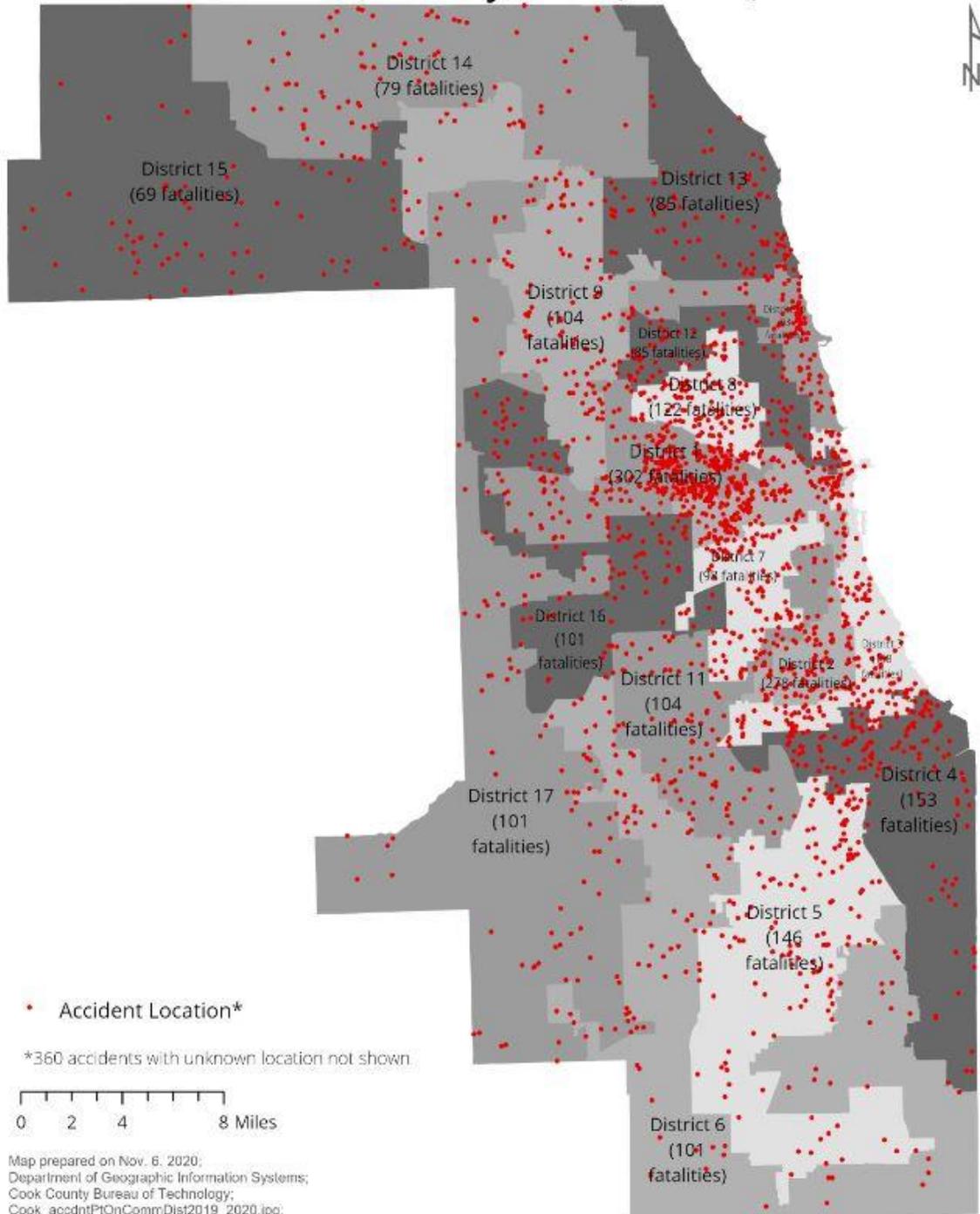


As shown in Figure 1, the number of accident manner of death did not show a consistent trend in 2019. Number of accident manner of death decreased and increased every other month from January to November.

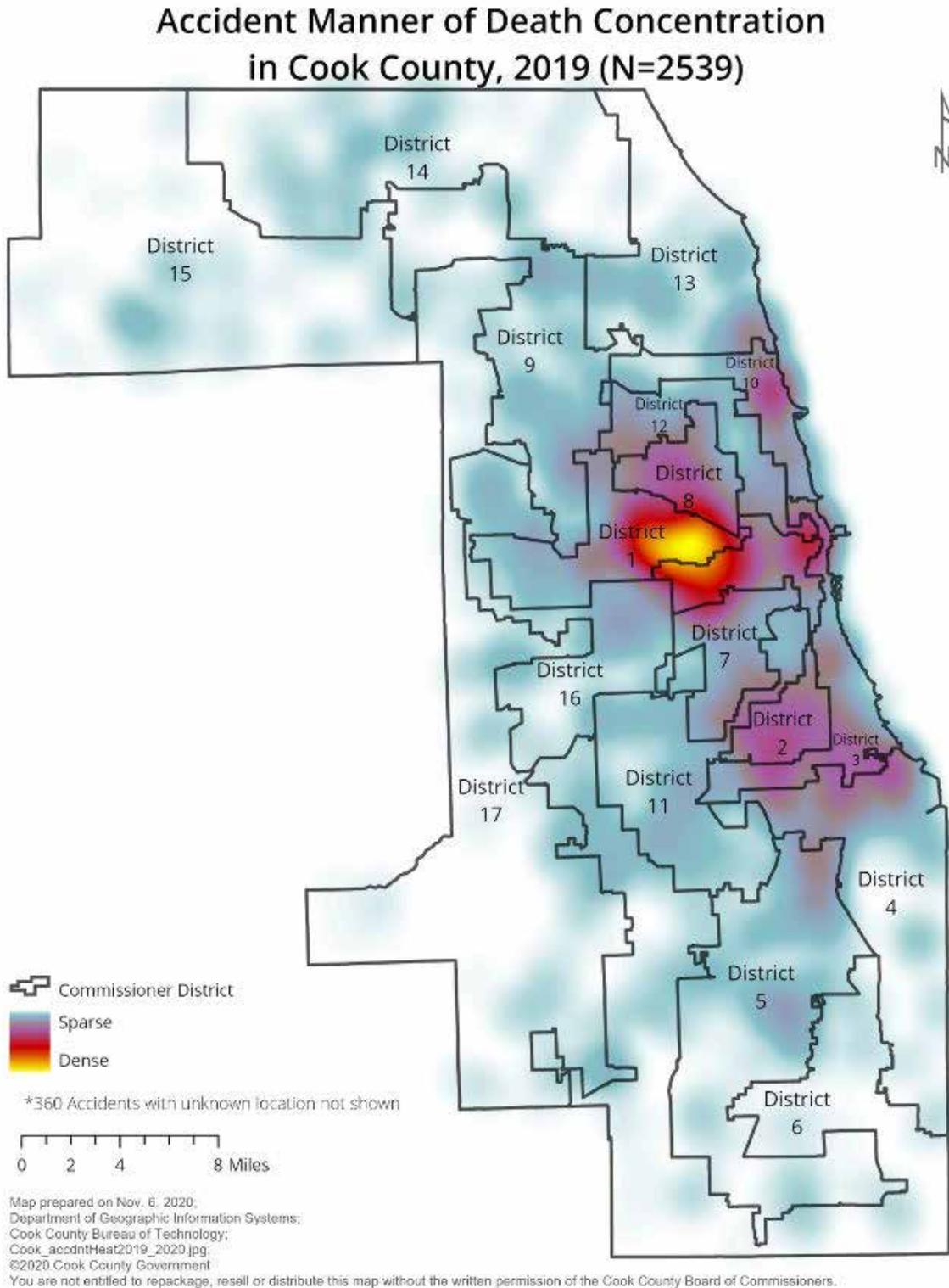
¹³ Difference with N on the GIS map is due to available zipcodes

2. MANNER AND CAUSE OF DEATH

Accident Manner of Death Incident Location in Cook County, 2019 (N=2539)

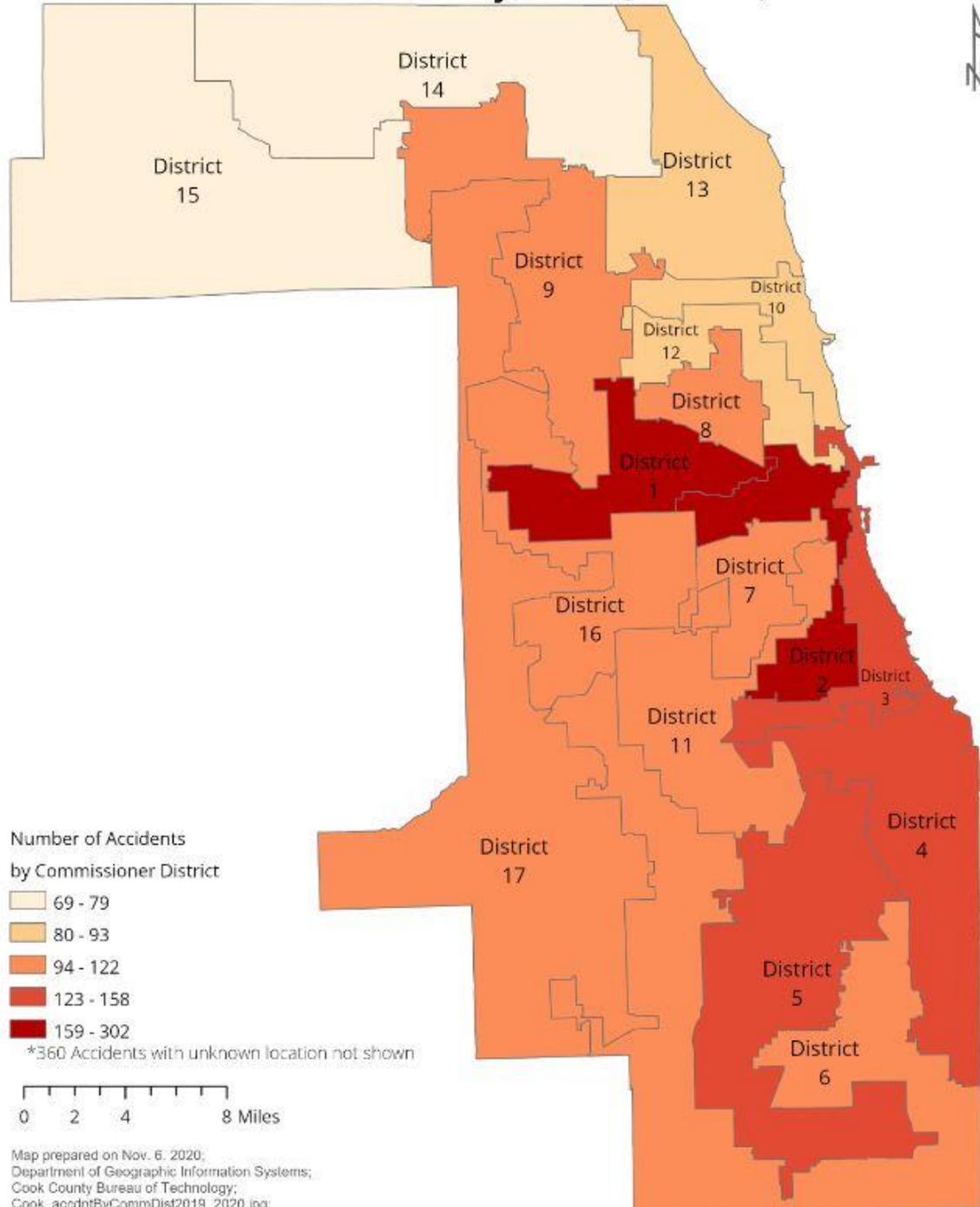


2. MANNER AND CAUSE OF DEATH



2. MANNER AND CAUSE OF DEATH

Accident Manner of Death By Commissioner District in Cook County, 2019 (N=2539)

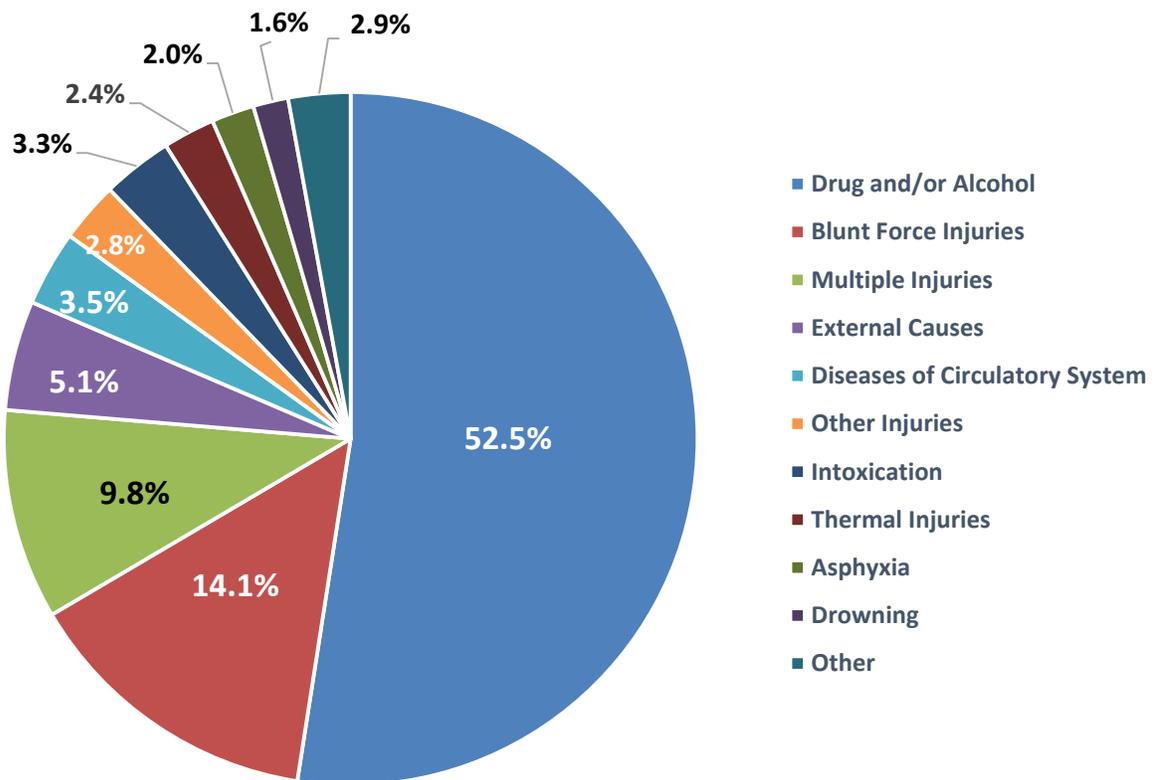


2. MANNER AND CAUSE OF DEATH

Table 1. Accident Manner of Death by Primary Cause of Death in Cook County, 2019

Primary Cause of Death	Number of Accidents	% of Accidents
Drug and/or Alcohol	1,343	52.5%
Blunt Force Injuries	360	14.1%
Multiple Injuries	251	9.8%
External Causes	131	5.1%
Diseases of Circulatory System	90	3.5%
Other Injuries	72	2.8%
Intoxication	84	3.3%
Thermal Injuries	62	2.4%
Asphyxia	51	2.0%
Drowning	42	1.6%
Other	74	2.9%
Total	2,560	100%

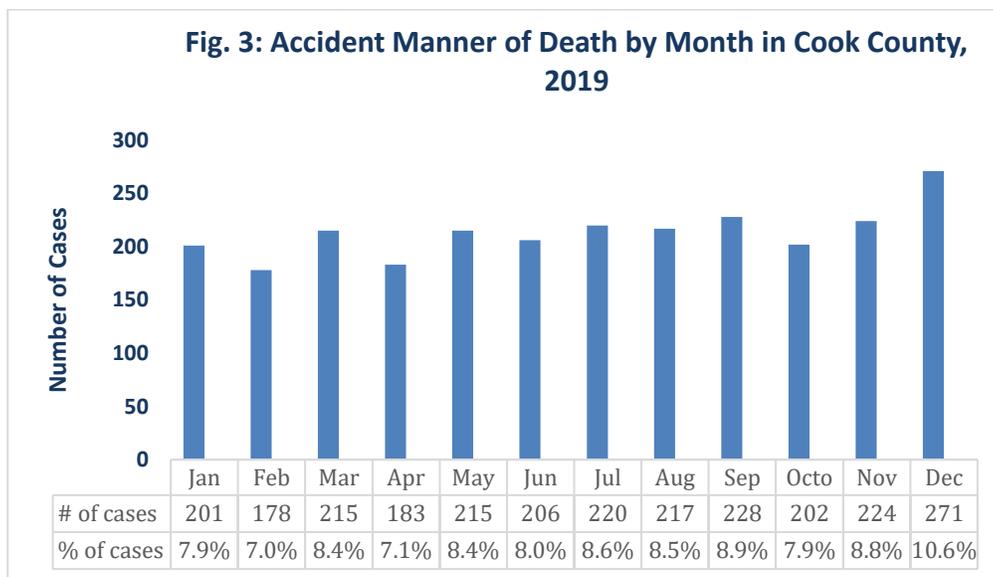
Fig. 2: Accident Manner of Death by Primary Cause of Death in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

Table 2. Accident Manner of Death by Month in Cook County, 2019

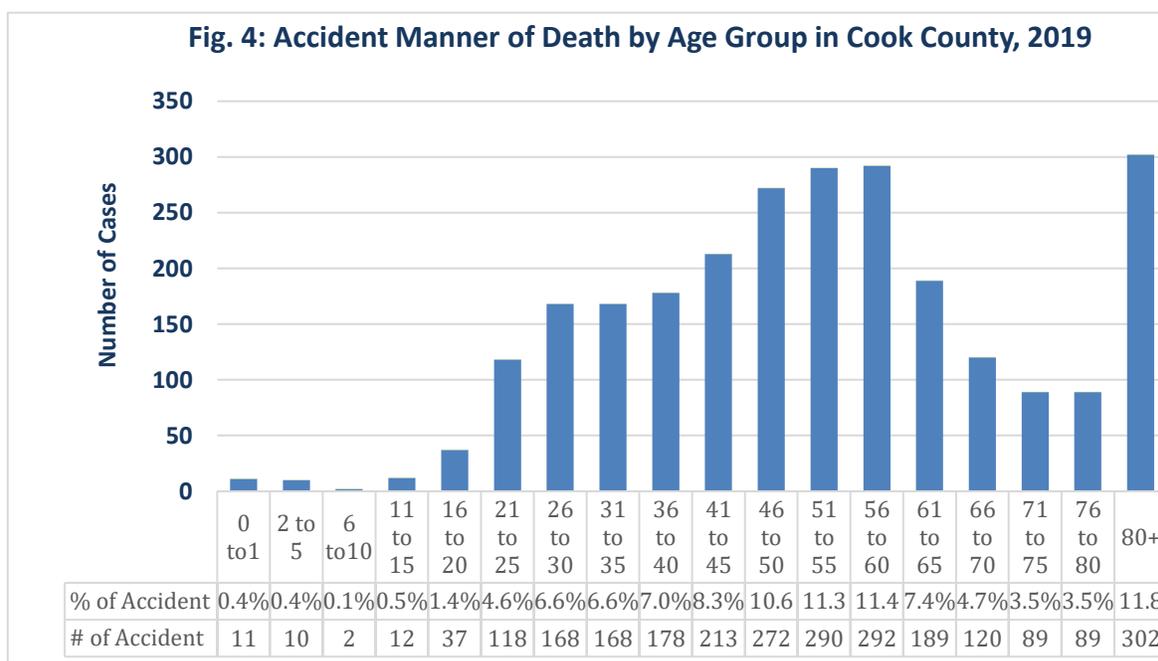
Month	Number of Accidents	% of Accidents
January	201	7.9%
February	178	7.0%
March	215	8.4%
April	183	7.1%
May	215	8.4%
June	206	8.0%
July	220	8.6%
August	217	8.5%
September	228	8.9%
October	202	7.9%
November	224	8.8%
December	271	10.6%
Total	2,560	100%



2. MANNER AND CAUSE OF DEATH

Table 3. Accident Manner of Death by Age Group in Cook County, 2019

Age Group	Number of Accidents	% of Accident
0 to 1	11	0.4%
2 to 5	10	0.4%
6 to 10	2	0.1%
11 to 15	12	0.5%
16 to 20	37	1.4%
21 to 25	118	4.6%
26 to 30	168	6.6%
31 to 35	168	6.6%
36 to 40	178	7.0%
41 to 45	213	8.3%
46 to 50	272	10.6%
51 to 55	290	11.3%
56 to 60	292	11.4%
61 to 65	189	7.4%
66 to 70	120	4.7%
71 to 75	89	3.5%
76 to 80	89	3.5%
80+	302	11.8%
Total	2,560	100%

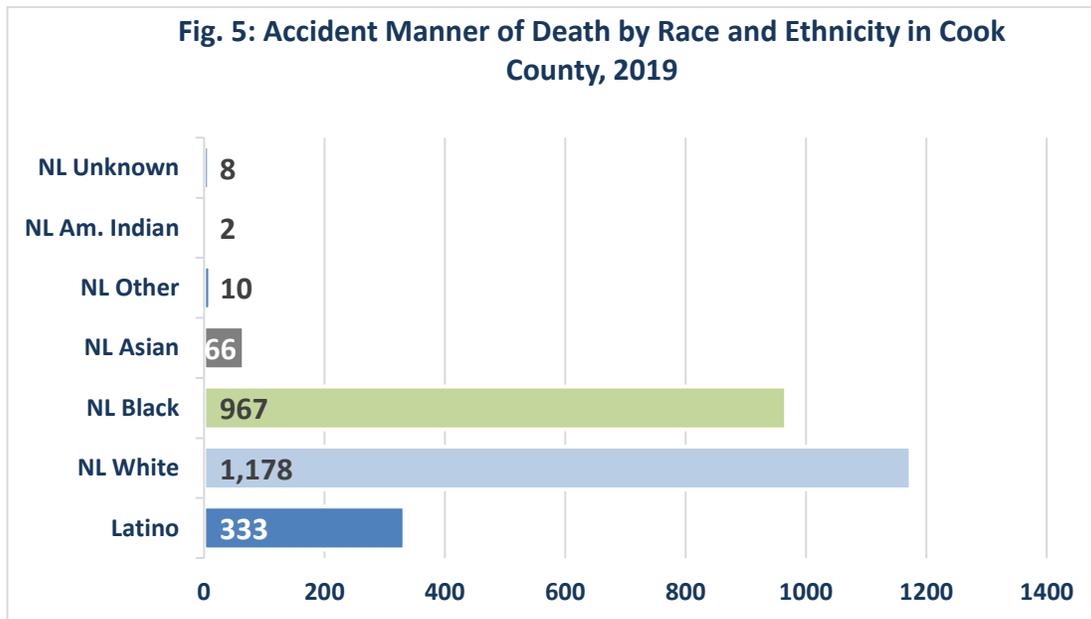


Most fatal accidents were observed in the age group of 31-60-year-olds (49%) (Fig. 4). A notable finding is that the age group of 80+ account for almost 12 percent of all fatal accidents.

2. MANNER AND CAUSE OF DEATH

Table 4. Accident Manner of Death by Race and Ethnicity in Cook County, 2019

Race/Ethnicity	Number of Accidents	% of Accidents
Latino	333	13.0%
NL White	1,178	45.9%
NL Black	967	37.7%
NL Asian	66	2.6%
NL Other	10	0.4%
NL Am. Indian	2	0.1%
NL Unknown	8	0.3%
Total	2,564	100%

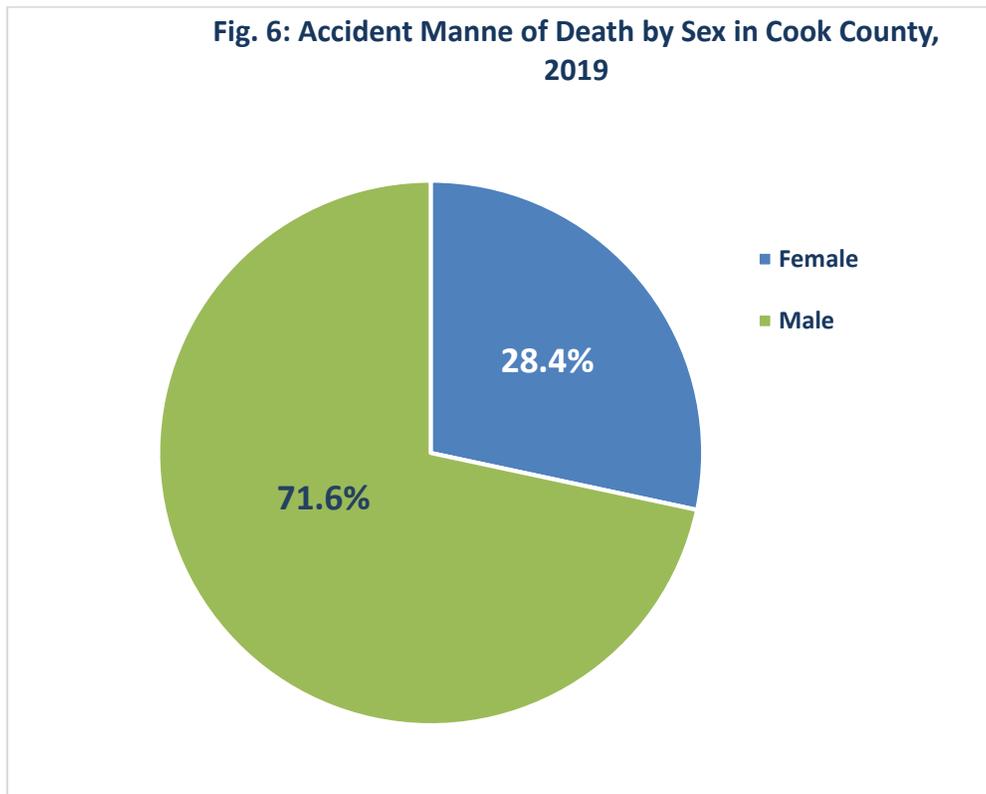


Accidents were higher among non-Latinos than Latinos (87% vs. 13%). Among non-Latinos, accidents were higher among Whites (46%) than Blacks (38%) in 2019.

2. MANNER AND CAUSE OF DEATH

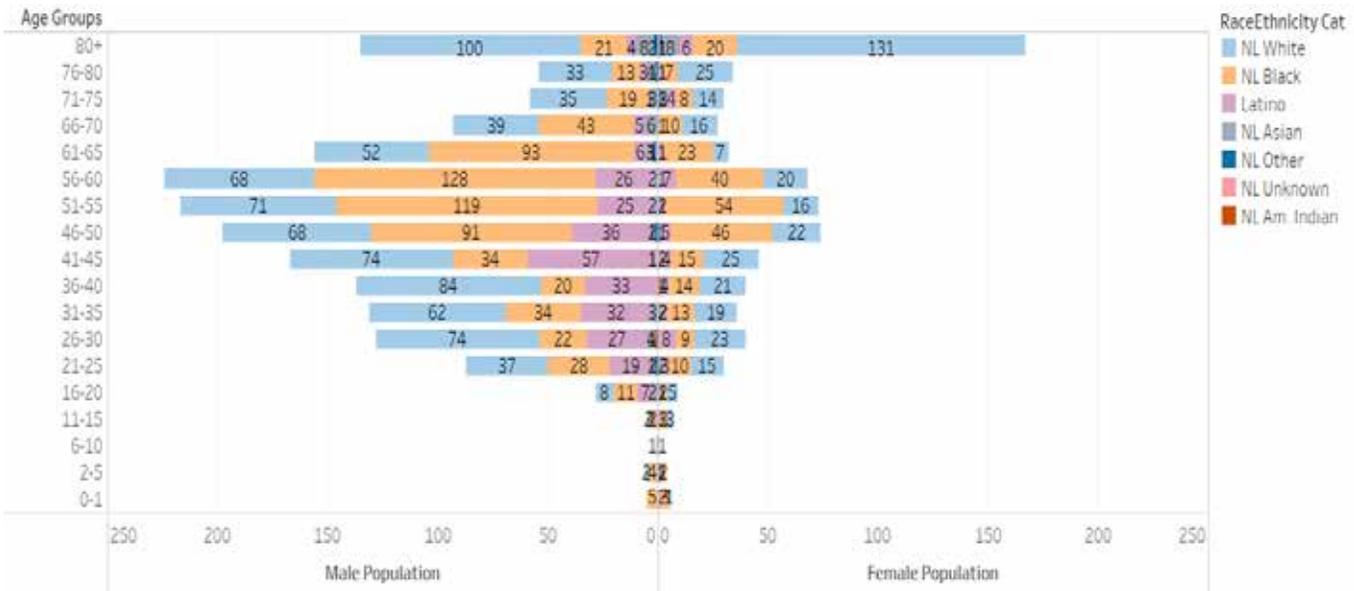
Table 5. Accident Manner of Death by Sex in Cook County, 2019

Sex	Number of Accidents	% of Accidents
Female	727	28.4%
Male	1,836	71.6%
Total	2,563	100%



2. MANNER AND CAUSE OF DEATH

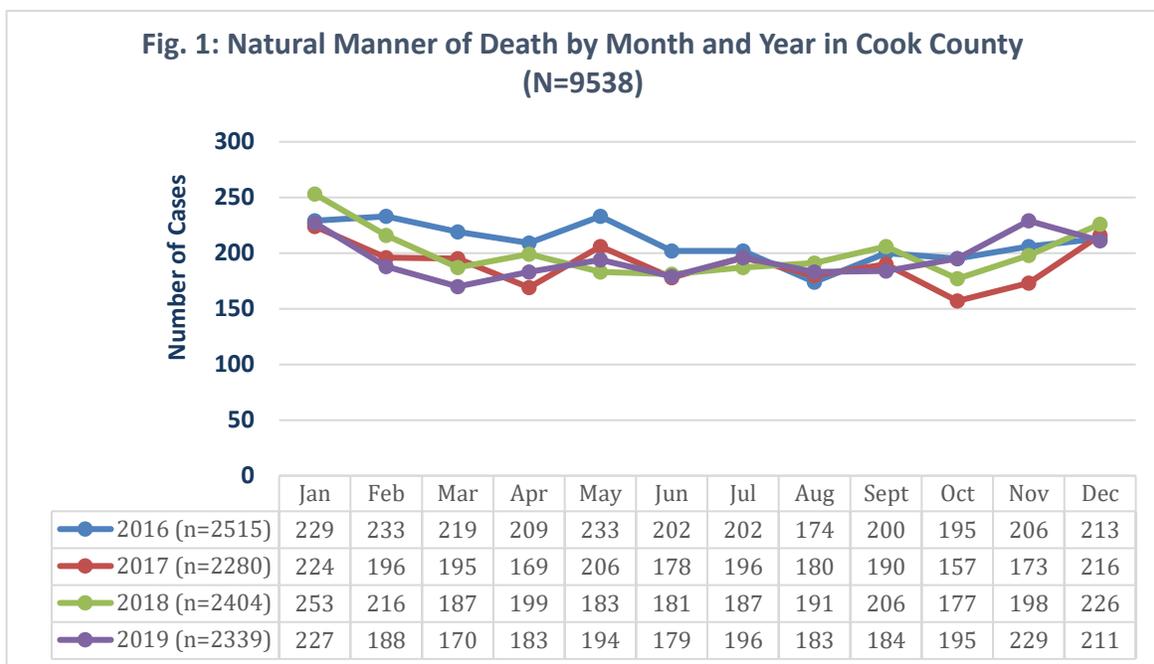
Fig. 7: Accident Manner of Death by Sex, Race/Ethnicity and Age Groups in Cook County, 2019



As shown in Fig. 6, the percent of accident manner of death was higher among males (72%) than females (28%). Almost half of accident manner of death observed in the age group of 41-65-year-olds. Another notable finding is that age group of 80+ are responsible for 12 percent of all accidental death. The data also revealed that accident manner of death was higher among non-Latinos than Latinos (87% vs. 13%). Accident manner of death was higher among NL Whites in age groups of 21-45-year-olds while it was higher among NL Blacks in age groups of 46-70-year-olds (Fig. 7).

2. MANNER AND CAUSE OF DEATH

2.4. Natural Death. CCMEO investigated 2,339¹⁴ natural manner of death in 2019. Of the 2,339 cases investigated, 78 percent had diseases of circulatory system, 6 percent had mental and behavioral disorders, 4.2 percent had diseases of respiratory system, 3.5 percent had endocrine, metabolic or nutritional diseases and 2.8 percent had diseases of nervous system as the primary cause of death. The number of natural manner of death in January 2018 (n=253) was higher than any other month over the last four years. Natural manner of death did not have a consistent trend over the last four years. The average number of natural manner of death was 210 per month in 2016, decreased in 2017 (n=190), increased in 2018 (n=200), and reduced to an average of 195 per month in 2019. Natural manner of death decreased by 6.9 percent from 2016 (n=2515) to 2019 (n=2339).

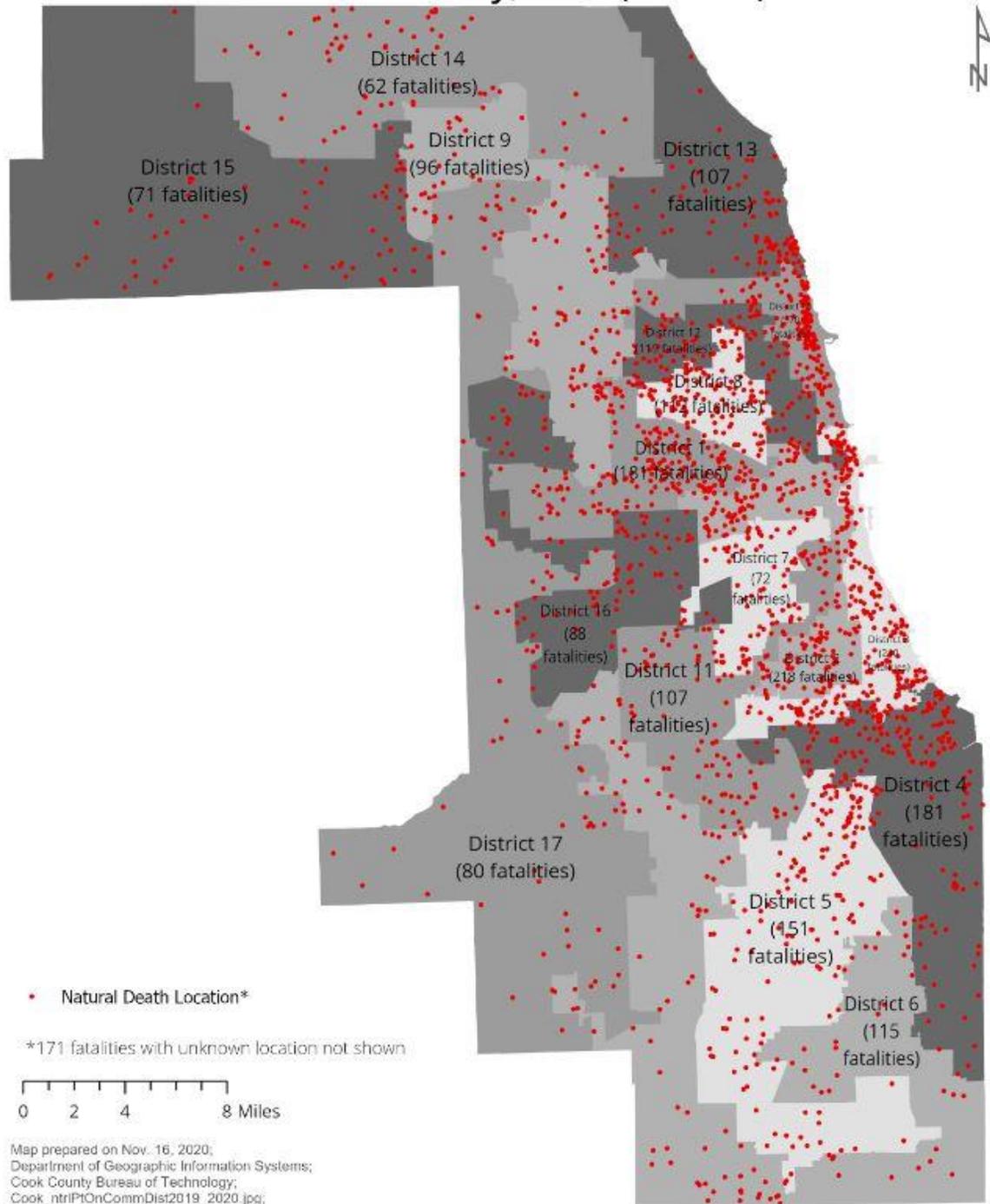


As shown in Figure 1, the number of natural manner of death did not show a consistent trend in 2019. Number of natural manner of death decreased from January to March, then increased in April and May and fluctuated afterwards.

¹⁴ Difference with N on the GIS map is due to available zipcodes

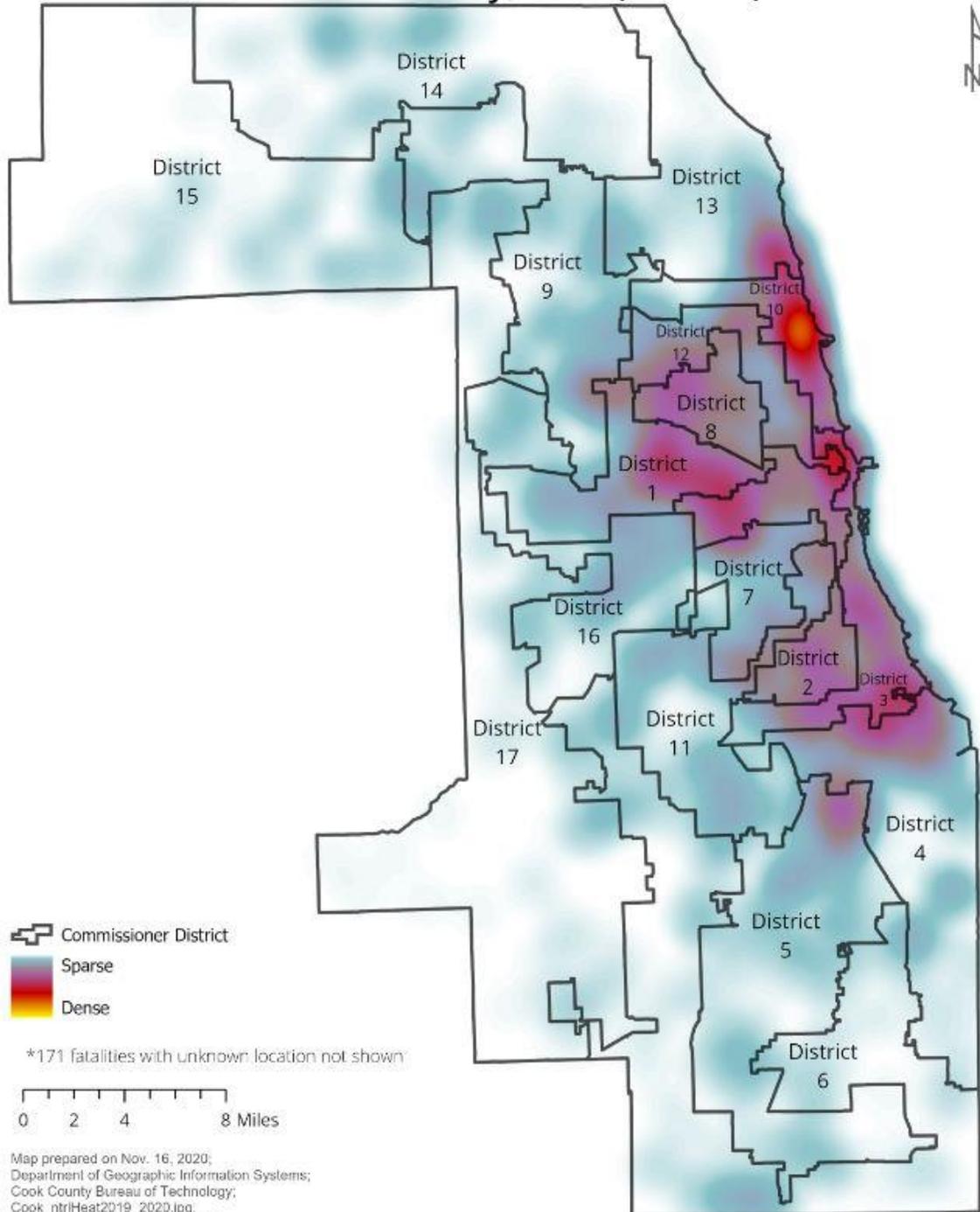
2. MANNER AND CAUSE OF DEATH

Natural Manner of Death Incident Locations in Cook County, 2019 (N=2308)



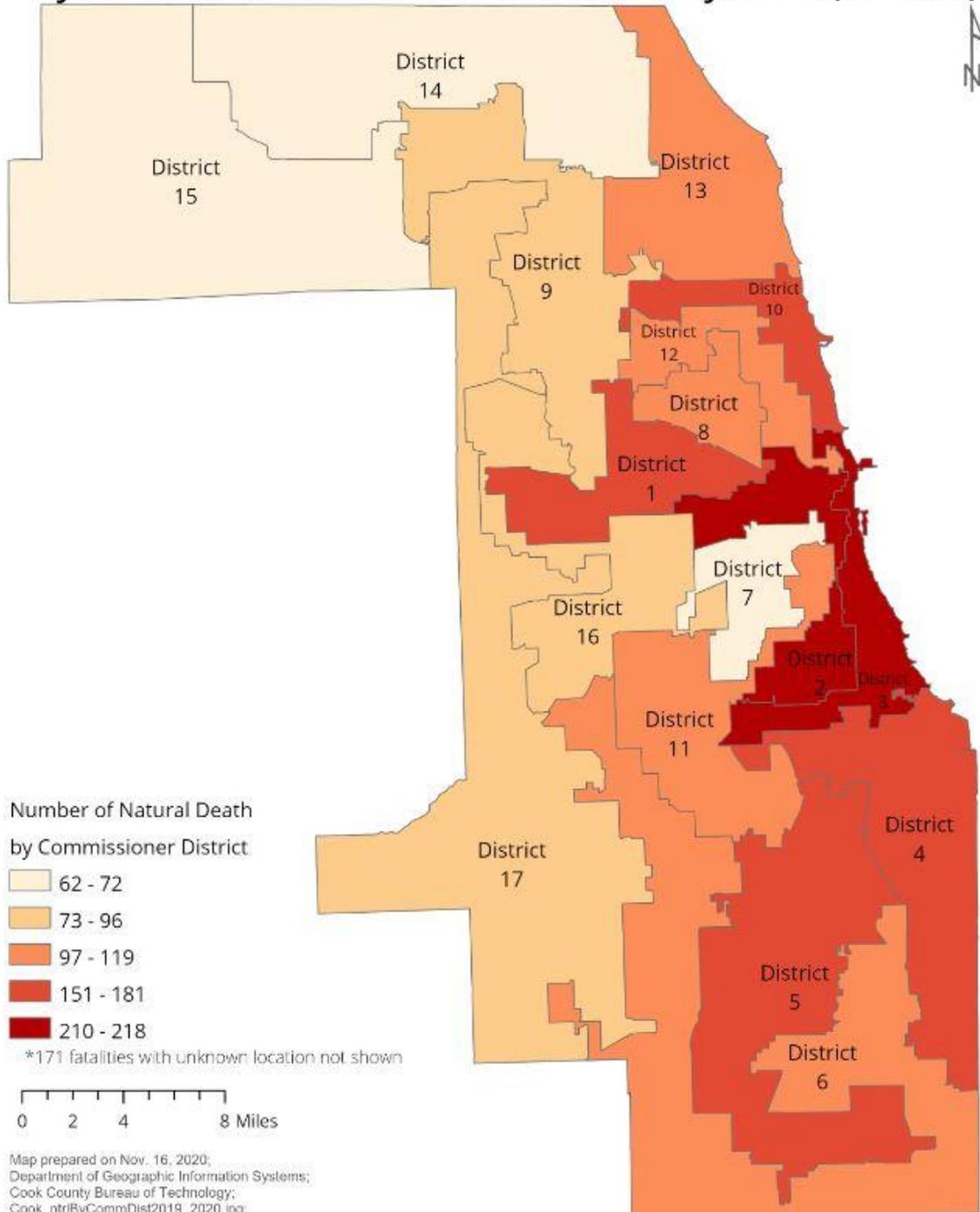
2. MANNER AND CAUSE OF DEATH

Natural Manner of Death Incident Concentration in Cook County, 2019 (N=2308)



2. MANNER AND CAUSE OF DEATH

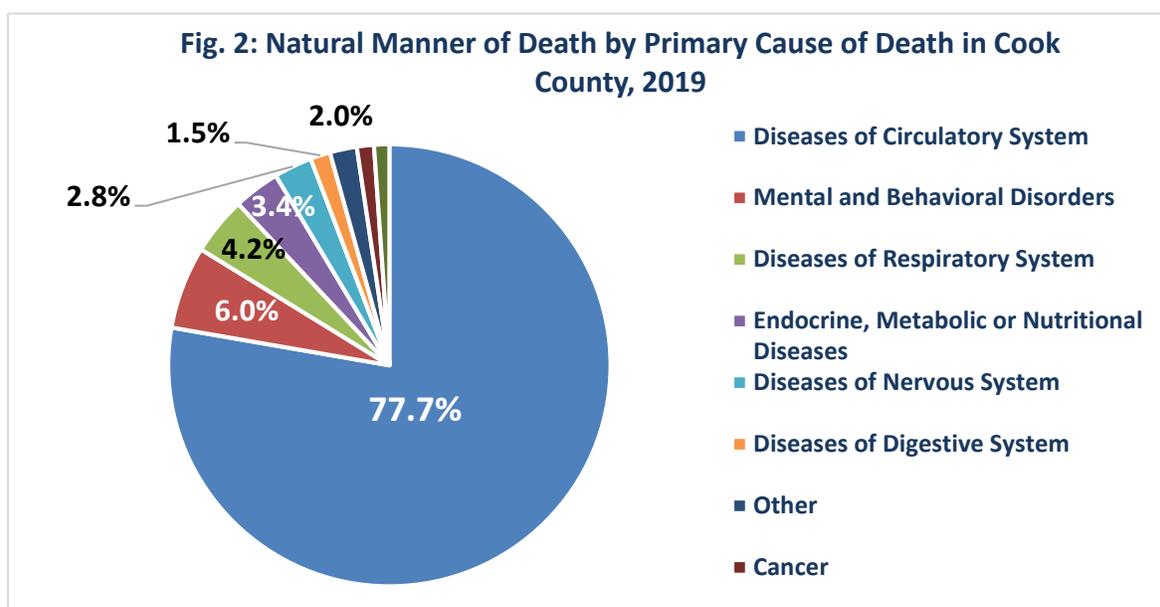
Natural Manner of Death Incident Locations by Commissioner District in Cook County, 2019 (N=2308)



2. MANNER AND CAUSE OF DEATH

Table 1. Natural Manner of Death by Primary Cause of Death¹⁵ in Cook County, 2019

Primary Cause of Death	Number of Natural Death	% of Total Natural Death
Diseases of Circulatory System	1,813	77.5%
Mental and Behavioral Disorders	142	6.1%
Diseases of Respiratory System	99	4.2%
Endocrine, Metabolic or Nutritional Diseases	82	3.5%
Diseases of Nervous System	65	2.8%
Diseases of Digestive System	35	1.5%
Other	31	1.3%
Cancer	29	1.2%
Infection of Parasitic Diseases	26	1.1%
Diseases of Genitourinary System	8	0.3%
Diseases of Immune System	3	0.1%
Developmental Anomalies	2	0.09%
Diseases of Blood or Blood-forming Organs	1	0.04%
External Factors	1	0.04%
Pregnancy and Childbirth	1	0.04%
Total	2,338	100%

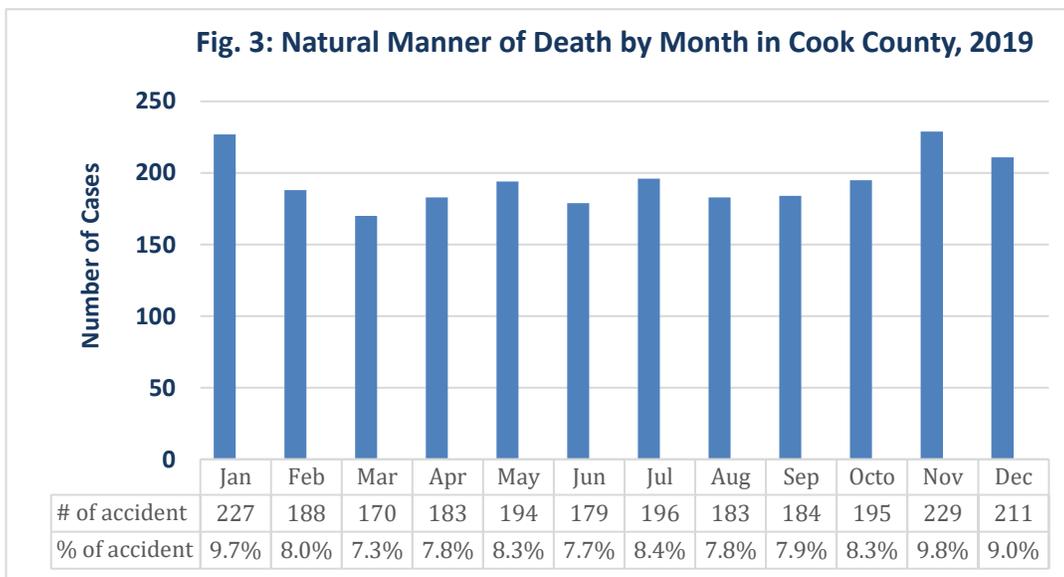


¹⁵ Classification of disease into categories throughout this report is based on the ICD-11: World Health Organization. (2018, June). ICD-11 for Mortality and Morbidity Statistics. Retrieved from World Health Organization/Classification of Diseases: icd.who.int/browse11/l-m/en

2. MANNER AND CAUSE OF DEATH

Table 2. Natural Manner of Death by Month in Cook County, 2019

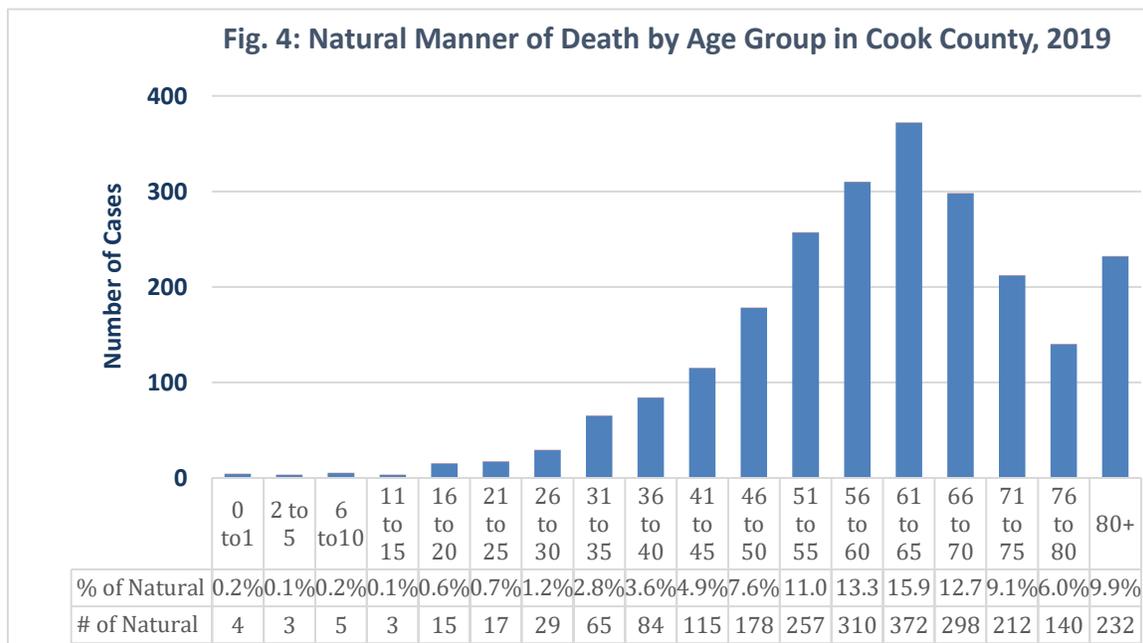
Month	Number of Natural Deaths	% of Natural Deaths
January	227	9.7%
February	188	8.0%
March	170	7.3%
April	183	7.8%
May	194	8.3%
June	179	7.7%
July	196	8.4%
August	183	7.8%
September	184	7.9%
October	195	8.3%
November	229	9.8%
December	211	9.0%
Total	2,339	100%



2. MANNER AND CAUSE OF DEATH

Table 3. Natural Manner of Death by Age Group in Cook County, 2019

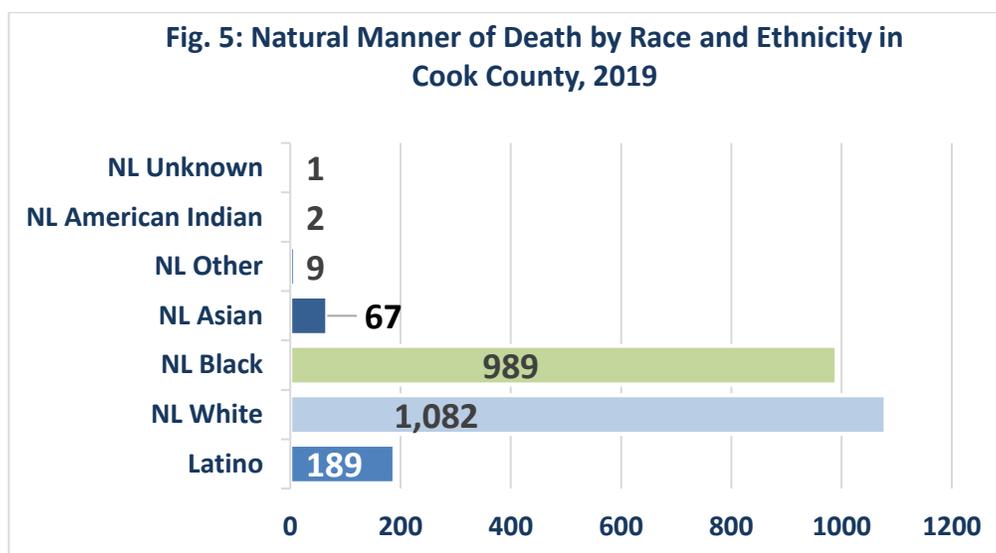
Age Group	Number of Natural Deaths	% of Natural Deaths
0 to 1	4	0.2%
2 to 5	3	0.1%
6 to 10	5	0.2%
11 to 15	3	0.1%
16 to 20	15	0.6%
21 to 25	17	0.7%
26 to 30	29	1.2%
31 to 35	65	2.8%
36 to 40	84	3.6%
41 to 45	115	4.9%
46 to 50	178	7.6%
51 to 55	257	11.0%
56 to 60	310	13.3%
61 to 65	372	15.9%
66 to 70	298	12.7%
71 to 75	212	9.1%
76 to 80	140	6.0%
80+	232	9.9%
Total	2,339	100%



2. MANNER AND CAUSE OF DEATH

Table 4. Natural Manner of Death by Race and Ethnicity in Cook County, 2019

Race/Ethnicity	Number of Natural Deaths	% of Natural Deaths
Latino	189	8.1%
NL White	1,082	46.3%
NL Black	989	42.3%
NL Asian	67	2.9%
NL Other	9	0.4%
NL Am. Indian	2	0.1%
NL Unknown	1	0.0%
Total	2,339	100%



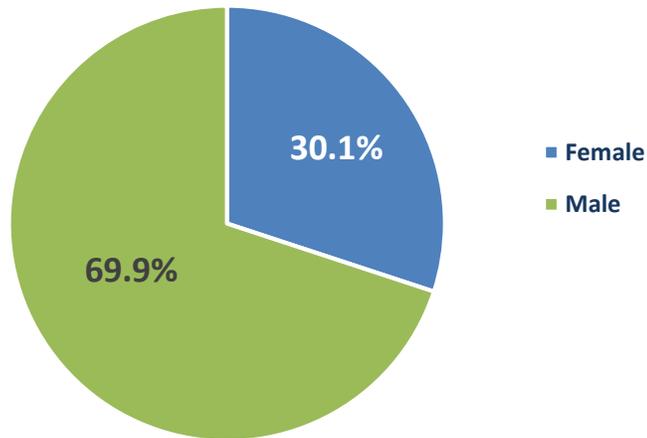
Natural manner of death was higher among non-Latinos than Latinos (92% vs. 8%) in 2019. Among non-Latinos, natural manner of death was higher among Whites (46%) than Blacks (42%) in 2019.

2. MANNER AND CAUSE OF DEATH

Table 5. Natural Manner of Death by Sex in Cook County, 2019

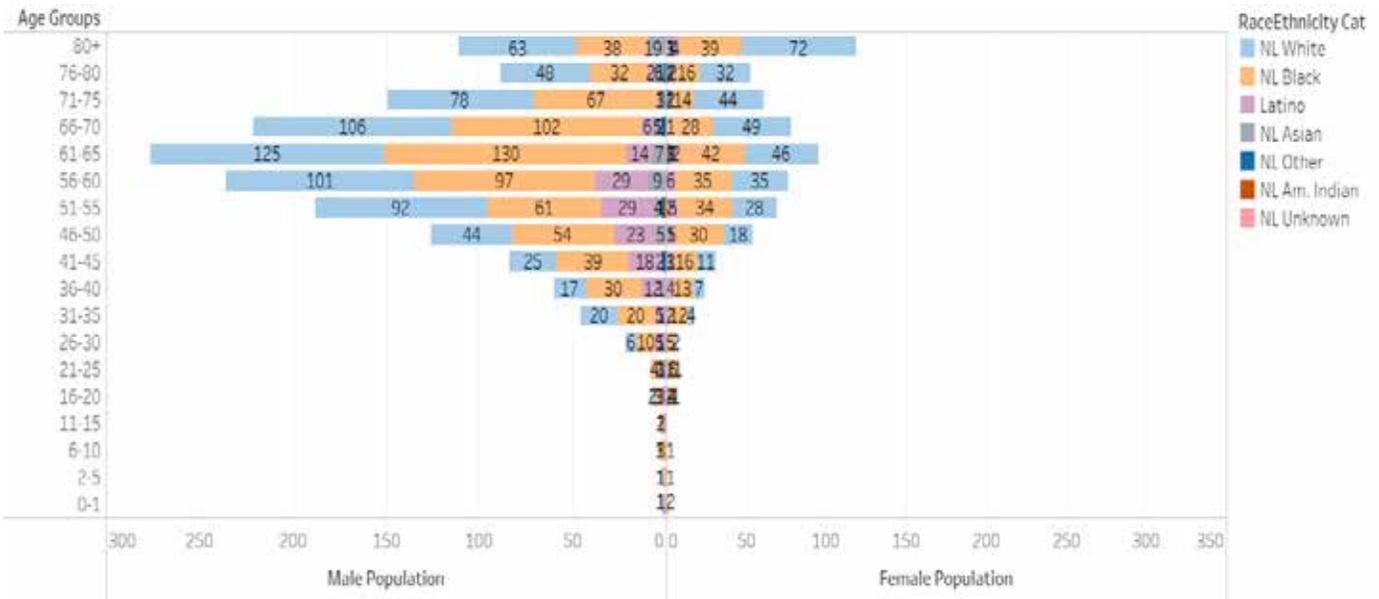
Sex	Number of Natural Deaths	% of Natural Deaths
Female	705	30.1%
male	1,634	69.9%
Total	2,339	100%

Fig. 6: Natural Manner of Death by Sex in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

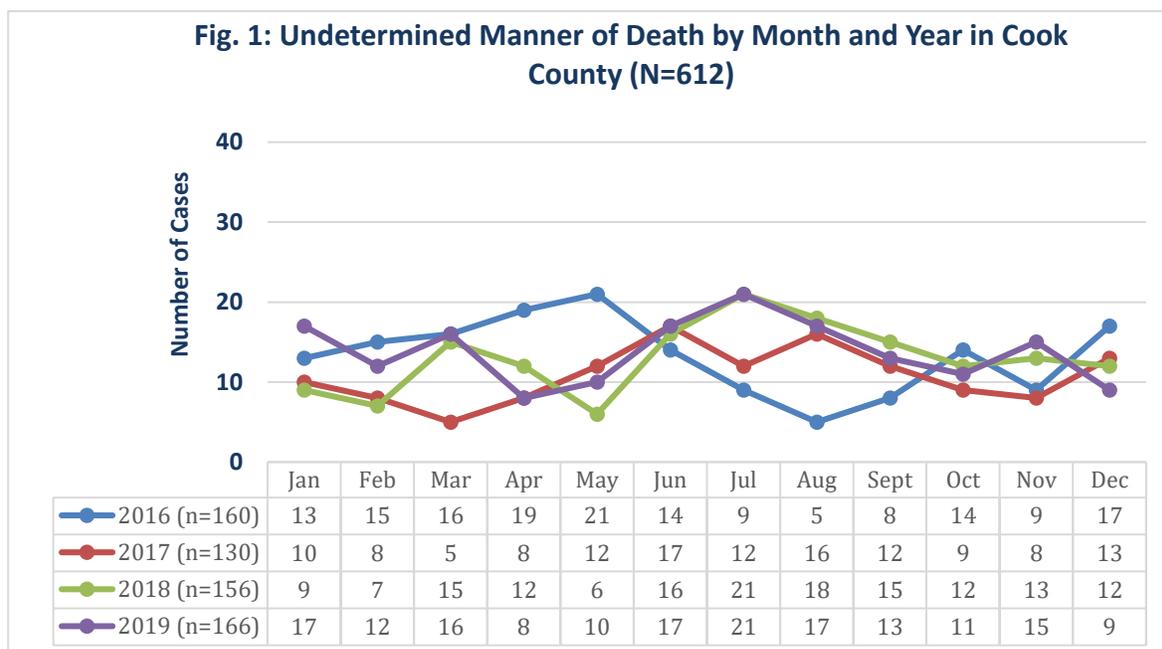
Fig. 7: Natural Manner of Death by Sex, Race/Ethnicity, and Age Groups in Cook County, 2019



As shown in Fig. 6, the natural manner of death was higher among males than females (70% vs. 30%). Natural manner of death was highest in age group of 51-70-year-olds among males. It was highest in age group of 61-80+ year-olds among females. Although the number of natural deaths was highest among White males in almost all age groups, the number of natural deaths did not show a consistent pattern among females. Number of natural deaths was higher among NL Black women in age groups of 16-65-year-olds (Fig. 7).

2. MANNER AND CAUSE OF DEATH

2.5. Undetermined. CCMEO investigated 166¹⁶ undetermined manner of death in 2019. Of the 166 cases investigated, 95 (57.2%) had undetermined primary cause of death. The number of undetermined manner of death in January 2019 (n=31) was higher than any other month over the last four years. Undetermined manner of death did not have a consistent trend over the last four years. The average number of natural manner of death was 13 per month in 2016, decreased in 2017 (n=11), increased in 2018 (n=13) and reduced to an average of 14 per month in 2019. Undetermined manner of death increased by 3.7 percent from 2016 (n=160) to 2019 (n=166).

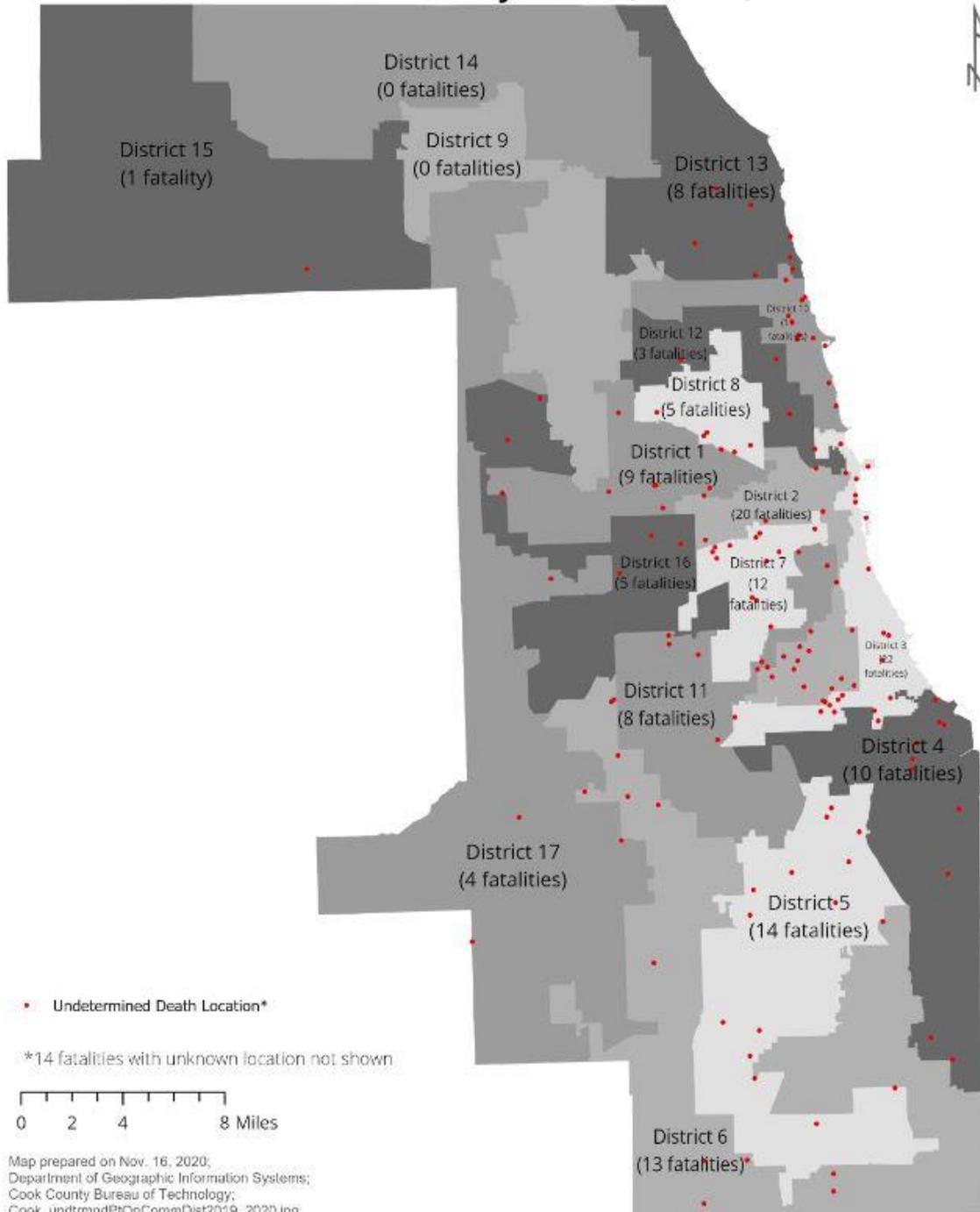


As shown in Fig. 1, the number of undetermined manner of death did not show a consistent trend in 2019. Number of undetermined manner of death decreased from January to April, then increased in months of June and July, then fluctuated between the months of August to December.

¹⁶ Difference with N on the GIS map is due to available zipcodes

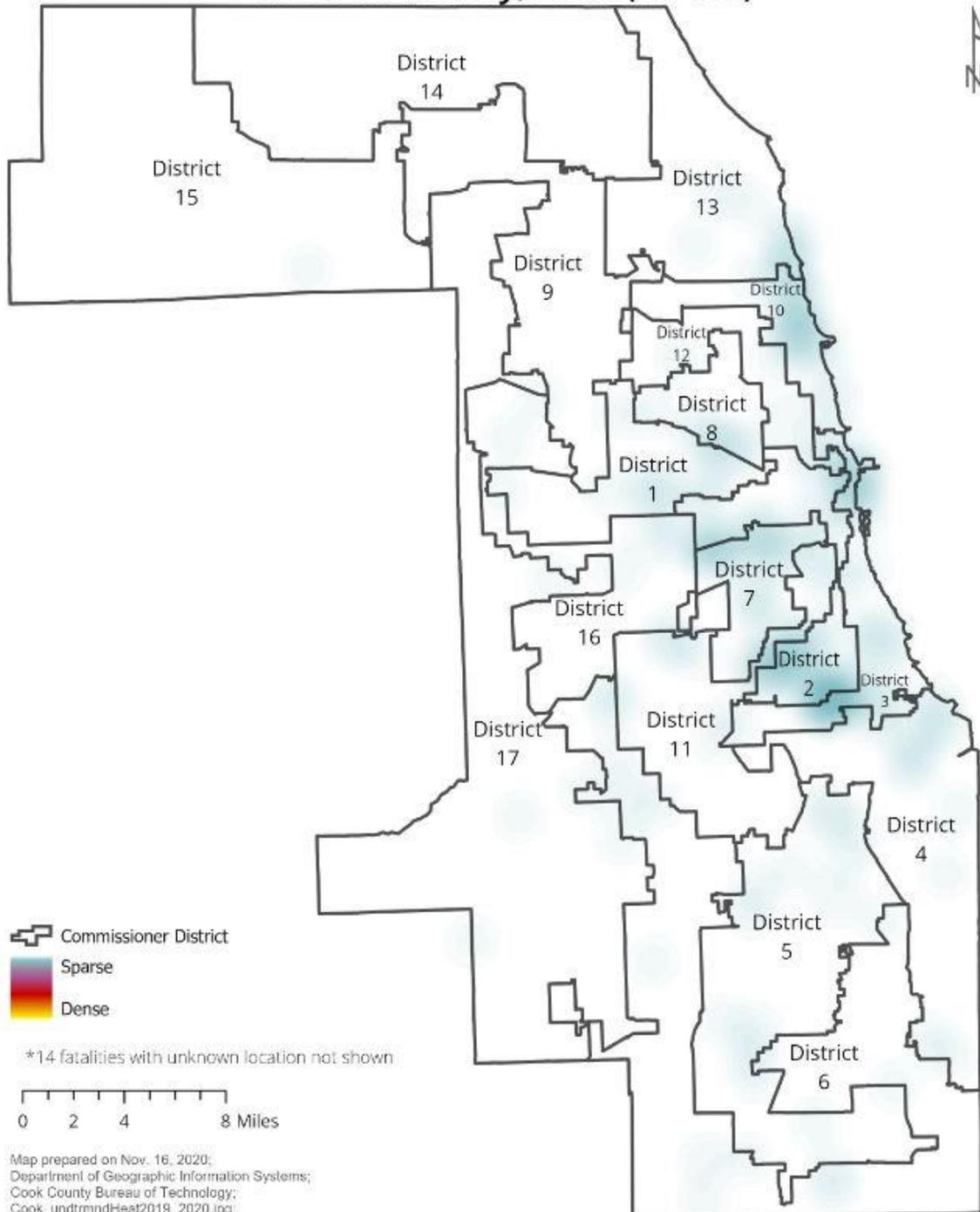
2. MANNER AND CAUSE OF DEATH

Undetermined Manner of Death Incident Locations in Cook County, 2019 (N=159)



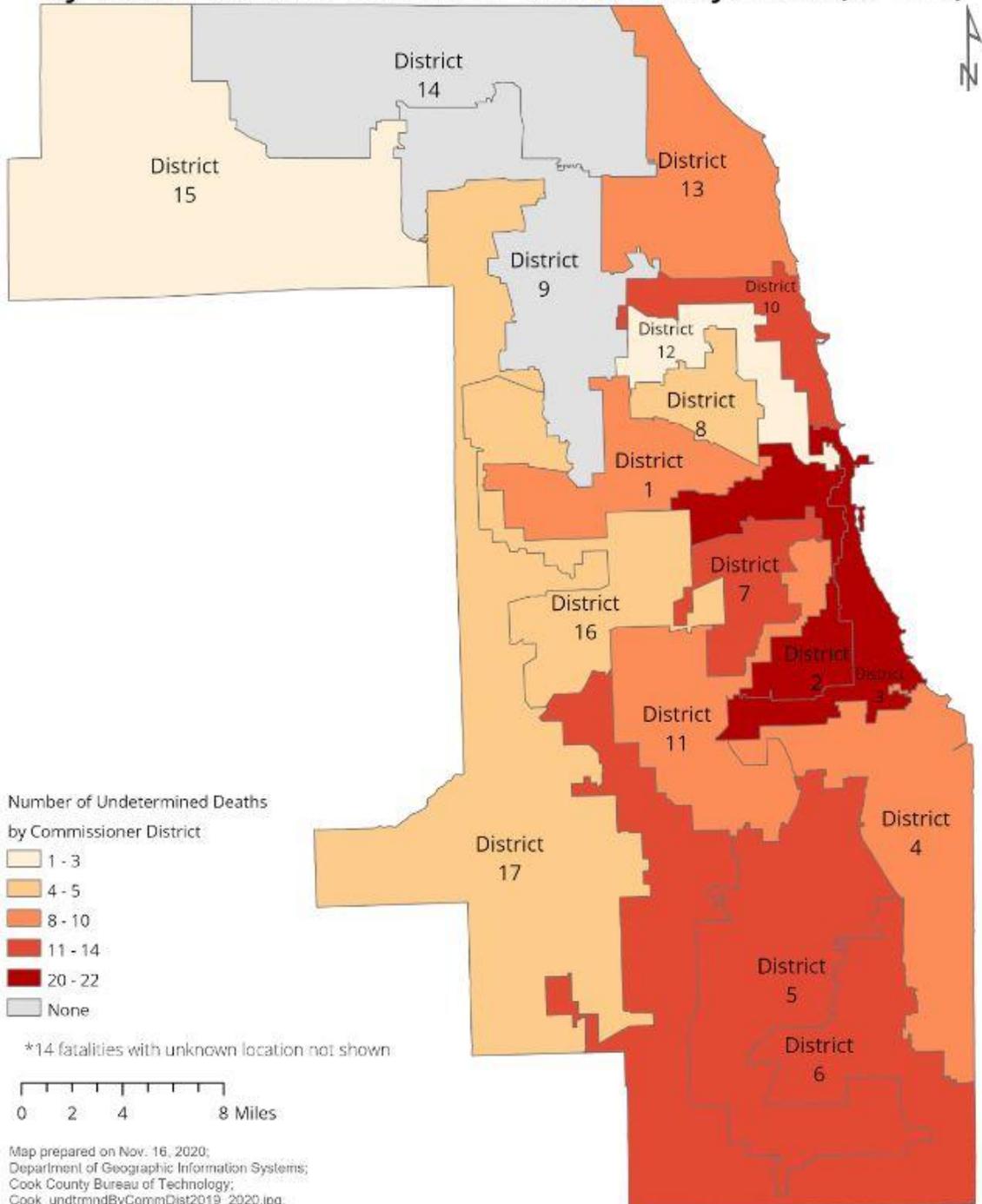
2. MANNER AND CAUSE OF DEATH

Undetermined Manner of Death Incident Concentration in Cook County, 2019 (N=159)



2. MANNER AND CAUSE OF DEATH

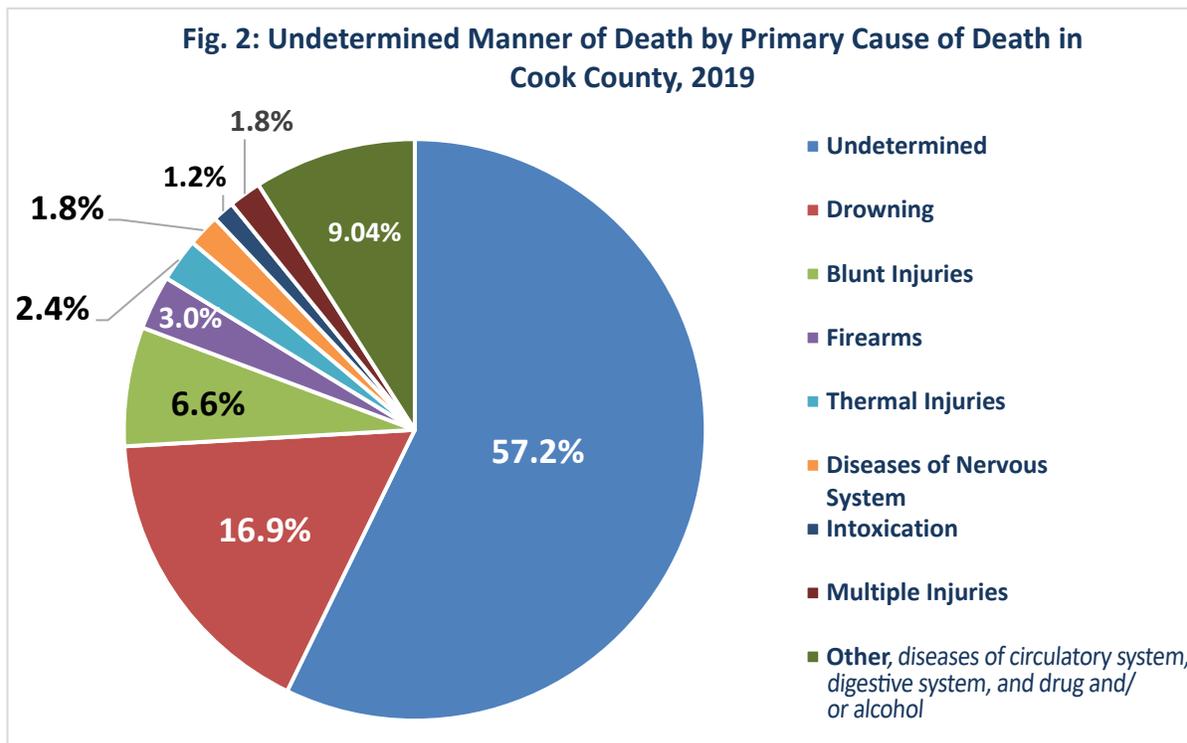
Undetermined Manner of Death Incident Locations by Commissioner District in Cook County, 2019 (N=159)



2. MANNER AND CAUSE OF DEATH

Table 1. Undetermined Manner of Death by Primary Cause of Death in Cook County, 2019

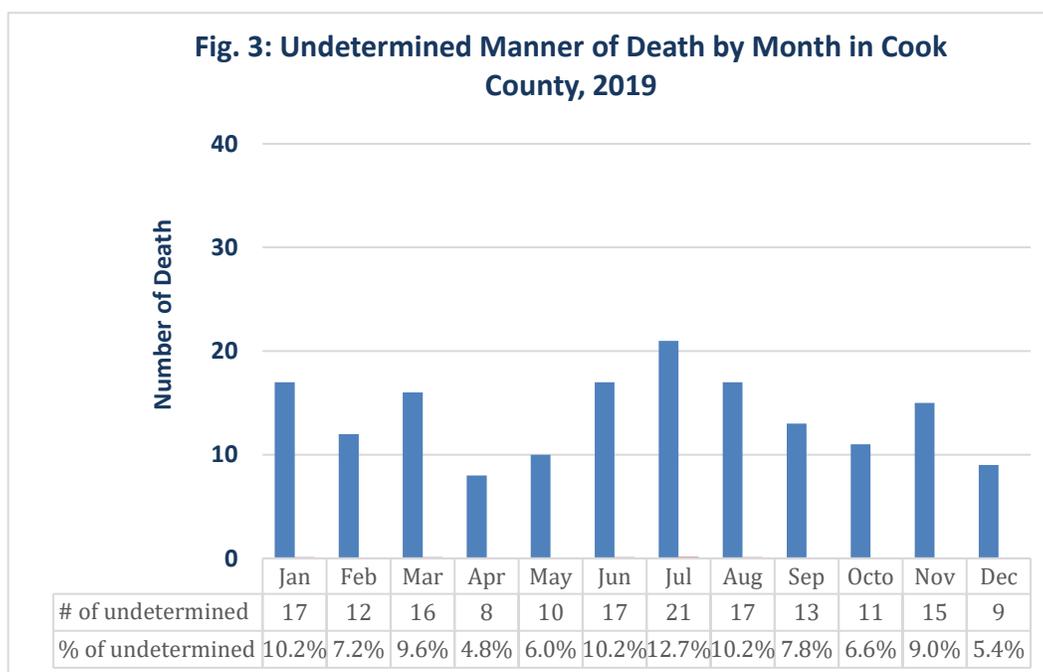
Primary Cause of Death	Number of Undetermined Death	% of Total Undetermined Death
Undetermined	95	57.2%
Drowning	28	16.9%
Blunt Injuries	11	6.6%
Firearms	5	3.0%
Thermal Injuries	4	2.4%
Diseases of Nervous System	3	1.8%
Intoxication	2	1.2%
Multiple Injuries	3	1.8%
Other	4	3.6%
Diseases of Circulatory System	4	2.4%
Diseases of Digestive System	1	0.6%
Drug and/or Alcohol	4	2.4%
Total	166	100%



2. MANNER AND CAUSE OF DEATH

Table 2. Undetermined Manner of Death by Month in Cook County, 2019

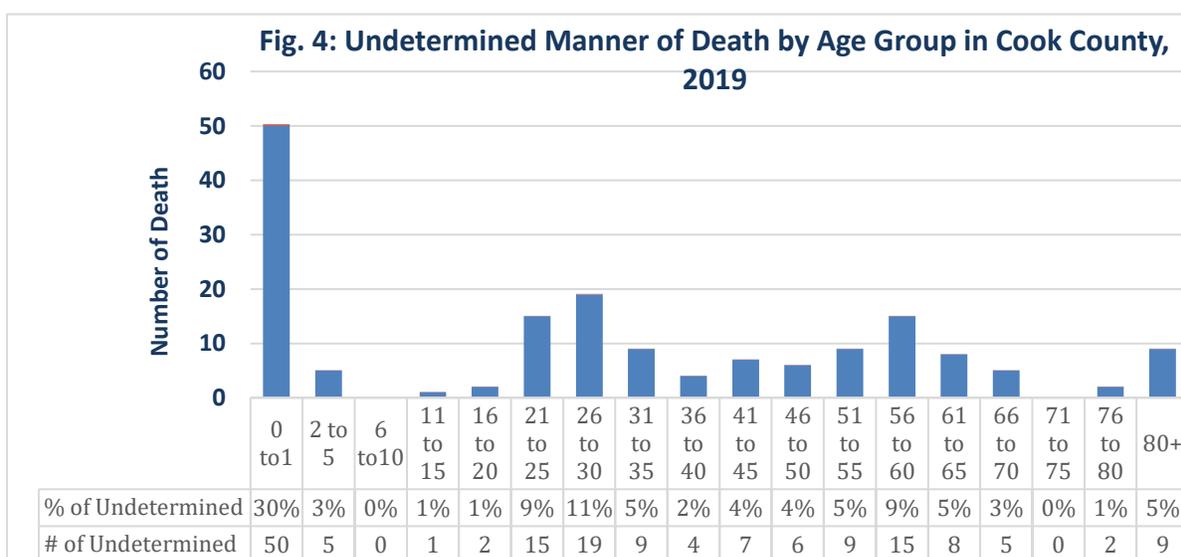
Month	Number of Undetermined Death	% of Undetermined Death
January	17	10.2%
February	12	7.2%
March	16	9.6%
April	8	4.8%
May	10	6.0%
June	17	10.2%
July	21	12.7%
August	17	10.2%
September	13	7.8%
October	11	6.6%
November	15	9.0%
December	9	5.4%
Total	166	100%



2. MANNER AND CAUSE OF DEATH

Table 3. Undetermined Manner of Death by Age Group in Cook County, 2019

Age Group	Number of Undetermined Death	% of Undetermined Death
0 to 1	50	30%
2 to 5	5	3%
6 to 10	0	0%
11 to 15	1	1%
16 to 20	2	1%
21 to 25	15	9%
26 to 30	19	11%
31 to 35	9	5%
36 to 40	4	2%
41 to 45	7	4%
46 to 50	6	4%
51 to 55	9	5%
56 to 60	15	9%
61 to 65	8	5%
66 to 70	5	3%
71 to 75	0	0%
76 to 80	2	1%
80+	9	5%
Total	166	100%

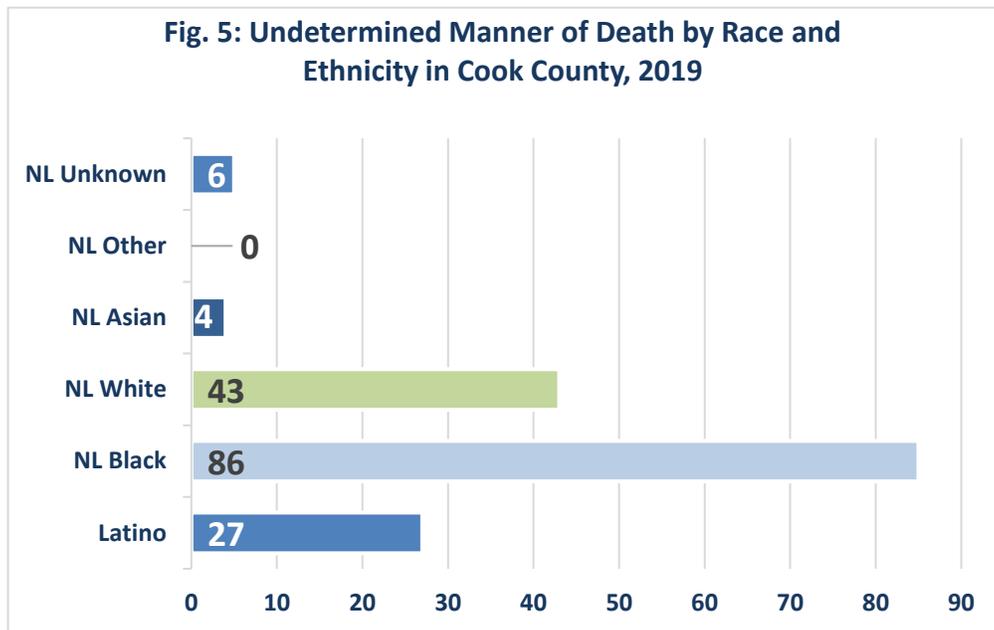


The majority of undetermined death observed in age group of 0-30-year-olds (60%) (Fig. 4). A notable finding is that the group of 0-1-year-olds account for 32 percent of all undetermined manner of death.

2. MANNER AND CAUSE OF DEATH

Table 4. Undetermined Manner of Death by Race and Ethnicity in Cook County, 2019

Race/Ethnicity	Number of Undetermined Death	% of Undetermined Death
Latino	27	16.3%
NL Black	86	51.8%
NL White	43	26.9%
NL Asian	4	2.4%
NL Other	0	0.0%
NL Unknown	6	3.6
Total	166	100%



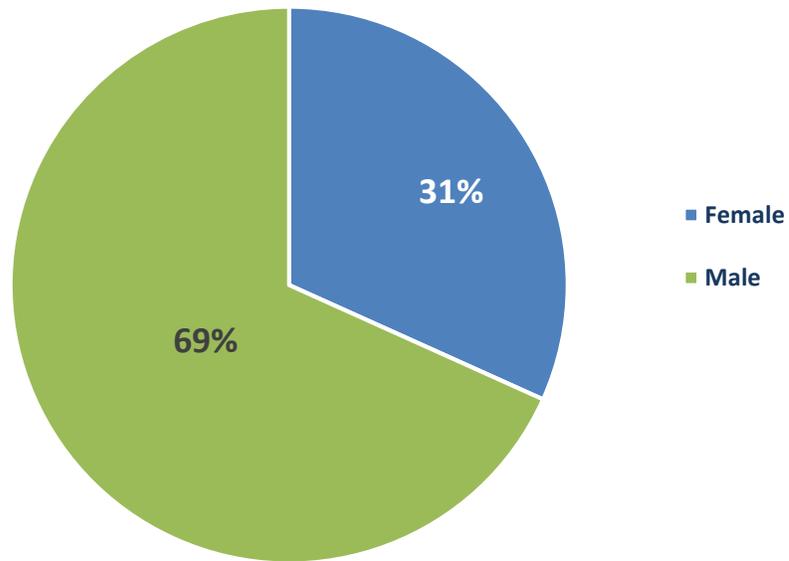
Undetermined manner of death was higher among non-Latinos than Latinos (83% vs. 17%) in 2019. Among non-Latinos, undetermined manner of death was higher among Blacks (52%) than Whites (26%) .

2. MANNER AND CAUSE OF DEATH

Table 5. Undetermined Manner of Death by Sex in Cook County, 2019

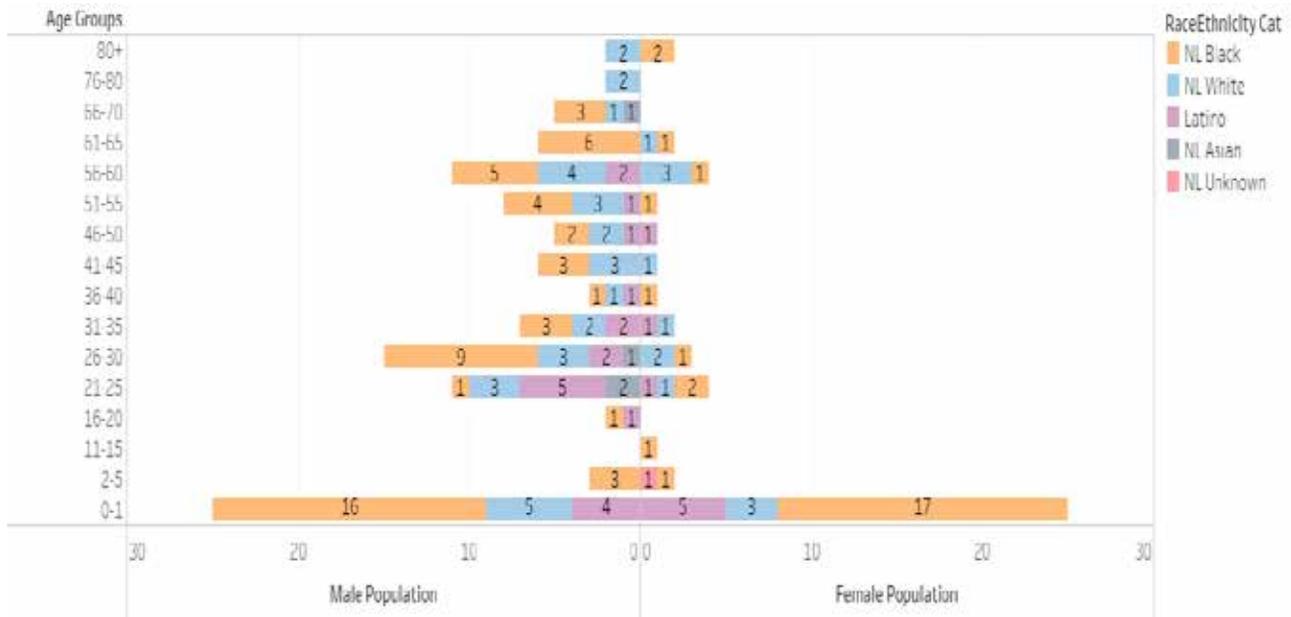
Sex	Number of Undetermined Death	% of Undetermined Death
Female	52	31%
male	114	69%
Total	166	100%

Fig. 6: Undetermined Manner of Death by Sex in Cook County, 2019



2. MANNER AND CAUSE OF DEATH

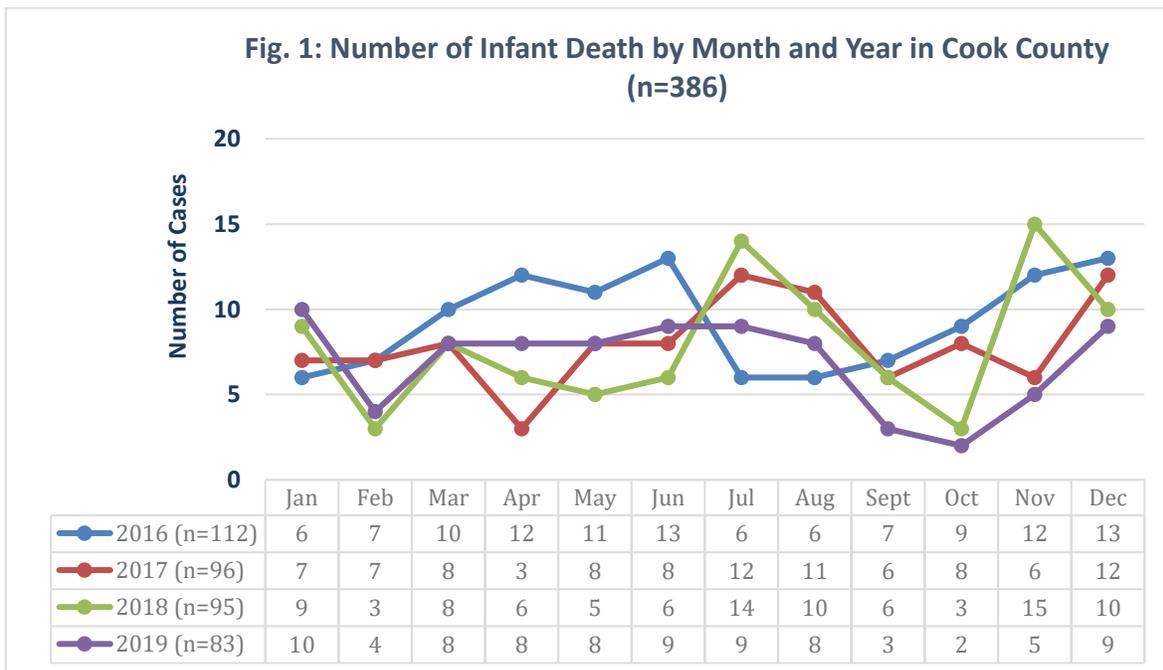
Fig 7: Undetermined Manner of Death by Sex, Race/Ethnicity, and Age Group in Cook County, 2019



As shown in Fig. 6, the number of undetermined deaths was higher among males than females (68% vs. 32%). Number of undetermined manner of death was highest in age group of 0-1-year-olds in both sexes. In males, the number of undetermined manner of death was higher among Blacks in age groups of 0-1, 26-30 and 61-65-year-olds. In females, it was higher among Black women in age groups of 0-1 and 21-25-year-olds. (Fig. 7)

3. SPECIAL GROUPS

3.1. Infant Death. CCMEO investigated 83 infant deaths in 2019. Of the 83 cases investigated, 50 (60.2%) had undetermined manner of death¹⁷, 11 (13.2%) accident manner, 10 (12%) homicide manner, 7 (8.4%) null manner of death¹⁸, 4 (4.8%) natural manner of death. The number of infant deaths in November 2018 (n=15) was higher than any other month over the last four years. Infant death decreased consistently over the last four years. The average number of infant deaths was 9 per month in 2016 and decreased consistently in 2017 (n=8), in 2018 (n=8) and in 2019 (n=7). Infant deaths decreased by 25.8 percent from 2016 (n=112) to 2019 (n=83).



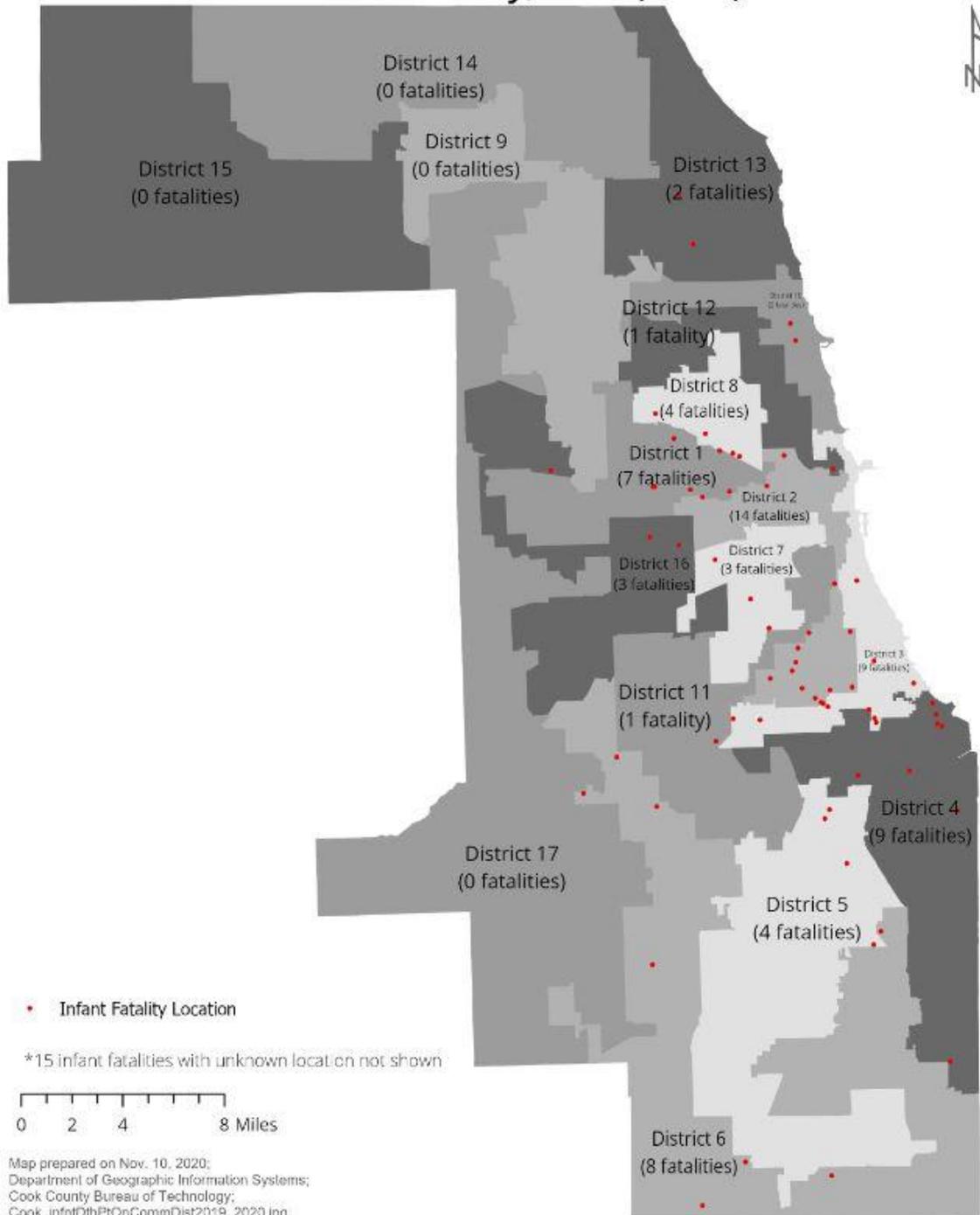
Infant death did not show a consistent trend in 2019. In 2019, the highest and lowest number of infant deaths were January (n=10) and October (n=2), respectively.

¹⁷ 41 (82%) of undetermined manner of death was due to unsafe sleeping environment or other

¹⁸ All null manner of death is fetal death.

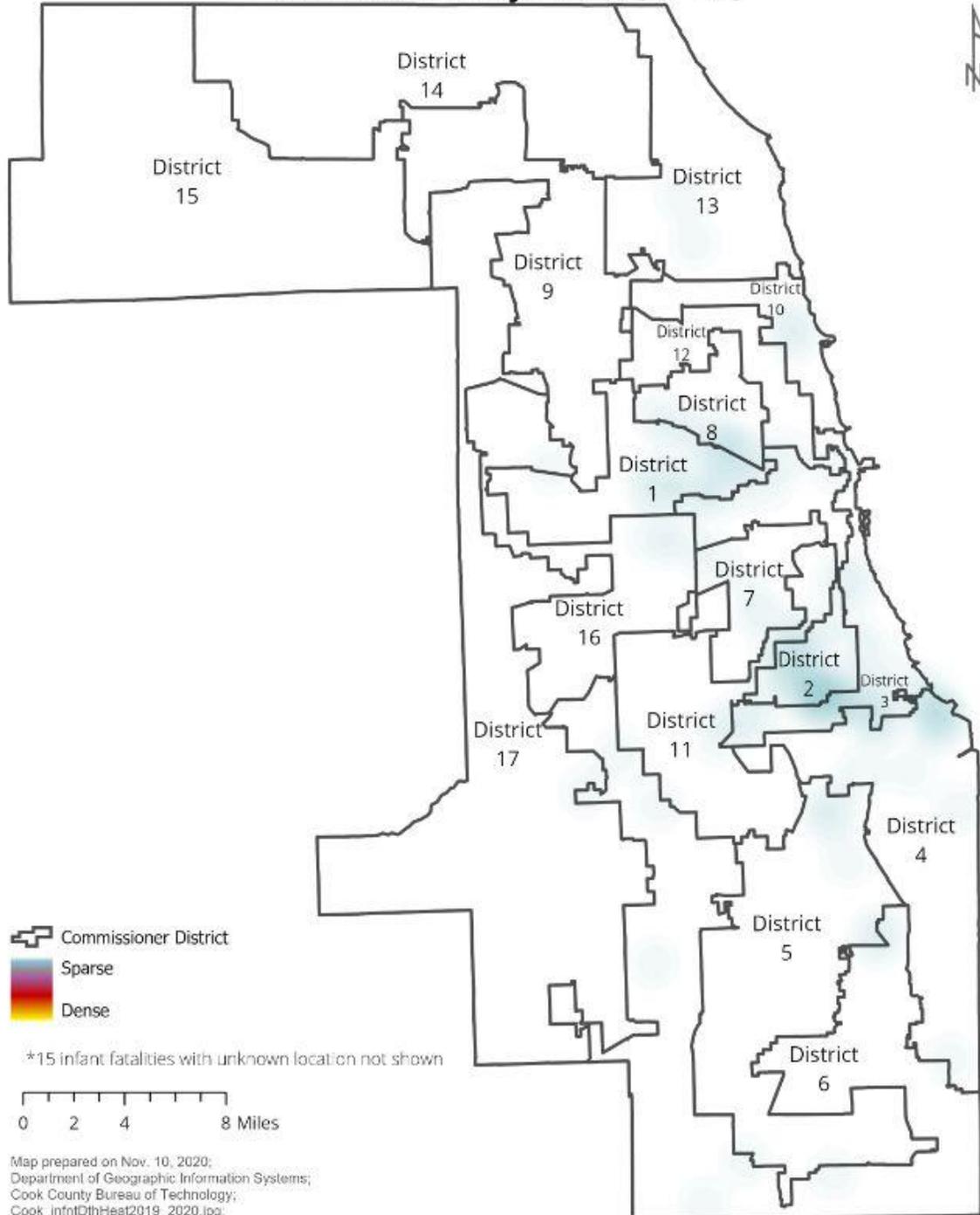
3. SPECIAL GROUPS

Infant Fatality Incident Locations in Cook County, 2019 (N=82)



3. SPECIAL GROUPS

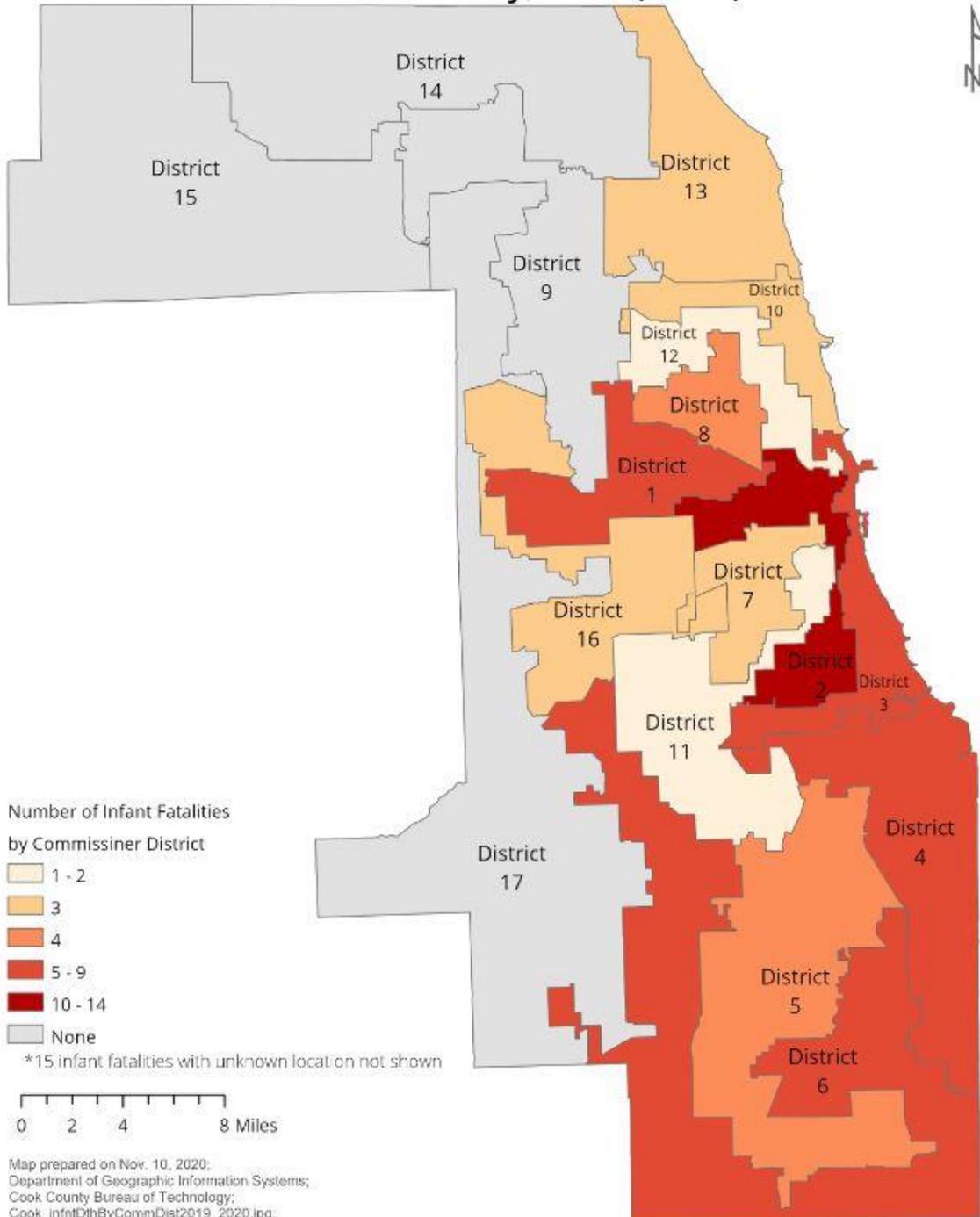
Infant Fatality Concentration in Cook County, 2019 (N=82)



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Cook County Bureau of Technology;
Cook_infntDthHeat2019_2020.jpg;
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3. SPECIAL GROUPS

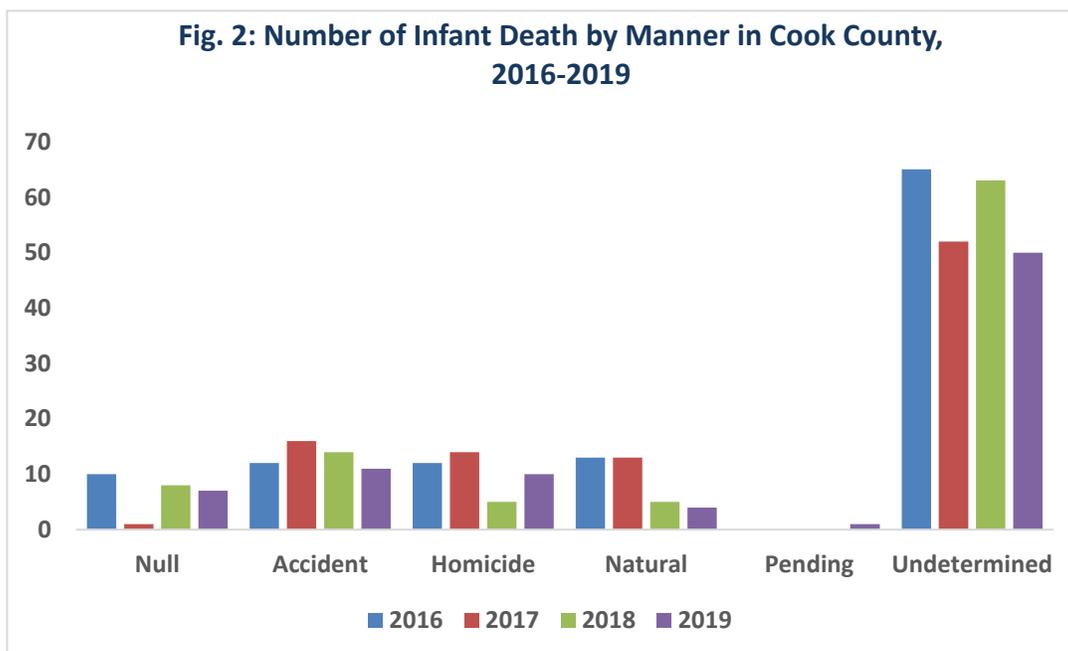
**Infant Fatalities by Commissioner District
in Cook County, 2019 (N=82)**



3. SPECIAL GROUPS

Table 1. Infant Death by Manner in Cook County, 2016-2019

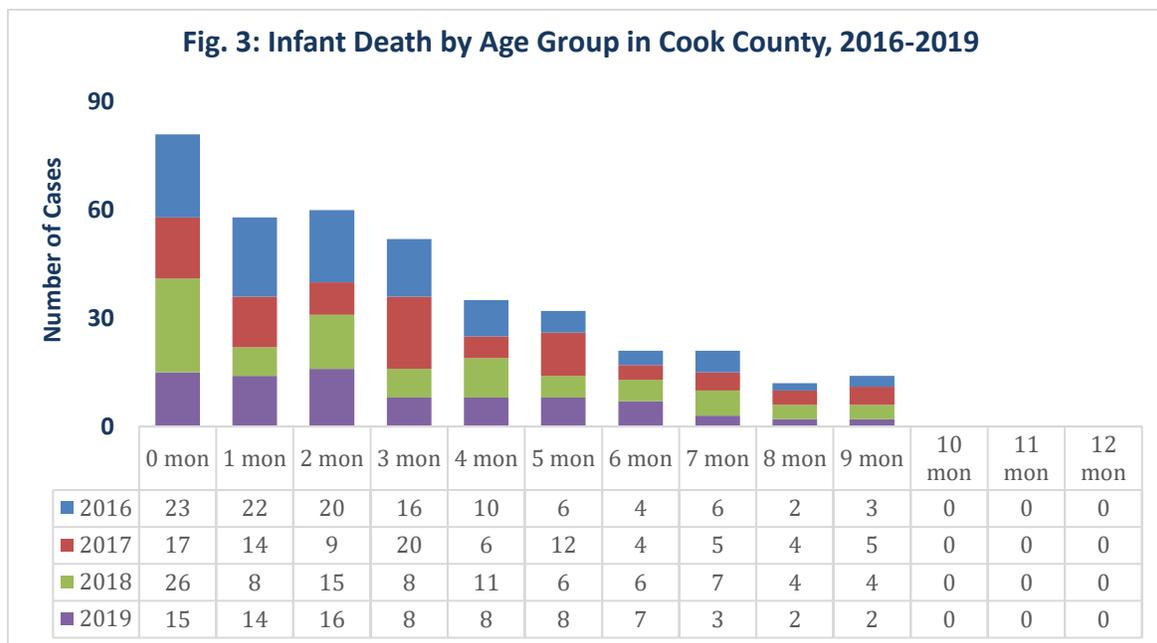
Manner of Death	2016	2017	2018	2019
Null	10	1	8	7
Accident	12	16	14	11
Homicide	12	14	5	10
Natural	13	13	5	4
Pending	0	0	0	1
Undetermined	65	52	63	50
Total	112	96	94	83



3. SPECIAL GROUPS

Table 2. Infant Death by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 month	23	17	26	15
1 months	22	14	8	14
2 months	20	9	15	16
3 months	16	20	8	8
4 months	10	6	11	8
5 months	6	12	6	8
6 months	4	4	6	7
7 months	6	5	7	3
8 months	2	4	4	2
9 months	3	5	4	2
10 months	0	0	0	0
11 months	0	0	0	0
12 months	0	0	0	0
Total	112	96	95	83

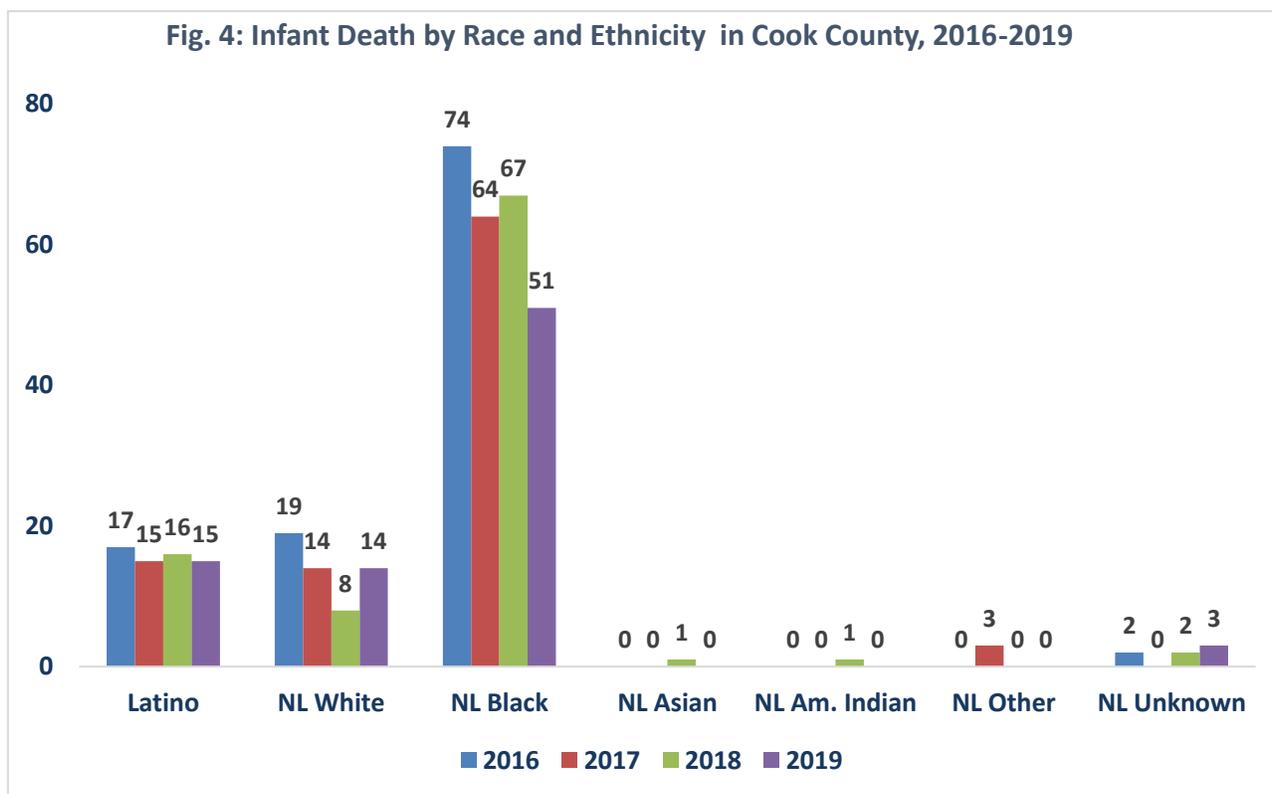


As shown in Figure 3, most infant deaths were in age group of 0-3 month olds (60%-72%) from 2016 to 2019. Age group of 0-1 month olds contributes the most to this number.

3. SPECIAL GROUPS

Table 3. Infant Death by Race and Ethnicity in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	17	15	16	15
NL White	19	14	8	14
NL Black	74	64	67	51
NL Asian	0	0	1	0
NL American Indian	0	0	1	0
NL Other	0	3	0	0
NL Unknown	2	0	2	3
Total	112	96	95	83

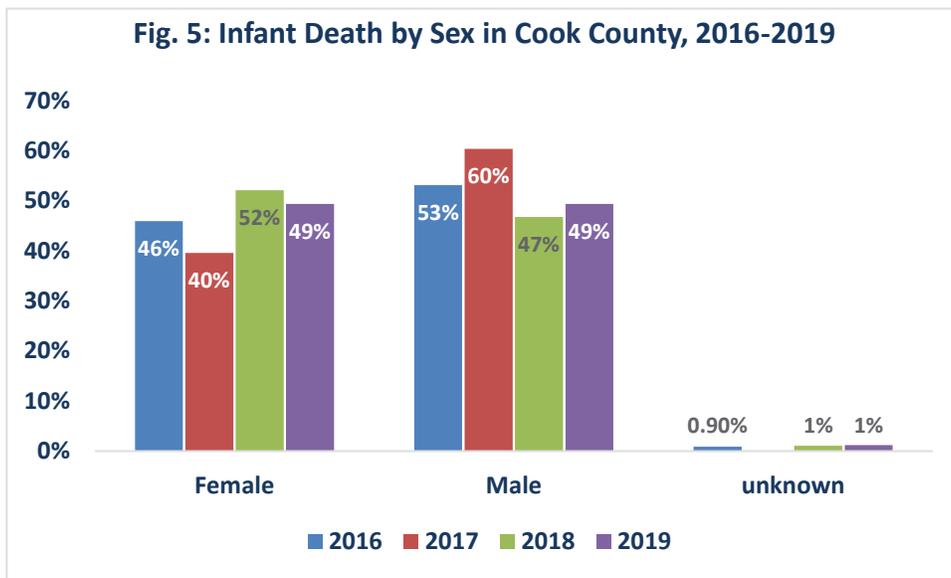


Infant death was higher among non-Latinos (82%-58%) than Latinos (15%-18%). Among non-Latinos, infant death was highest among Blacks (66-71%) followed by Whites (8-17%) from 2016 to 2019. The percent of non-Latino Black infants decreased from 2016 (66%) to 2019 (61%). A notable finding is an increasing trend of Latino infant deaths from 2016 (15%) to 2019 (18%).

3. SPECIAL GROUPS

Table 4. Infant Death by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	52	38	49	41
male	59	58	45	40
Unknown	1	0	1	2
Total	112	96	94	83



Infant death by sex did not show a consistent trend. Infant death was higher among males than females in 2016 (53% vs. 46%) and 2017 (60% vs. 40%). This trend changed in 2018 and most infant death was among females (52%). In 2019, it was slightly higher in females than males (49% vs. 48%).

3. SPECIAL GROUPS

Fig. 6: Infant Death by Sex, Race/Ethnicity and Age Group in Cook County, 2019



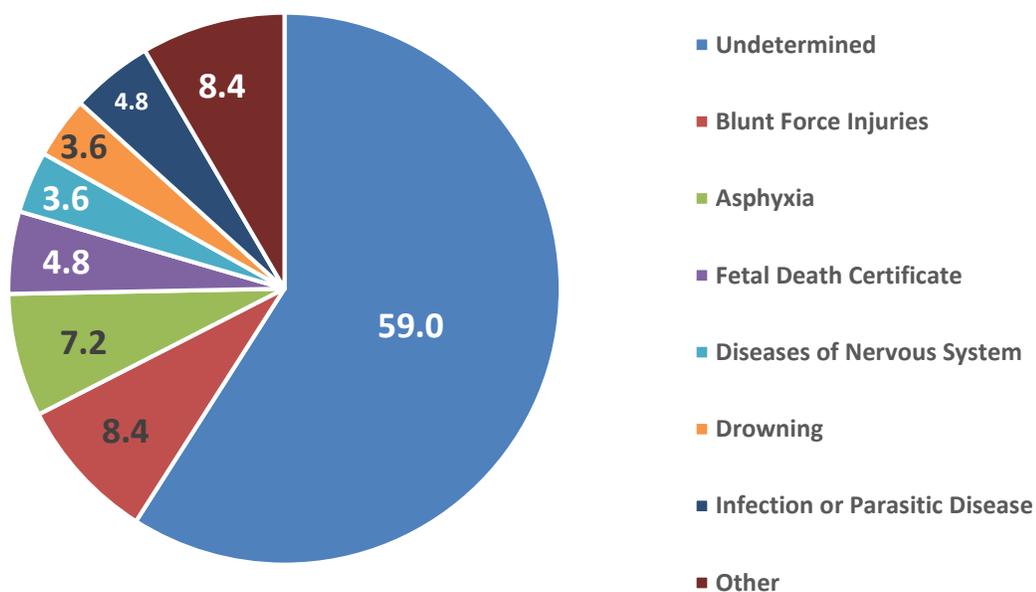
Figures 1-5 have shown infant death trend by age, race/ethnicity and sex from 2016 to 2019. Figure 6 focuses on infant death disparity in 2019. Infant death was highest in age groups of 0 month (n=14), 2 months (n=14), 3 months (n=14) and 5 months old (n=14). Another notable finding is having higher infant death among NL Blacks than NL Whites in almost all age groups and sex. Fig. 7 provides information on the primary cause of death.

3. SPECIAL GROUPS

Table 5. Infant Death by Primary Cause of Death in Cook County, 2019

Primary Cause of Death	Number of Infant Death	% of Infant Death
Undetermined	49	59.0
Blunt Force Injuries	7	8.4
Asphyxia	6	7.2
Fetal Death Certificate	4	4.8
Diseases of Nervous System	3	3.6
Drowning	3	3.6
Parasitic or Infection	4	4.8
Hanging	1	1.2
Multiple Injuries	1	1.2
No Death Certificate Issued	1	1.2
Prematurity	1	1.2
Other	3	3.6
Total	83	100 %

Fig. 7: Infant Death by Primary Cause of Death in Cook County, 2019

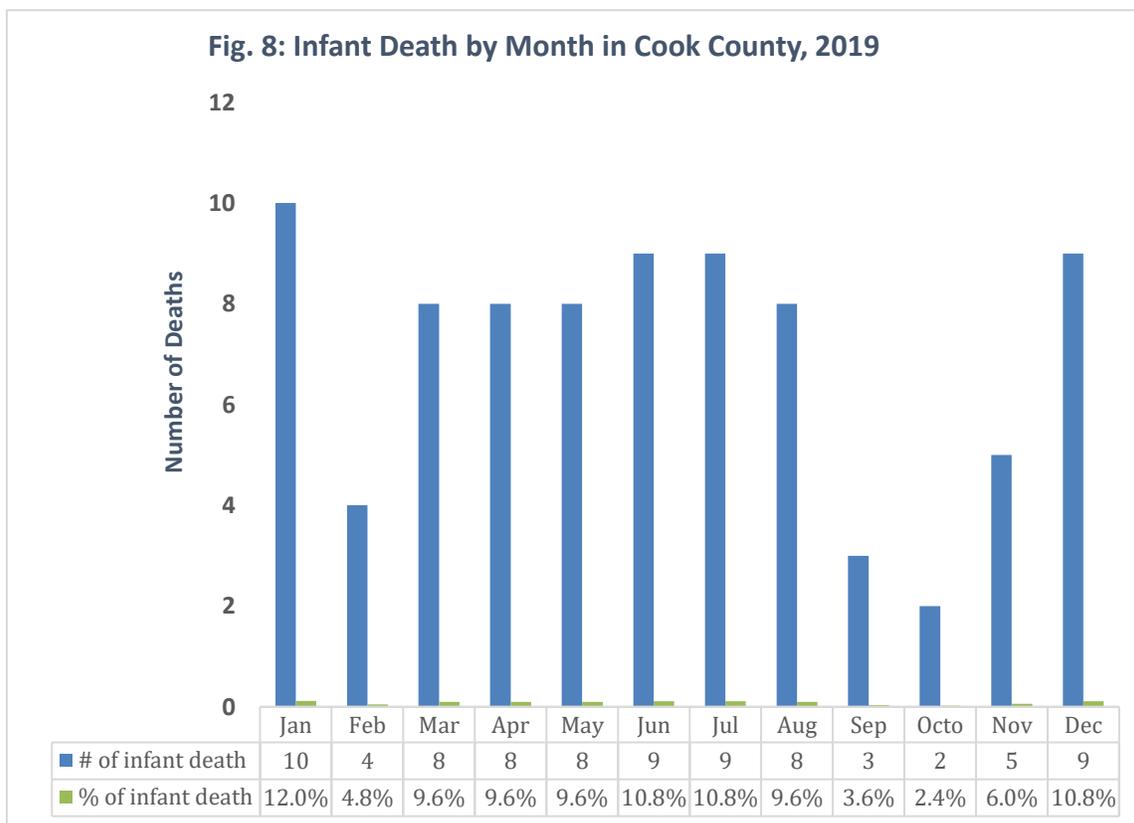


3. SPECIAL GROUPS

Table 6. Infant Death by Month in Cook County, 2019

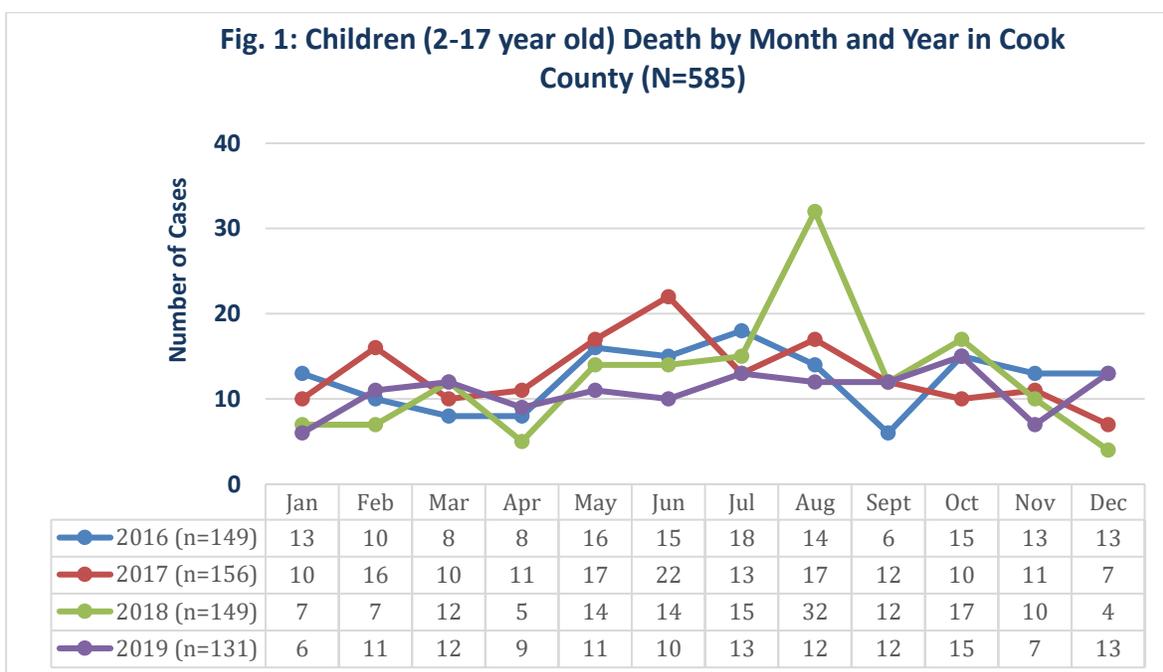
Month	Number of Infant Death	% of Infant Death
January	10	12.0%
February	4	4.8%
March	8	9.6%
April	8	9.6%
May	8	9.6%
June	9	10.8%
July	9	10.8%
August	8	9.6%
September	3	3.6%
October	2	2.4%
November	5	6.0%
December	9	10.8%
Total	83	100%

Fig. 8: Infant Death by Month in Cook County, 2019



3. SPECIAL GROUPS

3.2. Children Death. CCMEO investigated 131 children¹⁹ deaths in 2019. Of the 131 cases investigated, 52 (39.6%) cases had homicide manner of death, 36 (27.4%) cases had accident manner of death, 20 (15.2%) cases had suicide manner of death, 15 cases (11.4%) natural manner of death and 8 (6.1%) had undetermined manner of death. The number of children deaths in August 2018 (n=32) was higher than any other month over the last four years. Children deaths did not show a consistent trend from 2016 to 2019. The average children deaths was 12 per month in 2016, increased in 2017(n=13), decreased in 2018 (n=12) and reached an average number of 11 per month in 2019. Children deaths decreased by 12 percent from 2016 (n=149) to 2019 (n=131).

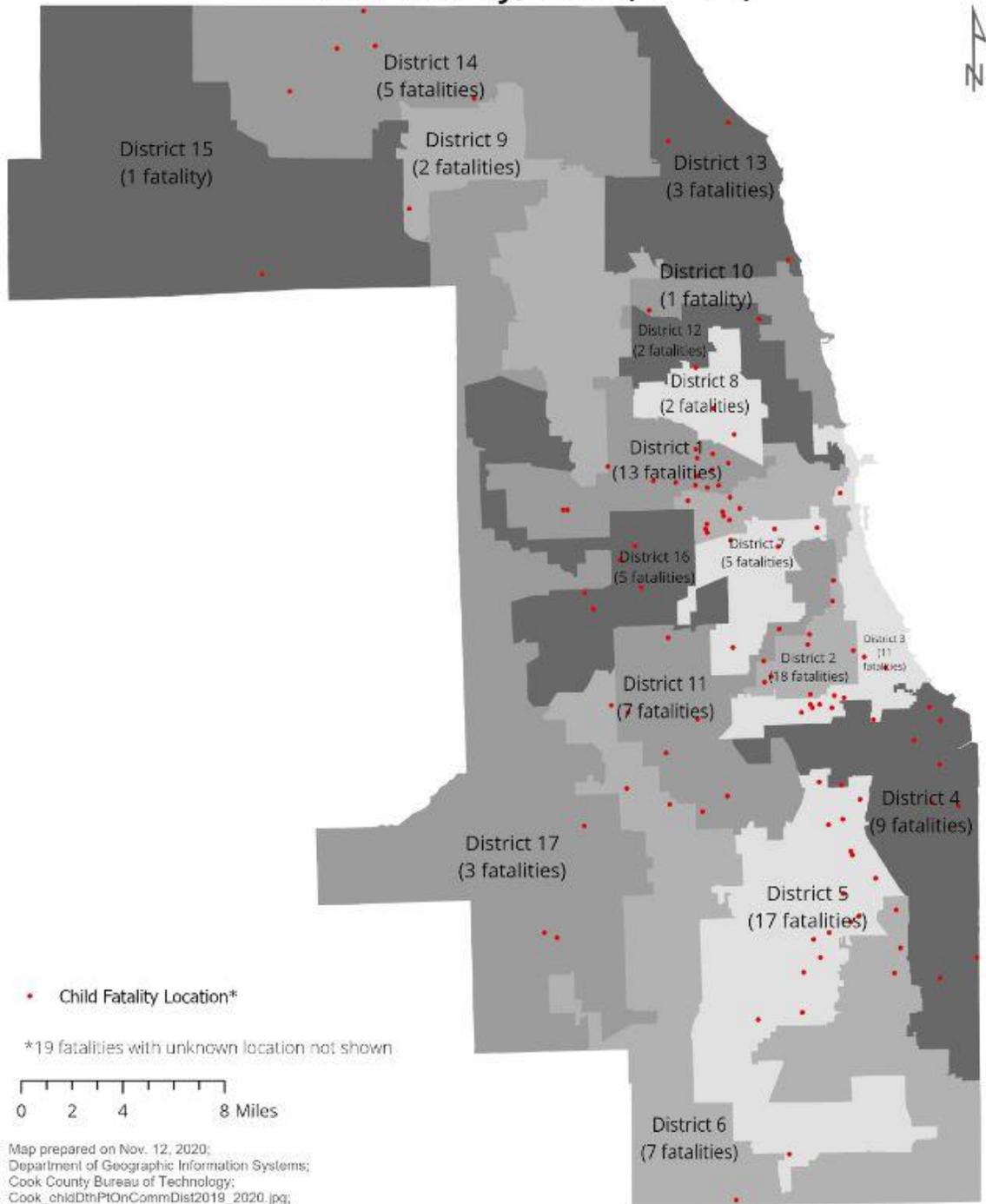


Children deaths did not show a consistent trend in 2019. The highest and lowest number of children deaths was in January (n=6) and October (n=15), respectively.

¹⁹Children (under 18-year-old) definition is based on this reference. Subject Definitions: Current Population Survey. (2019, February). Retrieved from United States Census Bureau: <https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html>

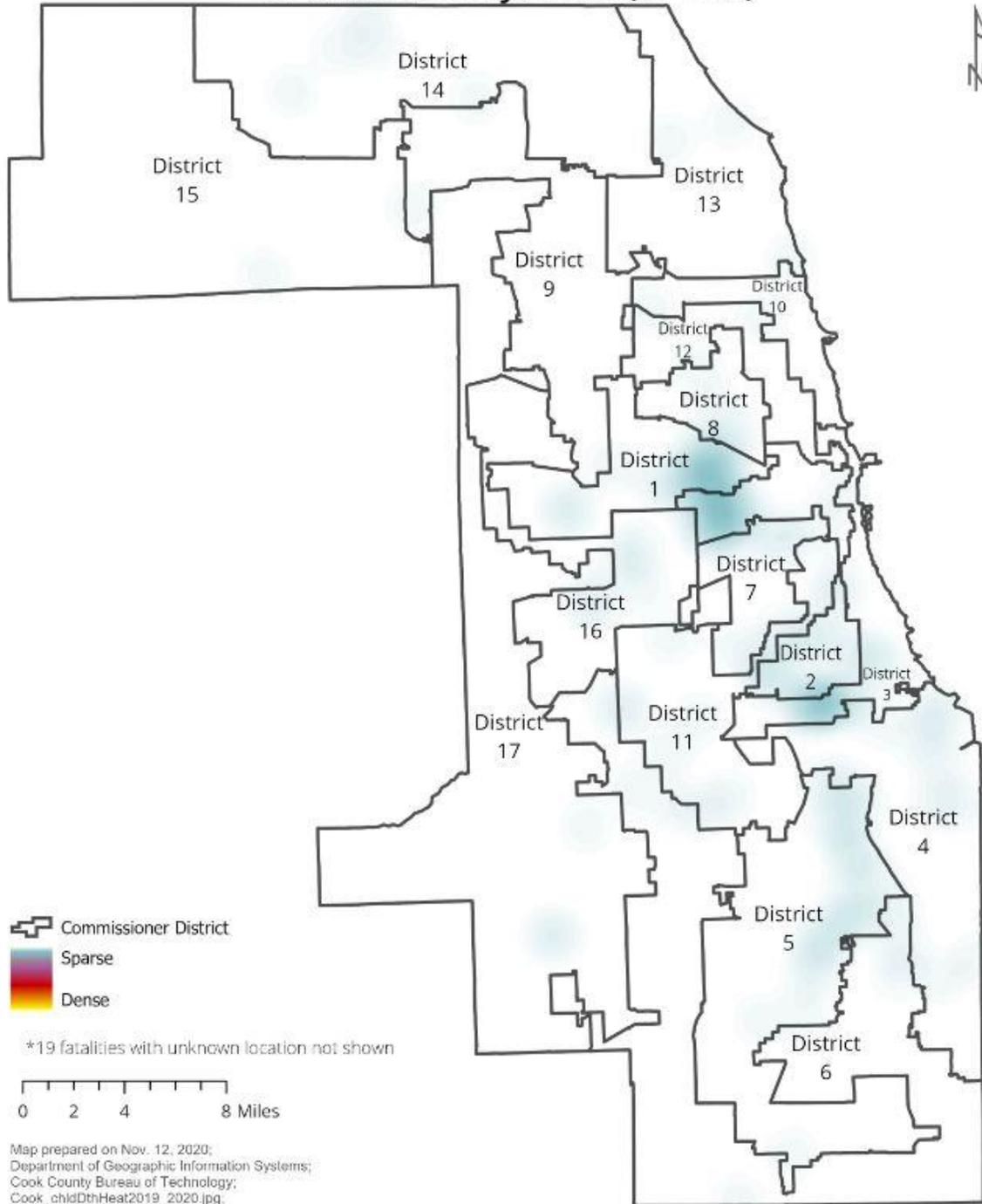
3. SPECIAL GROUPS

Child Fatality Incident Locations in Cook County, 2019 (N=130)



3. SPECIAL GROUPS

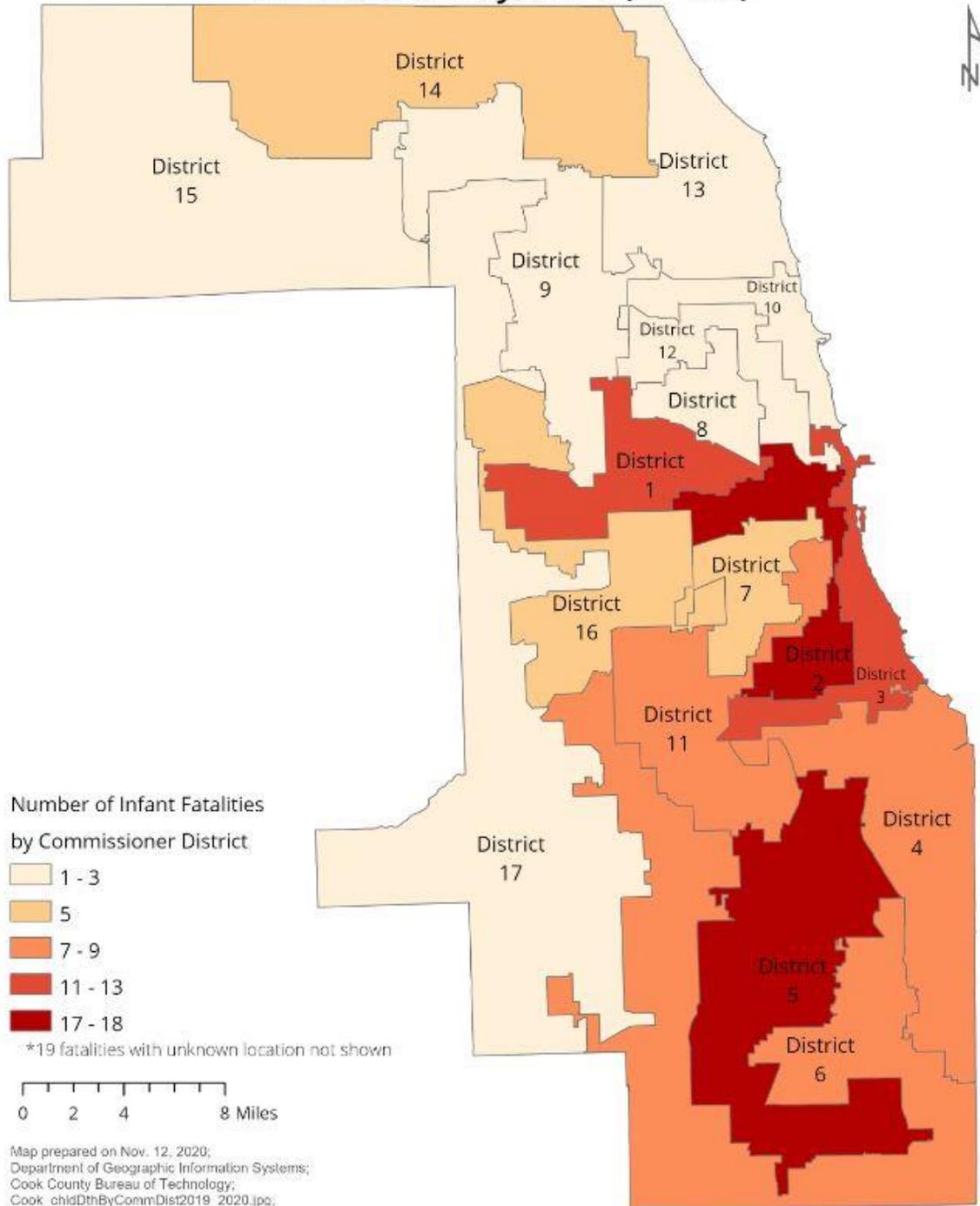
Child Fatality Incident Concentration in Cook County, 2019 (N=130)



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3. SPECIAL GROUPS

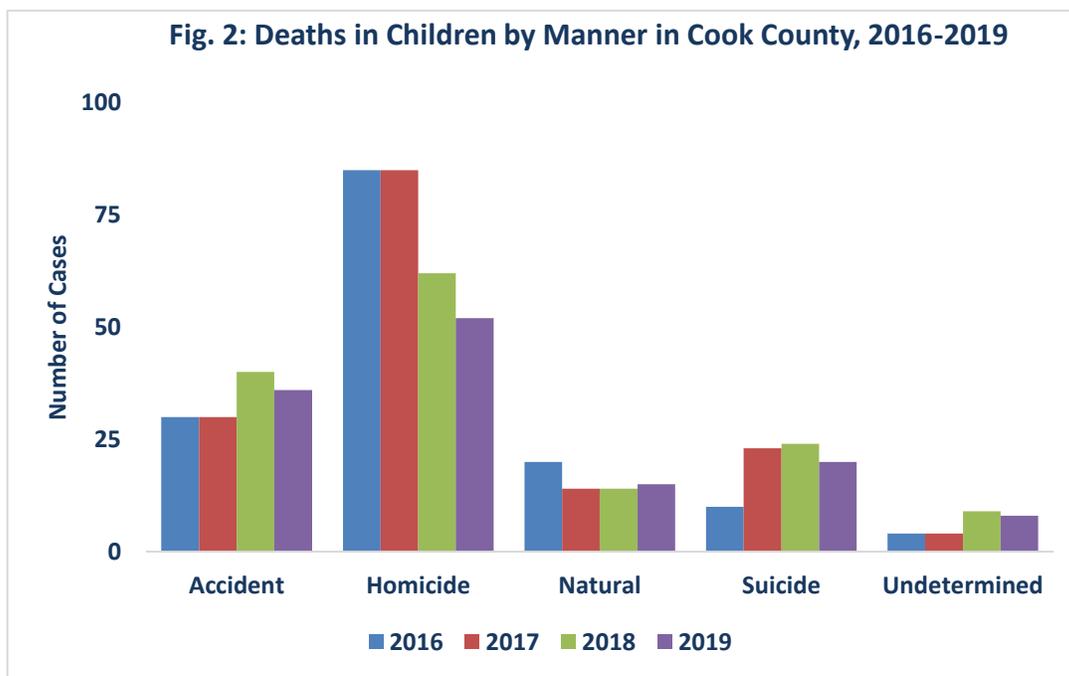
Child Fatality Incident Locations by Commissioner District in Cook County, 2019 (N=130)



3. SPECIAL GROUPS

Table 1. Deaths in Children by Manner in Cook County, 2016-2019

Manner of Death	2016	2017	2018	2019
Accident	30	30	40	36
Homicide	85	85	62	52
Natural	20	14	14	15
Suicide	10	23	24	20
Undetermined	4	4	9	8
Total	149	156	149	131

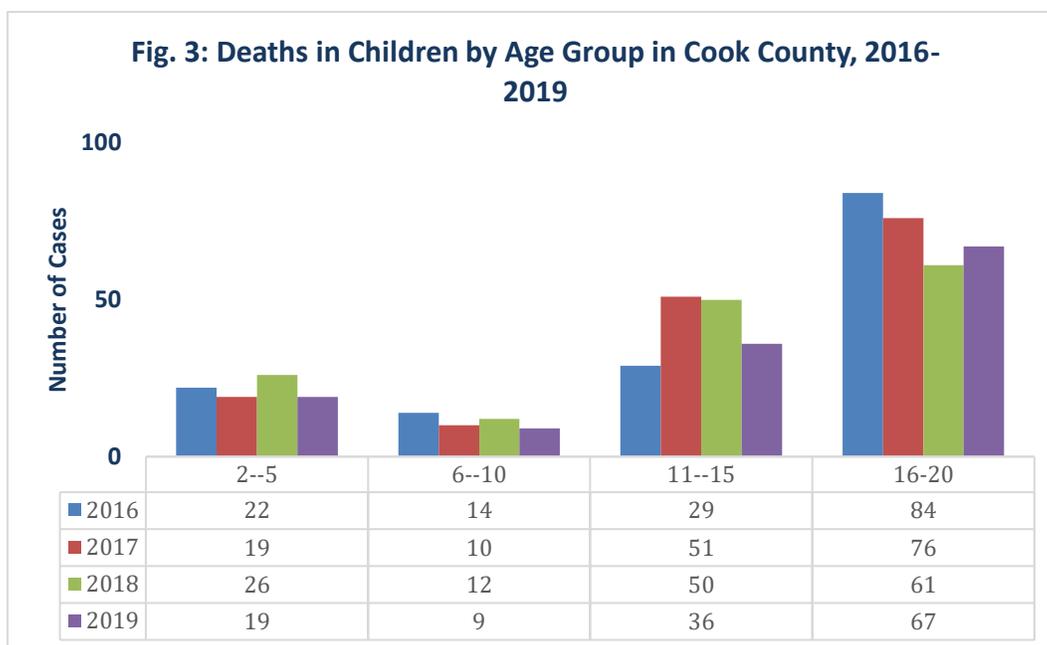


Homicide and natural manner of death showed a consistent decreasing trend from 2016 to 2019. Over the same period, homicide and natural manner of death decreased by 38.8 percent and 25 percent, respectively.

3. SPECIAL GROUPS

Table 2. Deaths in Children by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
2 to 5	22	19	26	19
6 to 10	14	10	12	9
11 to 15	29	51	50	36
16 to 20 ²⁰	84	76	61	67
Total	149	156	149	131



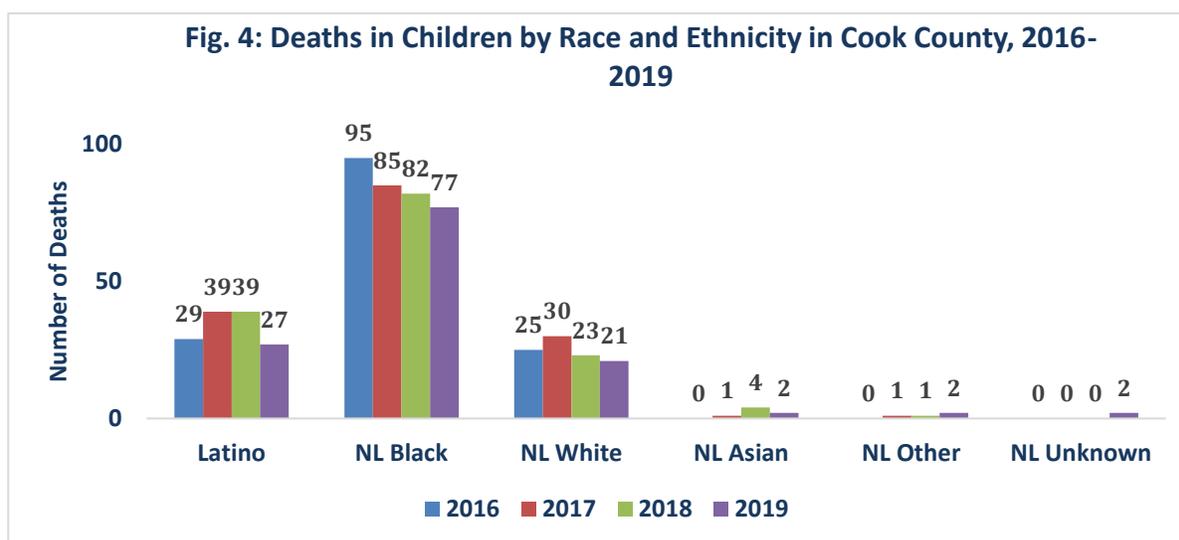
Most children deaths observed in age group of 11-18-year-olds (75%-81%) from 2016 to 2019 (Fig. 3). Age groups of 16-18-year-olds contribute the most to this number.

²⁰ Has only 16 and 17-year-old

3. SPECIAL GROUPS

Table 3. Deaths in Children by Race and Ethnicity in Cook County, 2016-2019

Race/Ethnicity	2016	2017	2018	2019
Latino	29	39	39	27
NL Black	95	85	82	77
NL White	25	30	23	21
NL Asian	0	1	4	2
NL Other	0	1	1	2
NL Unknown	0	0	0	2
Total	149	156	149	131

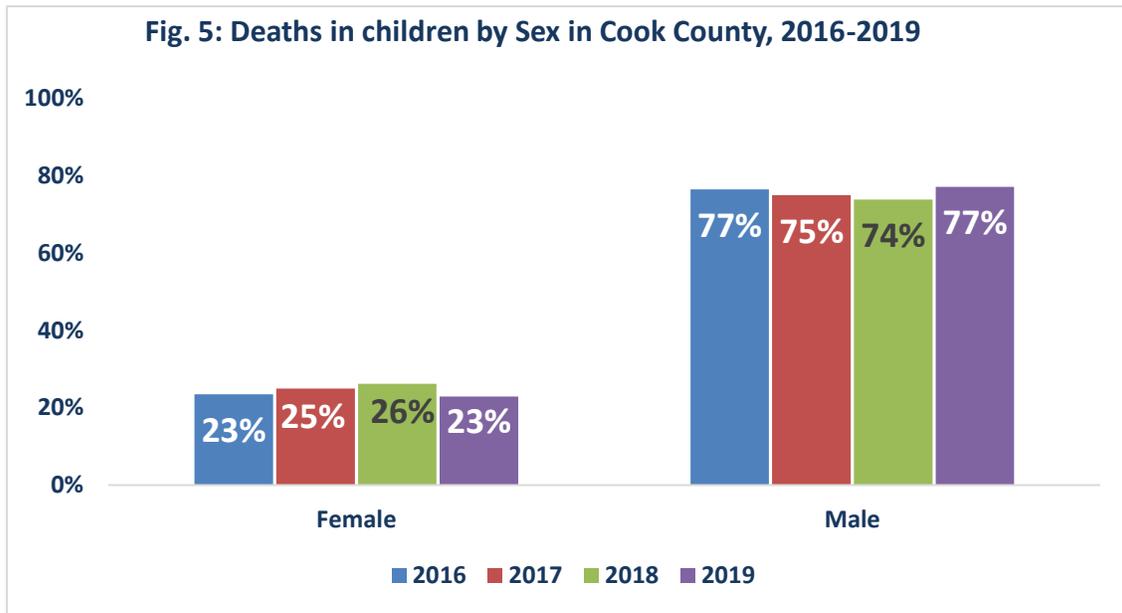


Number of children deaths was higher among non-Latinos (74%-80%) than Latinos (20%-26%) from 2016 to 2019. Among non-Latinos, children deaths were highest among Blacks (55-64%) followed by Whites (16-19%) from 2016 to 2019. The percent of non-Latino Blacks and Whites did not show a consistent trend over the last four years. From 2018 to 2019, percent of non-Latino Whites and Blacks increased by 0.6 percent and 3.8 percent, respectively. Another notable finding is a 5.6 percent decrease in children deaths among Latinos from 2018 to 2019.

3. SPECIAL GROUPS

Table 4. Deaths in Children by Sex in Cook County, 2016-2019

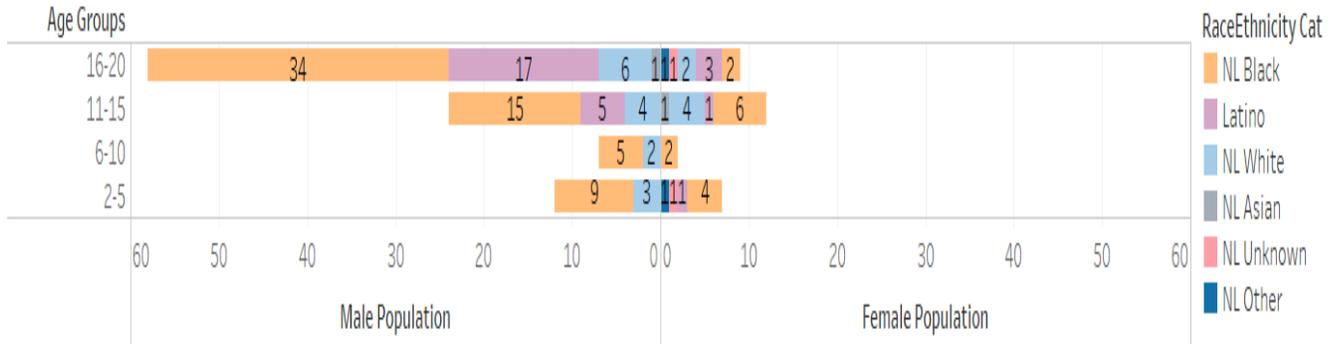
Sex	2016	2017	2018	2019
Female	35	39	39	30
male	114	117	110	101
Total	149	156	149	131



As seen in Fig. 5, children deaths are higher among males (74-77%) than females (23-26%) over the last four years.

3. SPECIAL GROUPS

Fig. 6: Deaths in Children by Sex, Age Group and Race in Cook County, 2019



Figures 1-5 have shown children deaths by age, race and sex from 2016 to 2019. Fig. 6 focuses on all demographics altogether and provides overall picture of disparity in 2019. As shown in Fig. 6, the number of children deaths was higher among males (101) than females (30). Children death was highest in age group of 16-20²¹. Most deaths were among Black males in almost all age groups. Fig. 7 provides information on the primary cause of death in 2019.

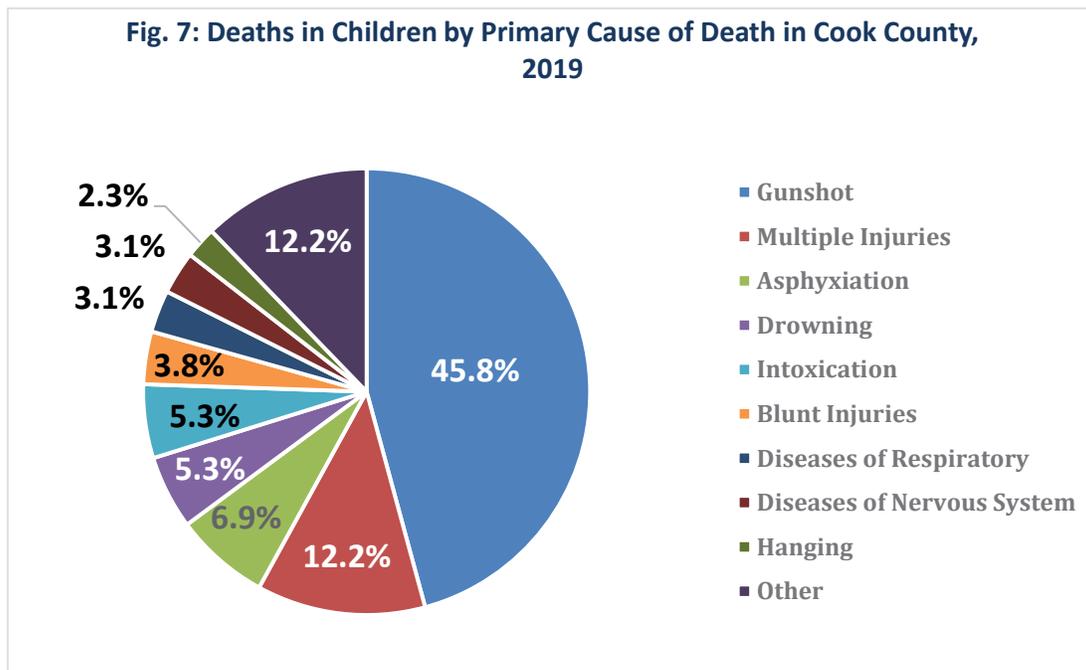
²¹ Please note this age group has 16 and 17-year-old children

3. SPECIAL GROUPS

Table 5. Deaths in Children by Primary Cause of Death in Cook County, 2019

Primary Cause of Death	Number of Children Death	% of Children Death
Gunshot	60	45.8%
Multiple Injuries	16	12.2%
Asphyxiation	9	6.9%
Drowning	7	5.3%
Intoxication	7	5.3%
Blunt Injuries	5	3.8%
Diseases of Respiratory System	4	3.1%
Diseases of Nervous System	4	3.1%
Hanging	3	2.3%
Thermal Injuries	3	2.3%
External Factors	2	1.5%
Infectious Disease	2	1.5%
Undetermined	2	1.5%
Unknown	2	1.5%
Originating in Perinatal Period	1	0.8%
Developmental Anomalies	1	0.8%
Diseases of Circulatory System	1	0.8%
Diseases of Blood or Blood-forming Organs	1	0.8%
Endocrine, Metabolic or Nutritional Diseases	1	0.8%
Total	131	100%

Fig. 7: Deaths in Children by Primary Cause of Death in Cook County, 2019

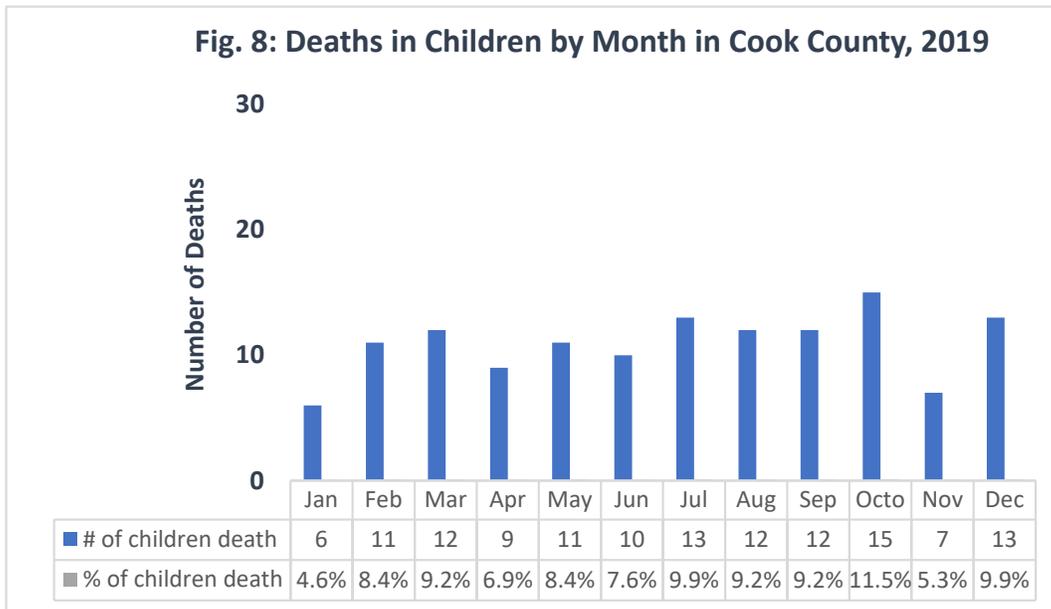


3. SPECIAL GROUPS

Table 6. Deaths in Children by Month in Cook County, 2019

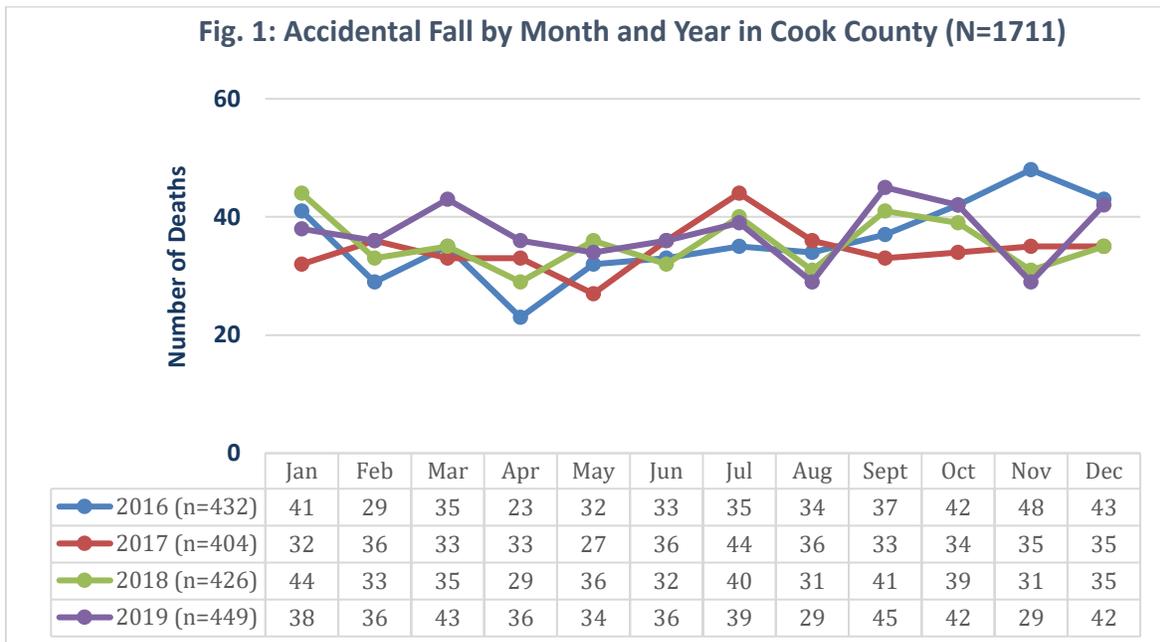
Month	Number of Children Death	% of Children Death
January	6	4.6%
February	11	8.4%
March	12	9.2%
April	9	6.9%
May	11	8.4%
June	10	7.6%
July	13	9.9%
August	12	9.2%
September	12	9.2%
October	15	11.5%
November	7	5.3%
December	13	9.9%
Total	131	100%

Fig. 8: Deaths in Children by Month in Cook County, 2019



3. SPECIAL GROUPS

3.3. Accidental Fall. CCMEO investigated 432 accidental falls in 2019. Of the 432 cases investigated, 49 percent had blunt force injuries, 28 percent had external factors, 12 percent had other injuries, 9 percent had multiple injuries and 2 percent had other causes as the primary cause of death. The number of accidental falls in November 2016 (n=48) was higher than any other month over the last four years. Accidental falls did not show a consistent trend from 2016 to 2019. The average accidental fall was 36 per month in 2016, decreased in 2017 to an average of 34 per month, then increased to an average number of 36 per month in 2018 and 37 per month in 2019. Accidental falls increased by 3.9 percent from 2016 (n=432) to 2019 (n=449).



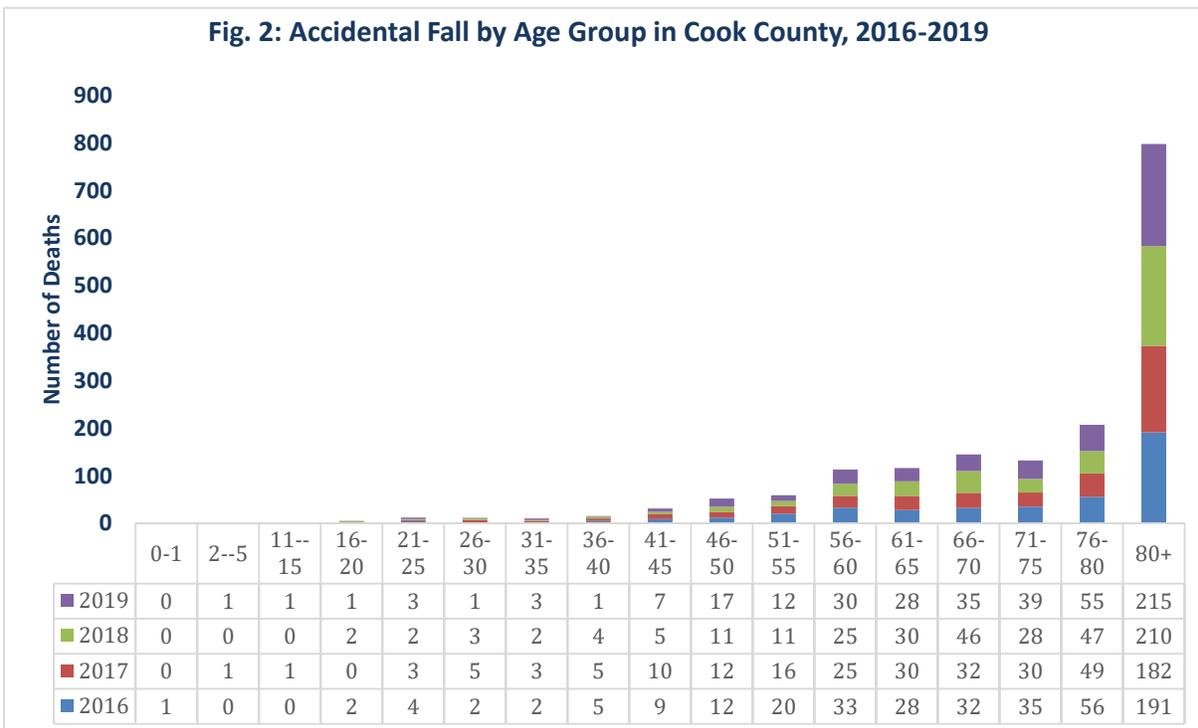
Accidental falls did not show a consistent trend in 2019. It was highest in September (n=45) and lowest in months of August and November (n=29).

3. SPECIAL GROUPS

Table 1. Accidental Fall by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 to 1	1	0	0	0
2 to 5	0	1	0	1
6 to 10	0	0	0	0
11 to 15	0	1	0	1
16 to 20	2	0	2	1
21 to 25	4	3	2	3
26 to 30	2	5	3	1
31 to 35	2	3	2	3
36 to 40	5	5	4	1
41 to 45	9	10	5	7
46 to 50	12	12	11	17
51 to 55	20	16	11	12
56 to 60	33	25	25	30
61 to 65	28	30	30	28
66 to 70	32	32	46	35
71 to 75	35	30	28	39
76 to 80	56	49	47	55
80+	191	182	210	215
Total	432	404	426	449

Fig. 2: Accidental Fall by Age Group in Cook County, 2016-2019



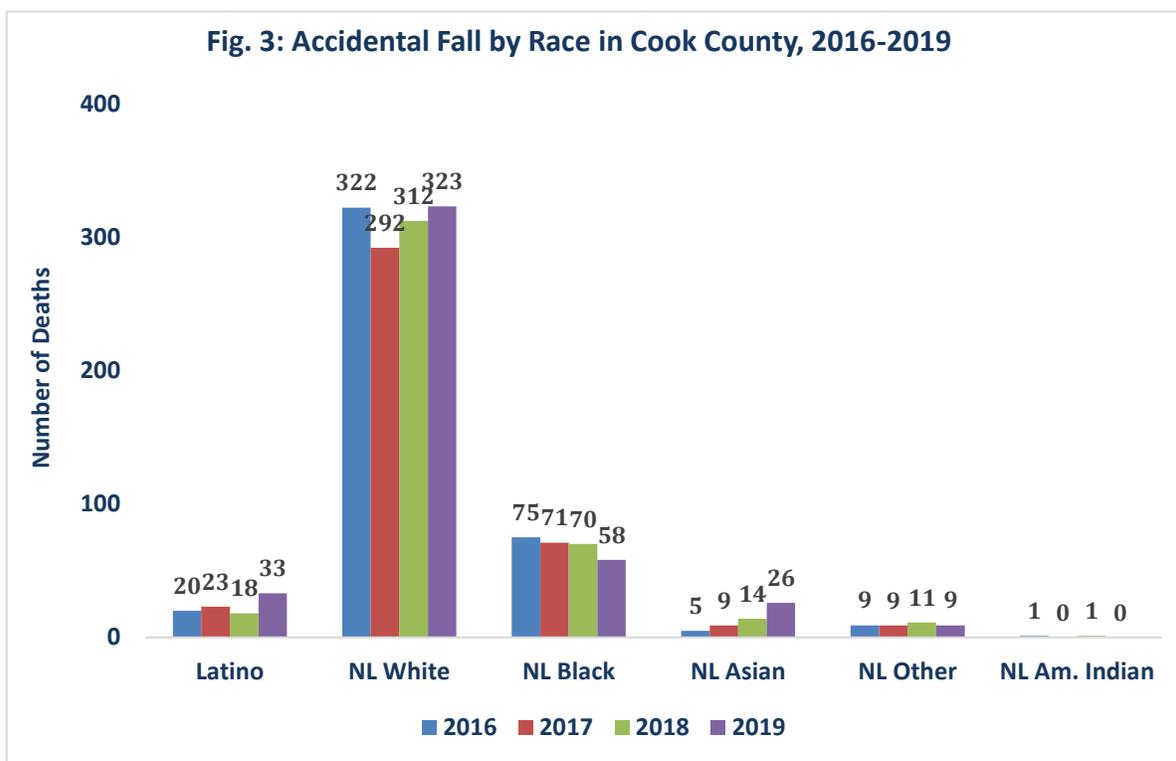
3. SPECIAL GROUPS

Most of the accidental deaths due to falls observed in age group of 71-80+ year-olds (65%-69%) from 2016 to 2019 (Fig. 2). Age group of 80+ year-olds contributes the most to this number.

3. SPECIAL GROUPS

Table 2. Accidental Fall by Race and Ethnicity in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	20	23	18	33
NL White	322	292	312	323
NL Black	75	71	70	58
Asian	5	9	14	26
NL Other	9	9	11	9
NL Am. Indian	1	0	1	0
NL Unknown	0	0	0	2
Total	432	404	426	449

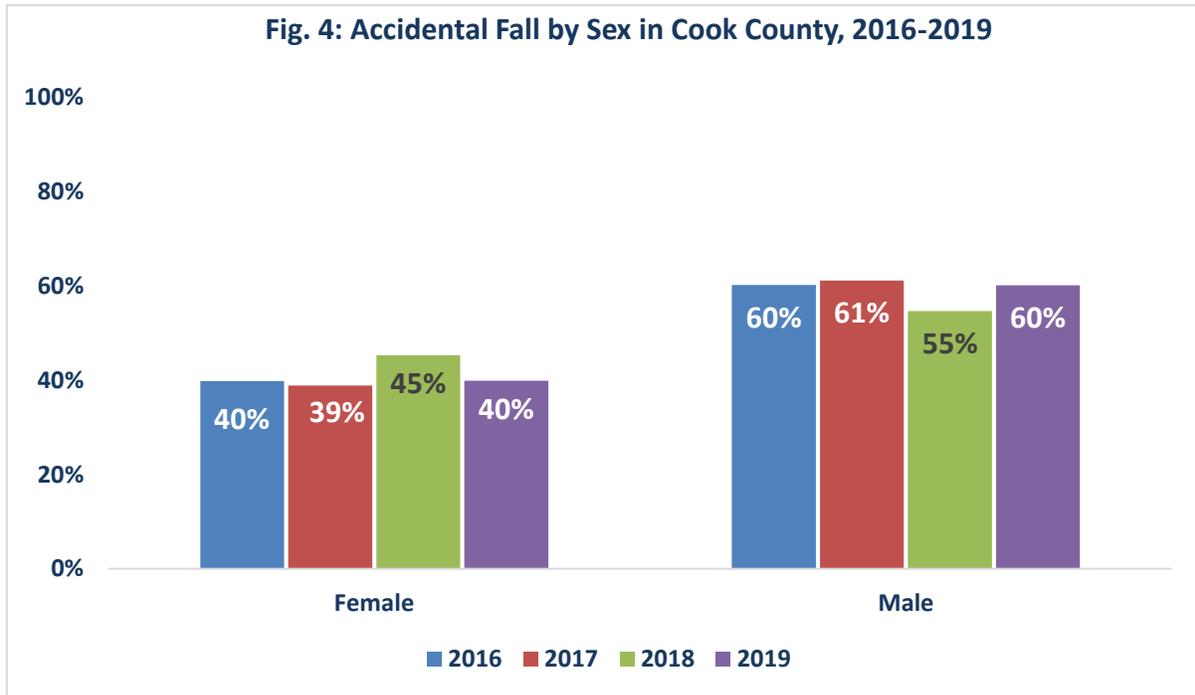


Accidental falls was higher among NL Whites (73%-75%) than NL Blacks (13%-18%) from 2016 to 2019. Although the percent of NL Whites did not show a consistent from 2016 to 2019, the percent of Blacks decreased by 4.4 percent over the same time. As shown in Fig 3., the number of NL Asians increased (from 1.1% to 6%) over the same time. From 2018 to 2019, percent of NL Blacks decreased by 3.4 percent.

3. SPECIAL GROUPS

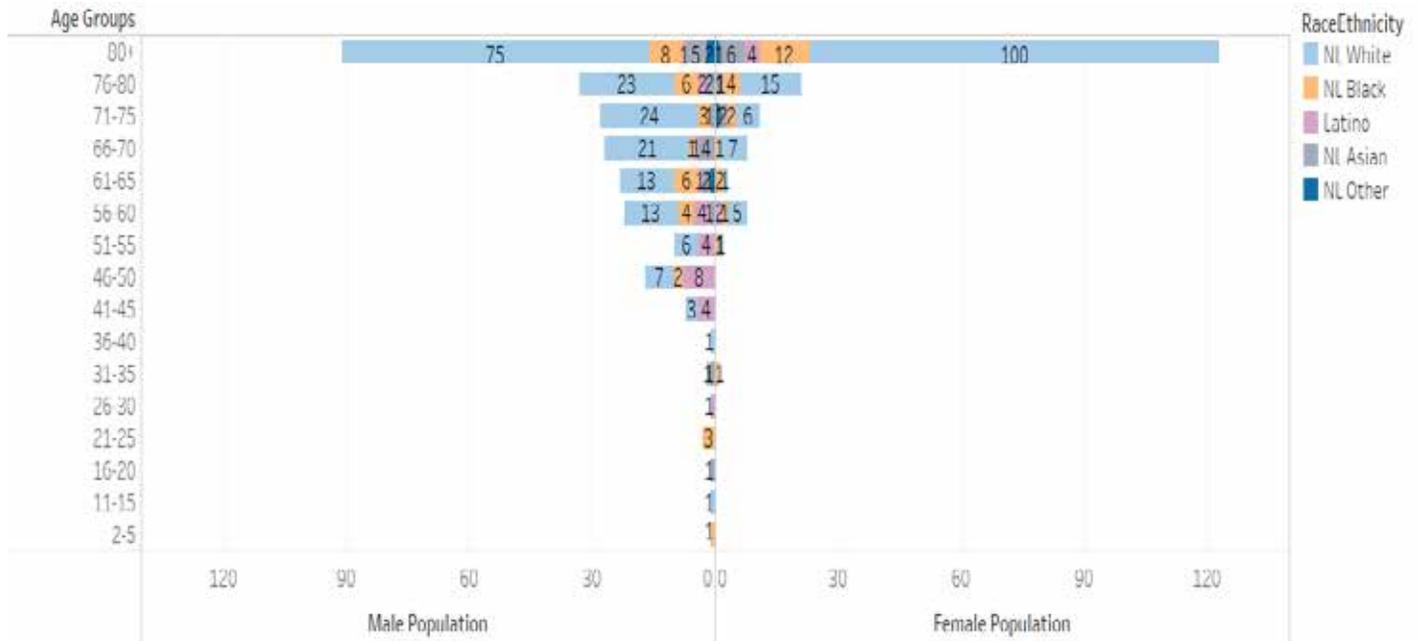
Table 3. Accidental Fall by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	172	157	193	179
Male	260	247	233	270
Total	432	404	426	449



3. SPECIAL GROUPS

Fig. 5: Accidental Fall by Sex, Age Group and Race in Cook County, 2019

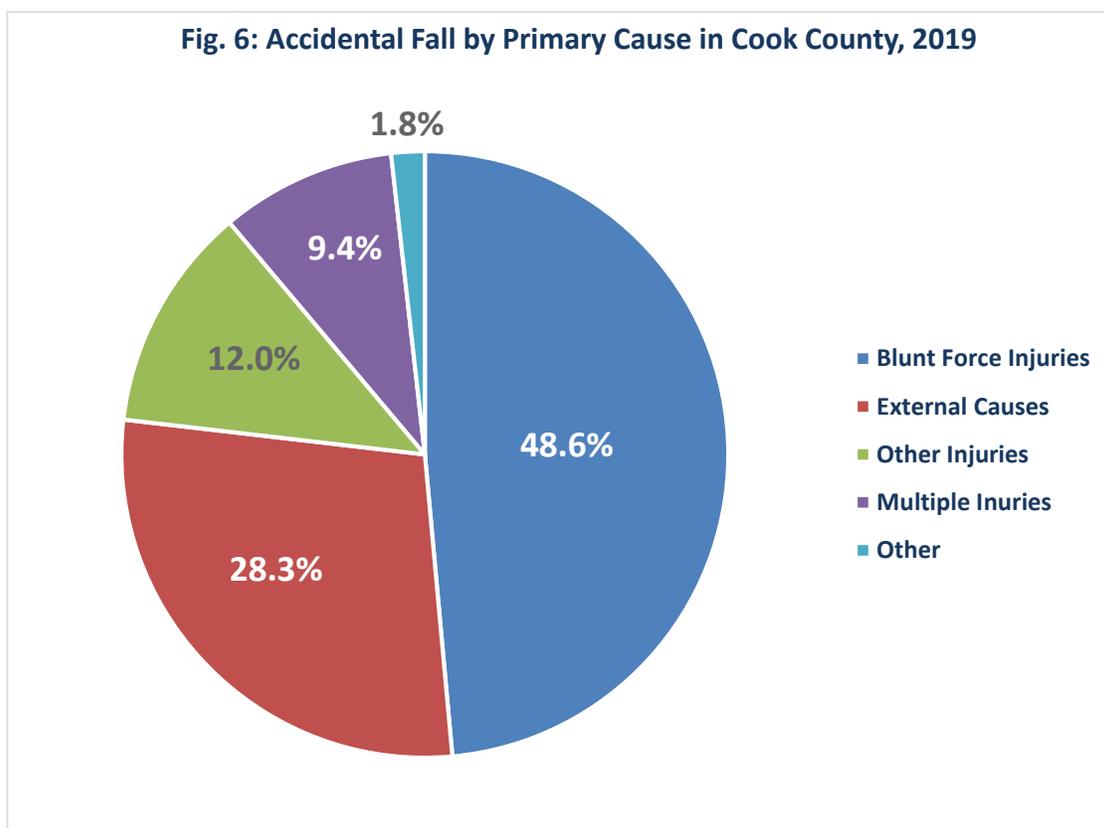


Figures 1-4 have shown trend of accidental falls and distribution by age, race and sex from 2016 to 2019. Fig. 5 focuses on accidental fall disparity in 2019. As shown in Fig. 5, the number of accidental falls was higher among males (270) than females (179). Fig. 5 shows that accidental falls is higher among males than females in almost all age groups. Two notable findings are: 1) the majority of accidental falls are in the age group of 80+ 2) number of accidental falls is higher among NL Whites in almost all age groups. Fig. 6 provides information on the primary cause of death in 2019.

3. SPECIAL GROUPS

Table 4. Accidental Fall by Primary Cause of Death in Cook County, 2019

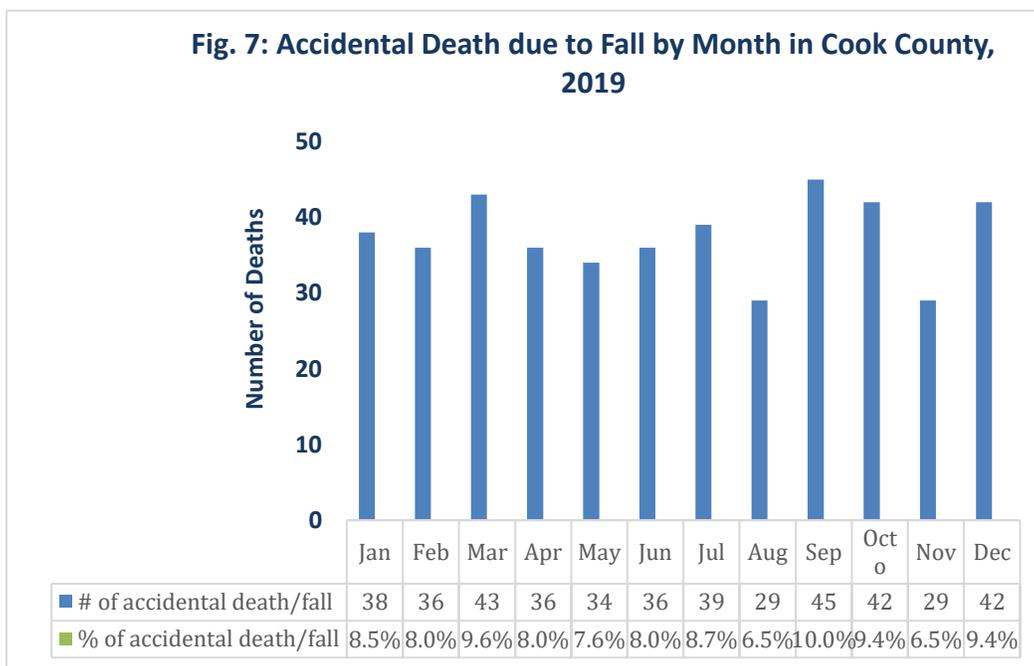
Primary Cause	Number of Accidental Fall	% of Accidental Fall
Blunt Force Injuries	218	48.6%
External Causes	127	28.3%
Other Injuries	54	12.0%
Multiple Injuries	42	9.4%
Other	4	0.9%
Electrocution	2	0.4%
Sharp Force Injuries	1	0.2%
Burn	1	0.2%
Total	449	100%



3. SPECIAL GROUPS

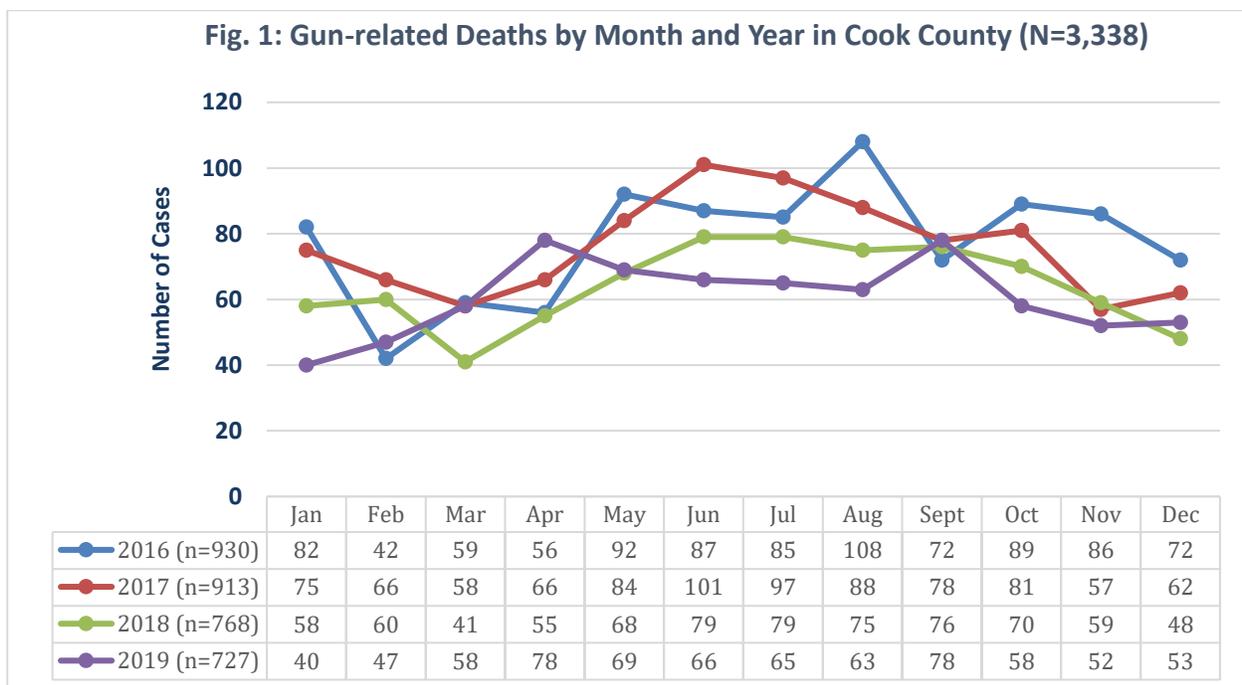
Table 5. Accidental Fall by Month in Cook County, 2019

Month	Number of Accidental Fall	% of Accidental Fall
January	38	8.5%
February	36	8.0%
March	43	9.6%
April	36	8.0%
May	34	7.6%
June	36	8.0%
July	39	8.7%
August	29	6.5%
September	45	10.0%
October	42	9.4%
November	29	6.5%
December	42	9.4%
Total	449	100%



3. SPECIAL GROUPS

3.4. Gun-related Deaths. CCMEO investigated 727²² gun-related deaths in 2019. Of the 727 cases investigated, 585 (80.4%) cases had homicide manner of death, 135 (18.5%) cases had suicide manner of death, 5 (0.6%) cases had undetermined and 2 cases (0.2%) had accident manner of death. The number of gun-related deaths in August 2016 (n=108) was higher than any other month over the last four years. Gun-related deaths showed a consistent decreasing trend over the last four years. The number of gun-related deaths per month decreased since 2016. The average gun-related deaths were 78 per month in 2016, decreased consistently over time and reached an average number of 61 per month in 2019. Gun-related deaths decreased by 21.8 percent from 2016 (n=930) to 2019 (n=727).

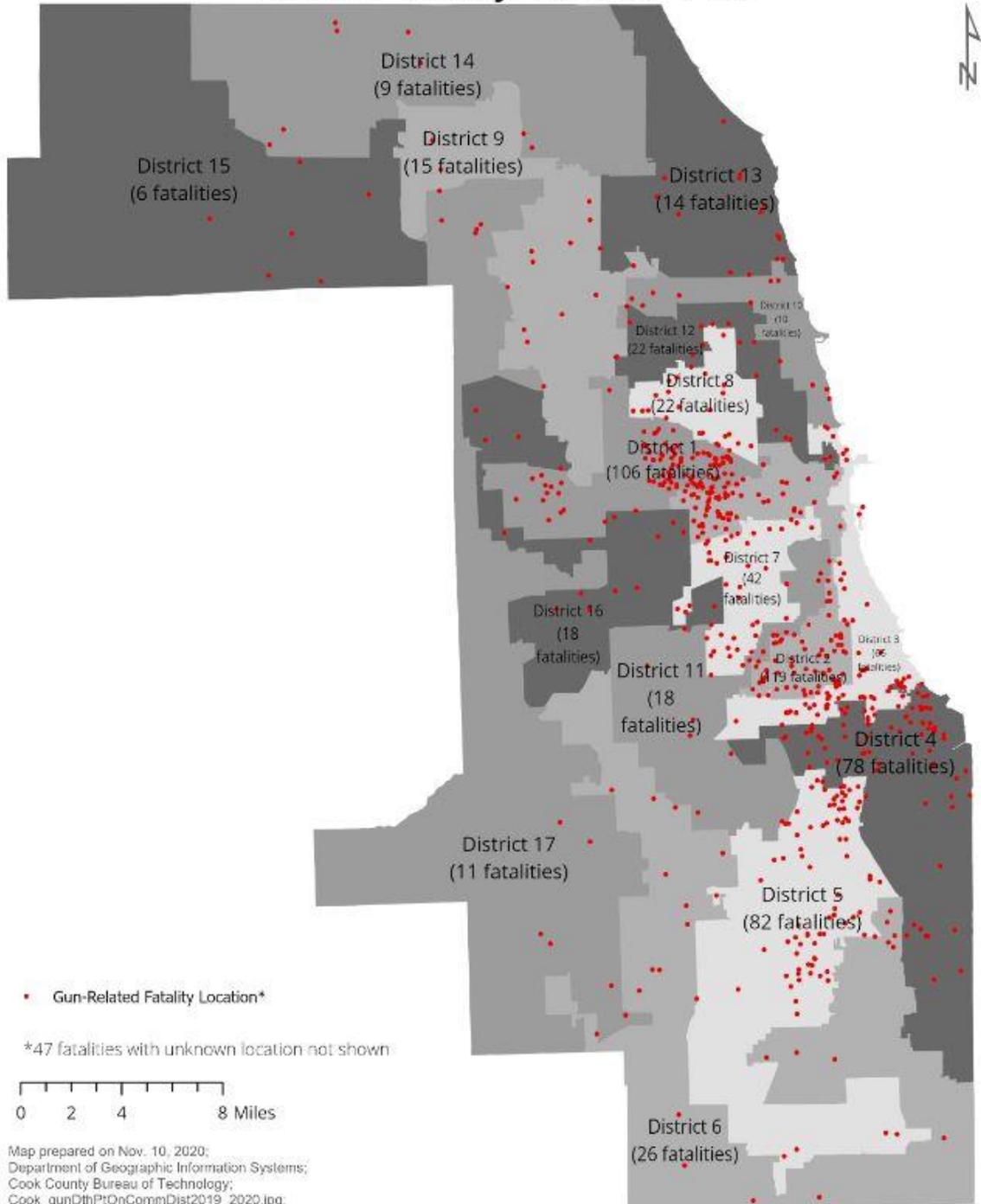


Gun-related deaths did not show a consistent trend in 2019. In 2019, the number of gun-related deaths increased from January to April, then decreased in months of May to August, increased in September and decreased afterwards.

²²Difference with N on the GIS map is due to available

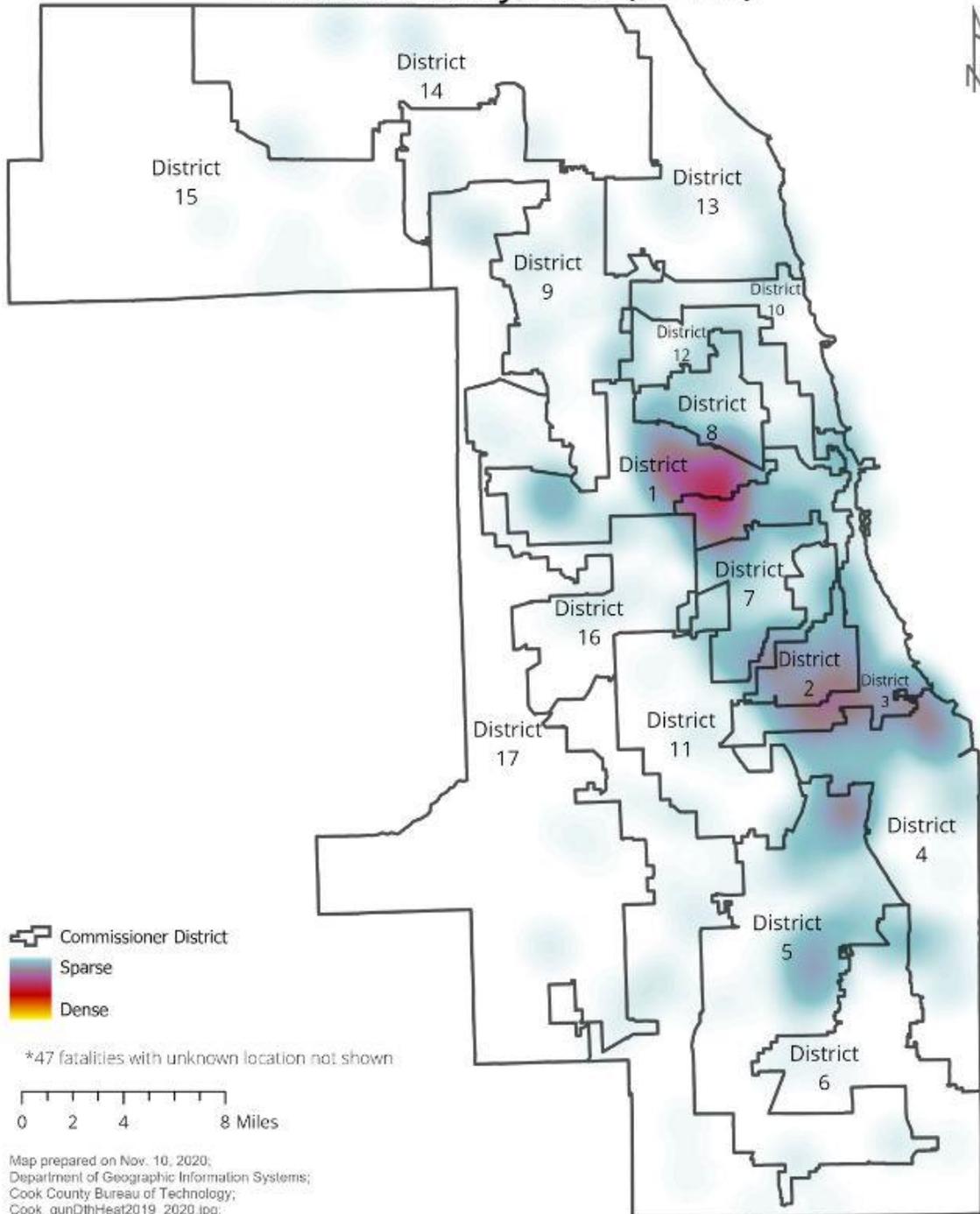
3. SPECIAL GROUPS

Gun-Related Fatality Incident Locations in Cook County, 2019 (N=711)



3. SPECIAL GROUPS

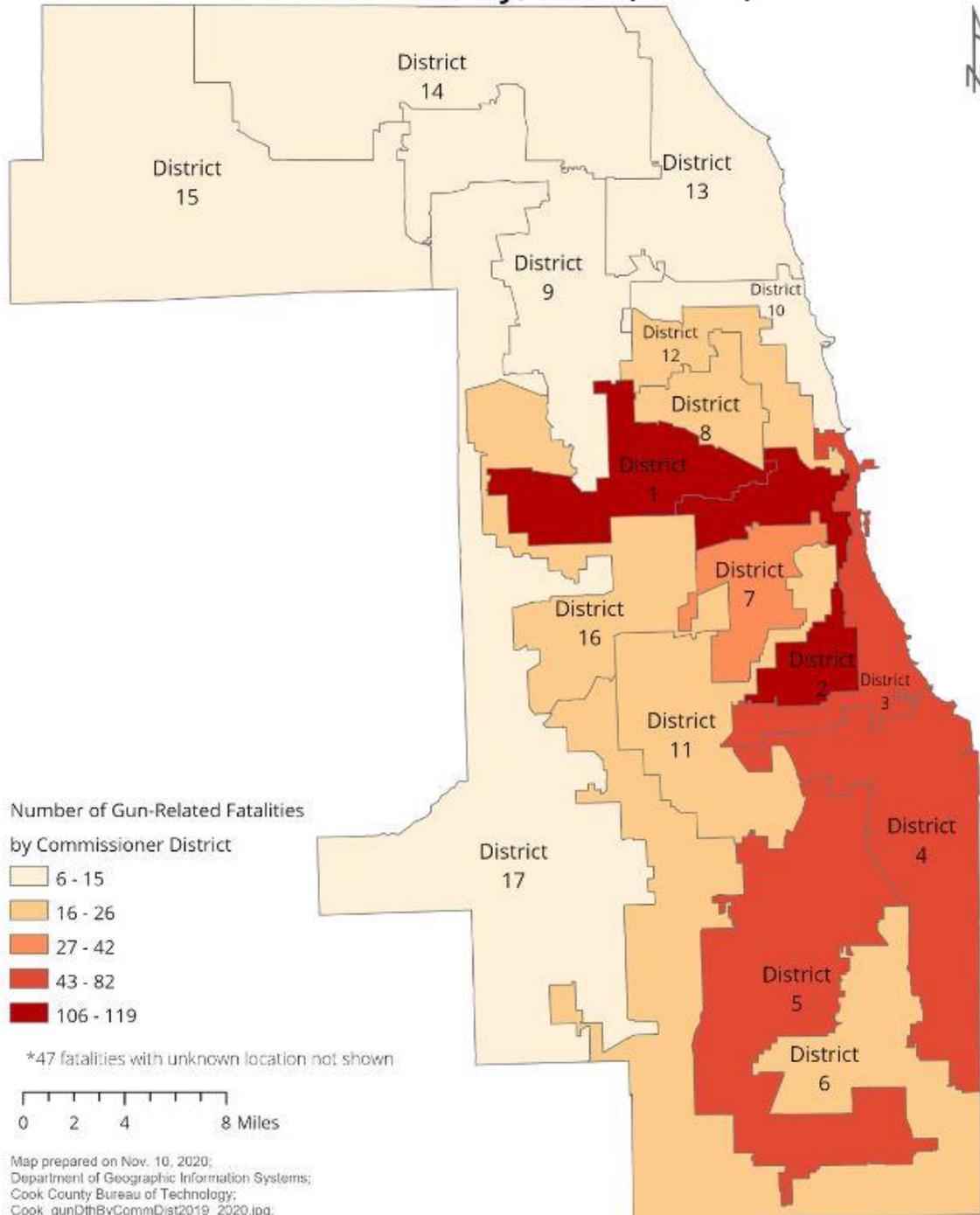
Gun-Related Fatality Concentration in Cook County, 2019 (N=711)



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3. SPECIAL GROUPS

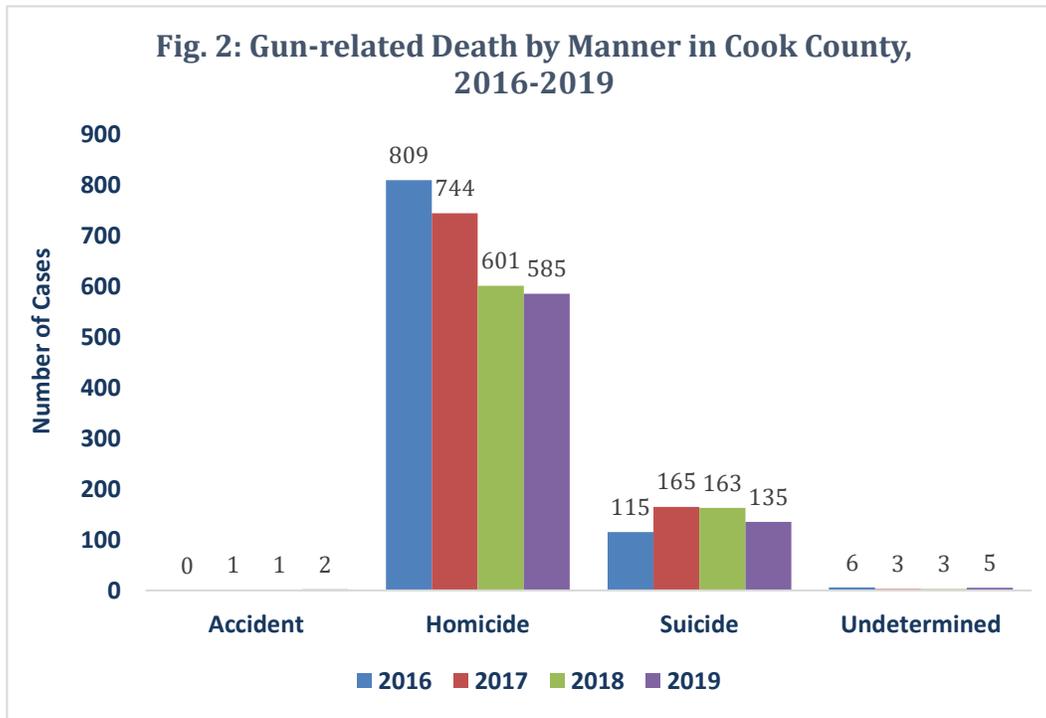
Gun-Related Fatalities by Commissioner District in Cook County, 2019 (N=711)



3. SPECIAL GROUPS

Table 1. Gun-related Death by Manner in Cook County, 2016-2019

Manner of Death	2016	2017	2018	2019
Accident	0	1	1	2
Homicide	809	744	601	585
Suicide	115	165	163	135
Undetermined	6	3	3	5
Total	930	913	768	727

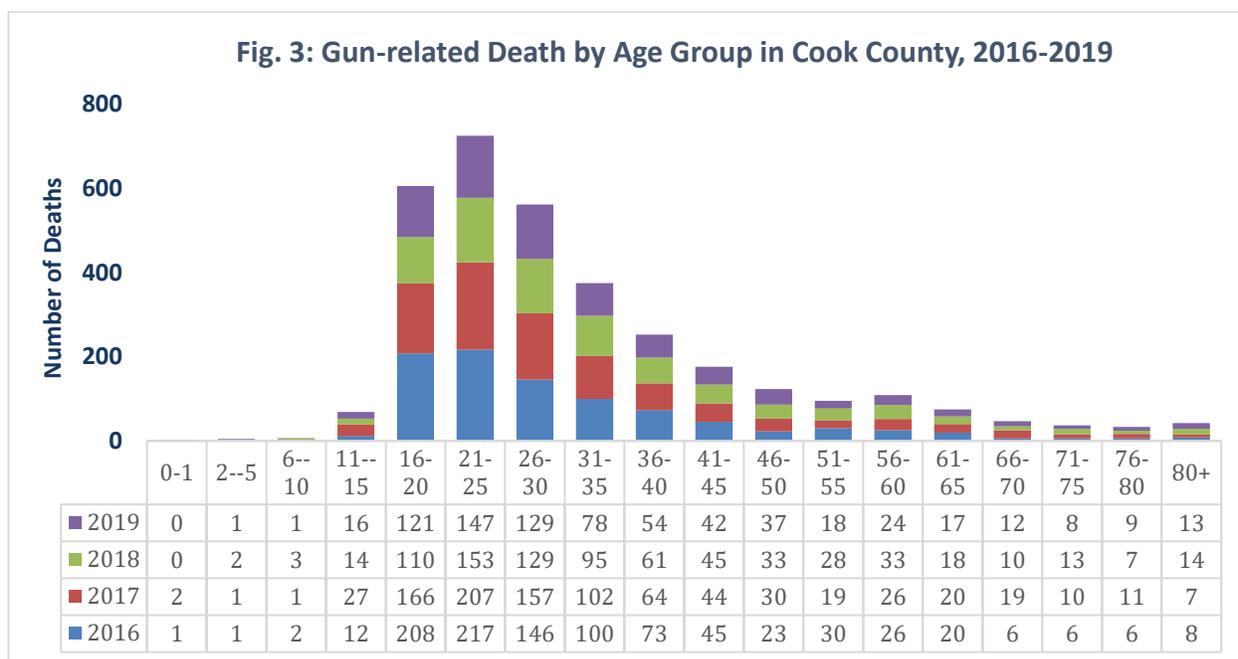


Although gun-related homicide and suicide fluctuated from 2016 to 2019, gun-related suicide decreased by 2.6 percent and homicide increased by 2.2 percent from 2018 to 2019.

3. SPECIAL GROUPS

Table 2. Gun-related Death by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 to 1	1	2	0	0
2 to 5	1	1	2	1
6 to 10	2	1	3	1
11 to 15	12	27	14	16
16 to 20	208	166	110	121
21 to 25	217	207	153	147
26 to 30	146	157	129	129
31 to 35	100	102	95	78
36 to 40	73	64	61	54
41 to 45	45	44	45	42
46 to 50	23	30	33	37
51 to 55	30	19	28	18
56 to 60	26	26	33	24
61 to 65	20	20	18	17
66 to 70	6	19	10	12
71 to 75	6	10	13	8
76 to 80	6	11	7	9
80+	8	7	14	13
Total	930	913	768	727

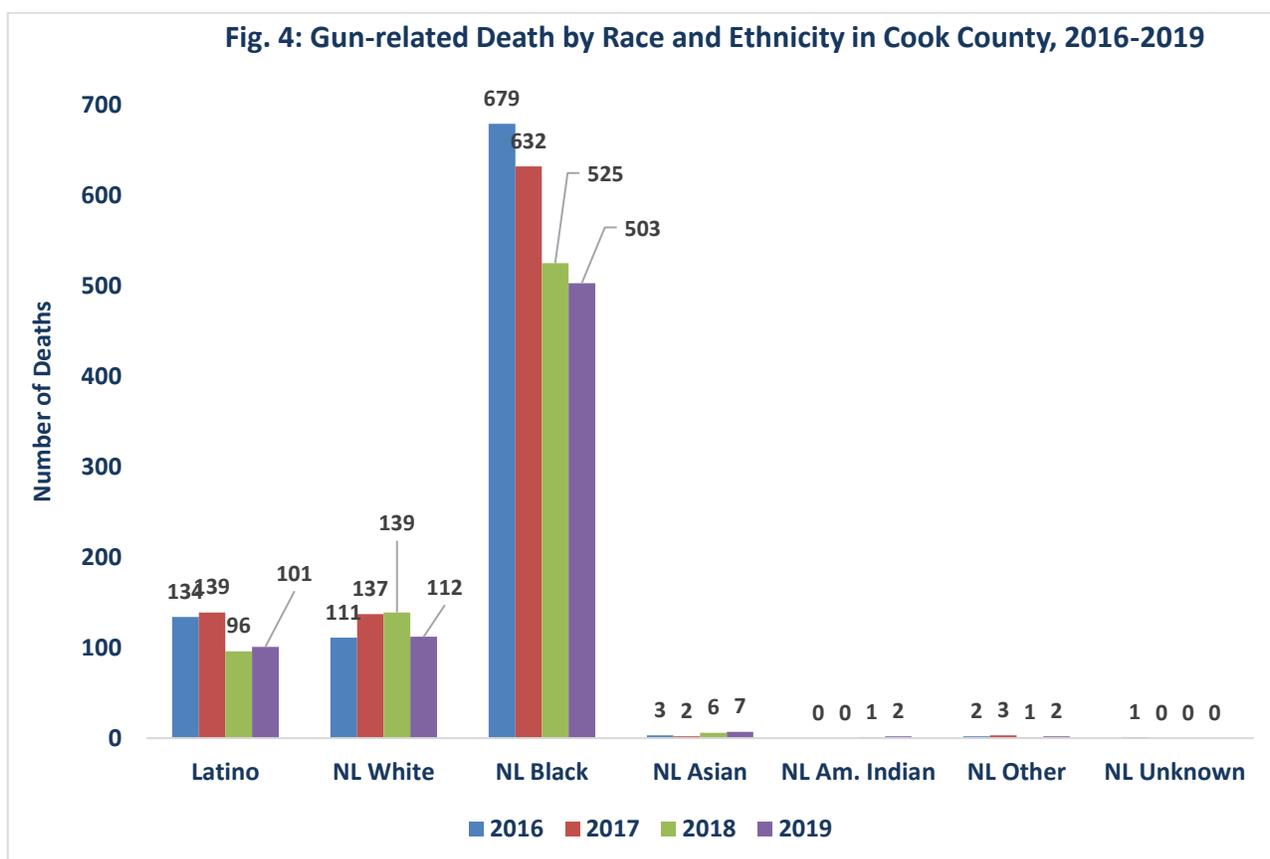


Most gun-related deaths observed in age group of 16-45-year-olds (78%-84%) from 2016 to 2019 (Fig. 3). Age group of 16-25-year-olds contributed the most to this number.

3. SPECIAL GROUPS

Table 3. Gun-related Death by Race and Ethnicity in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	134	139	96	101
NL White	111	137	139	112
NL Black	679	632	525	503
NL Asian	3	2	6	7
NL American Indian	0	0	1	2
NL Other	2	3	1	2
NL Unknown	1	0	0	0
Total	929	913	768	727

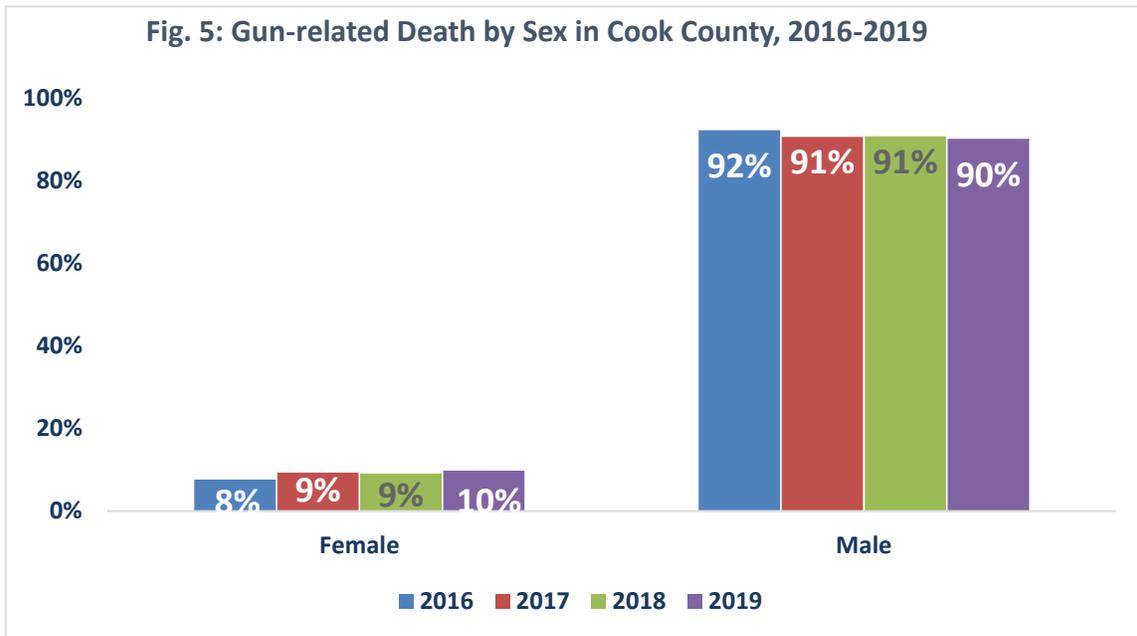


Gun-related death was higher among non-Latinos (85%-88%) than Latinos (12%-15%) from 2016 to 2019. Among non-Latinos, gun-related death was higher in Blacks (68-73%) than Whites (15%-18%) over the same period. Although the percent of non-Latino Blacks decreased from 2016 to 2019 (73% to 69%), the percent of non-Latino Whites increased (11% to 15%) over the same period. From 2018 to 2019, percent of Blacks increased by 1 percent (Fig. 4).

3. SPECIAL GROUPS

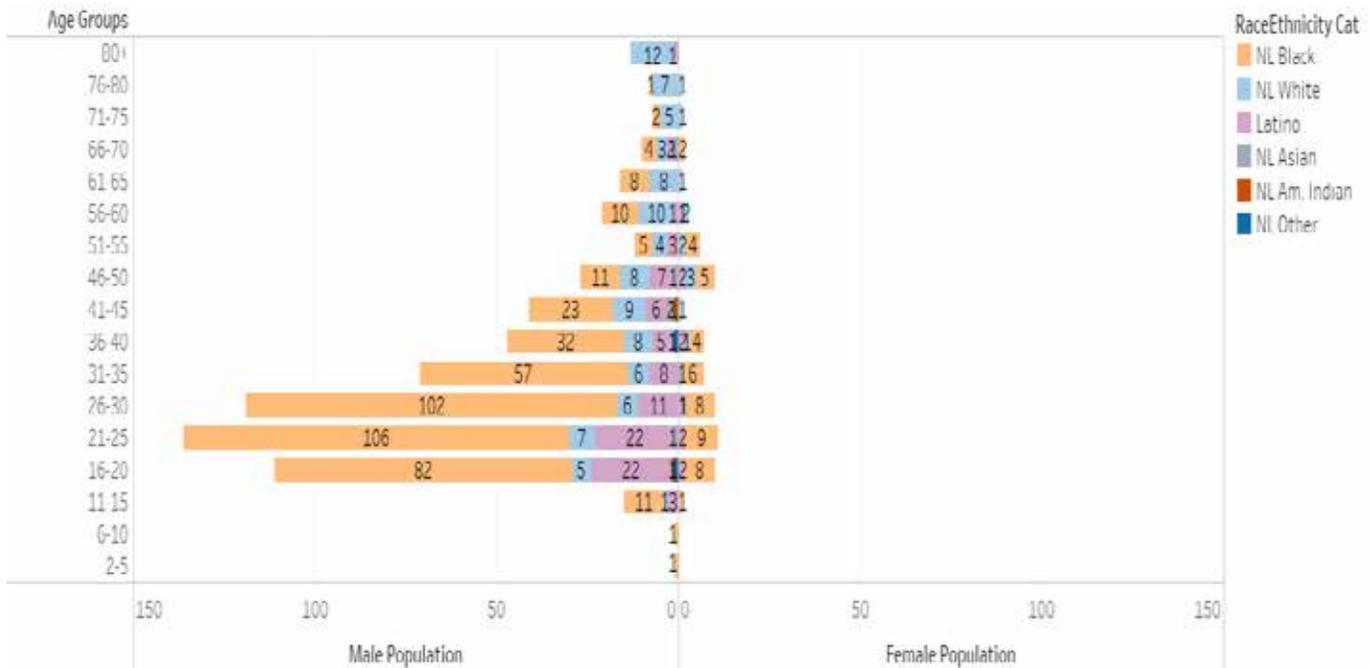
Table 4. Gun-related Death by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	69	84	70	71
male	851	825	694	643
Total	930	913	768	727



3. SPECIAL GROUPS

Fig. 6: Gun-related Death by Sex, Race/Ethnicity and Age Group in Cook County, 2019

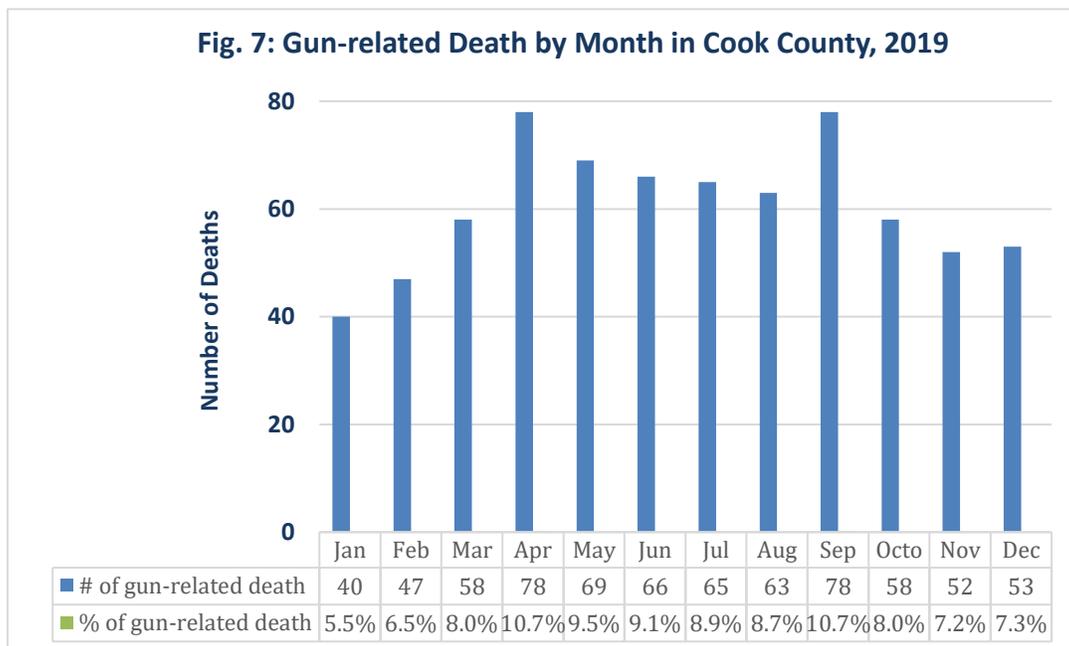


Figures 1-5 have shown gun-related death trend by manner, age, race and sex from 2016 to 2019. Figure 6 provides information on gun-related death disparity. As shown in Fig. 6, gun-related death is higher among males in all age groups. Although gun-related death is more prevalent among Black males than Whites in age range of 11-50-year-olds, it was more prevalent among White males ages 46+.

3. SPECIAL GROUPS

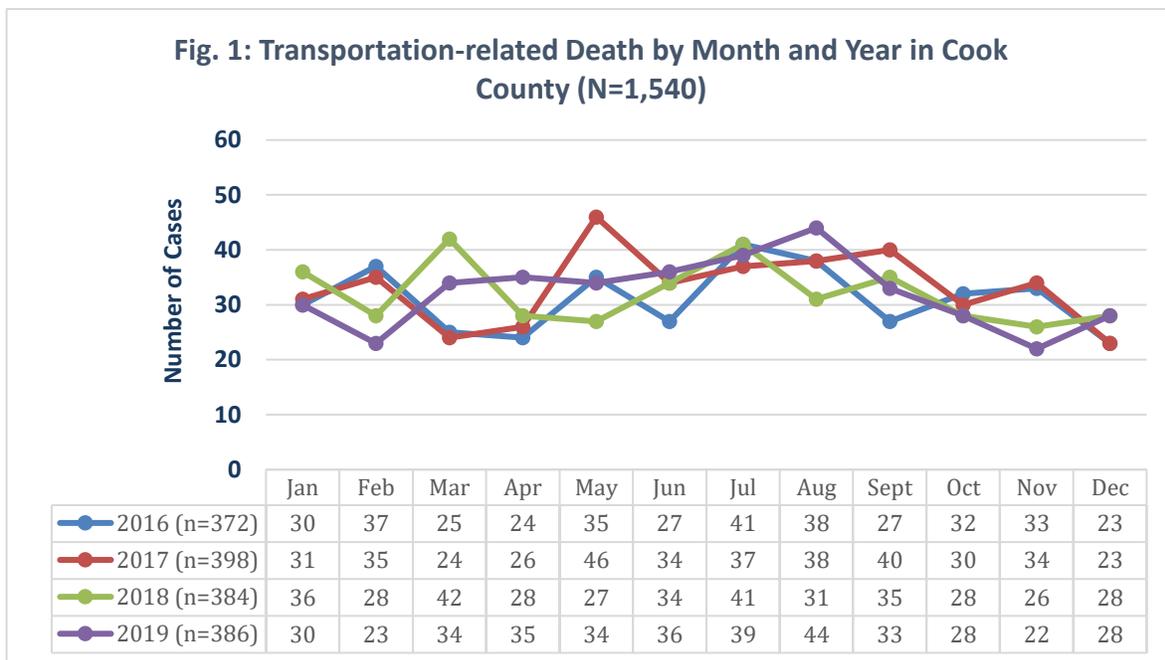
Table 5. Gun-related Death by Month in Cook County, 2019

Month	Number Gun-related Death	% of Gun-related Death
January	40	5.5%
February	47	6.5%
March	58	8.0%
April	78	10.7%
May	69	9.5%
June	66	9.1%
July	65	8.9%
August	63	8.7%
September	78	10.7%
October	58	8.0%
November	52	7.2%
December	53	7.3%
Total	727	100%



3. SPECIAL GROUPS

3.5. Transportation-related Deaths. CCMEO investigated 386²³ transportation-related deaths in 2019. Of the 386 cases investigated, 354 (92%) cases had accident manner of death, 27 (7%) cases had suicide manner of death, 2 (0.5%) cases had homicide and 3 cases (0.8%) had undetermined manner of death. The number of transportation-related deaths in May 2017 (n=46) was higher than any other month over the last four years. Transportation-related deaths did not show a consistent trend from 2016 to 2019. The average number of transportation-related deaths was 31 per month in 2016, increased in 2017 (n=33) and then decreased in 2018 (n=32) and 2019 (n=32). Transportation-related deaths decreased by 3.7 percent from 2016 (n=372) to 2019 (n=386).

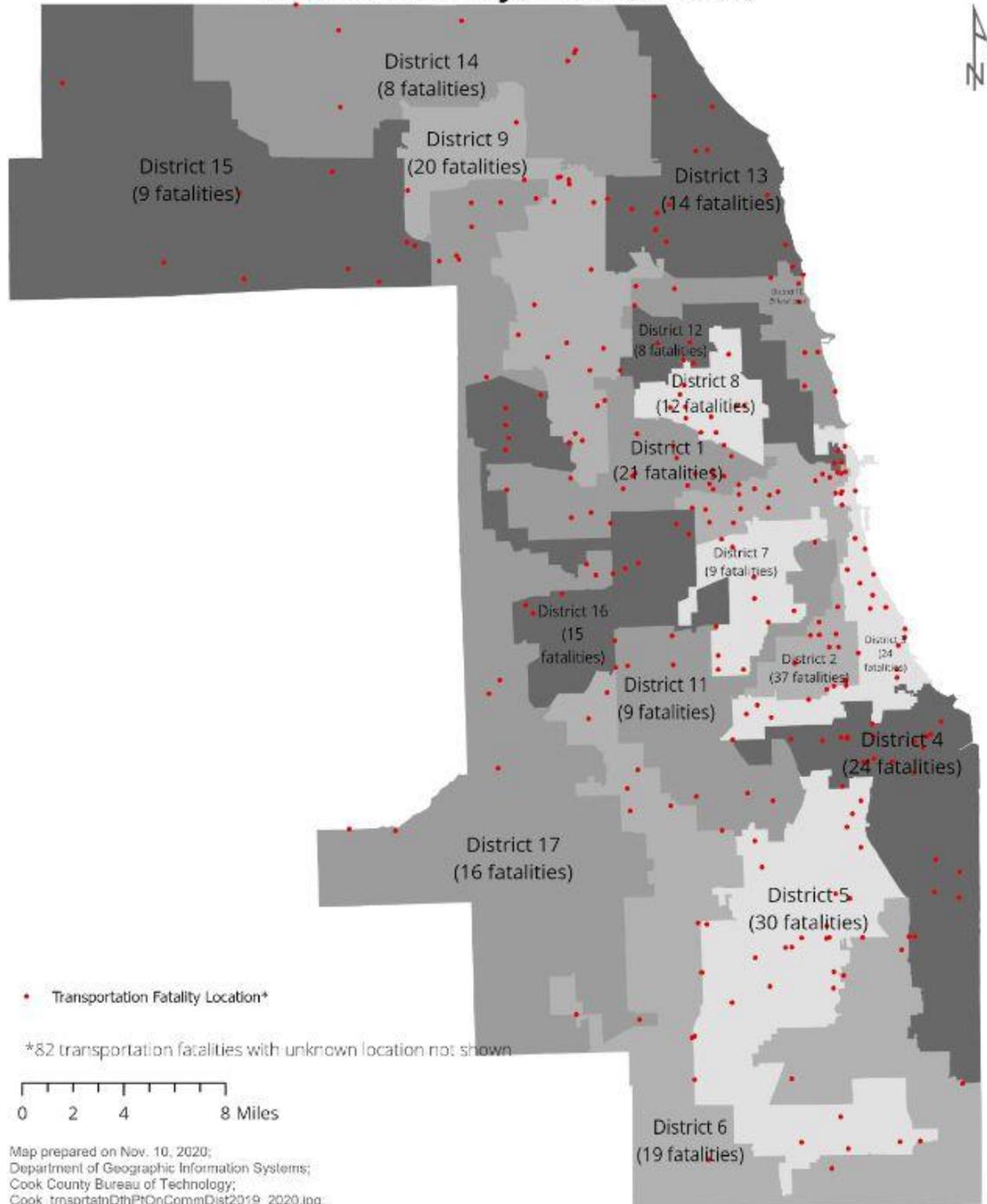


Transportation-related deaths did not show a consistent trend in 2019. It was lowest and highest in months of November (n=22) and August (n=44) respectively.

²³ Difference with N on the GIS map is due to available zipcodes

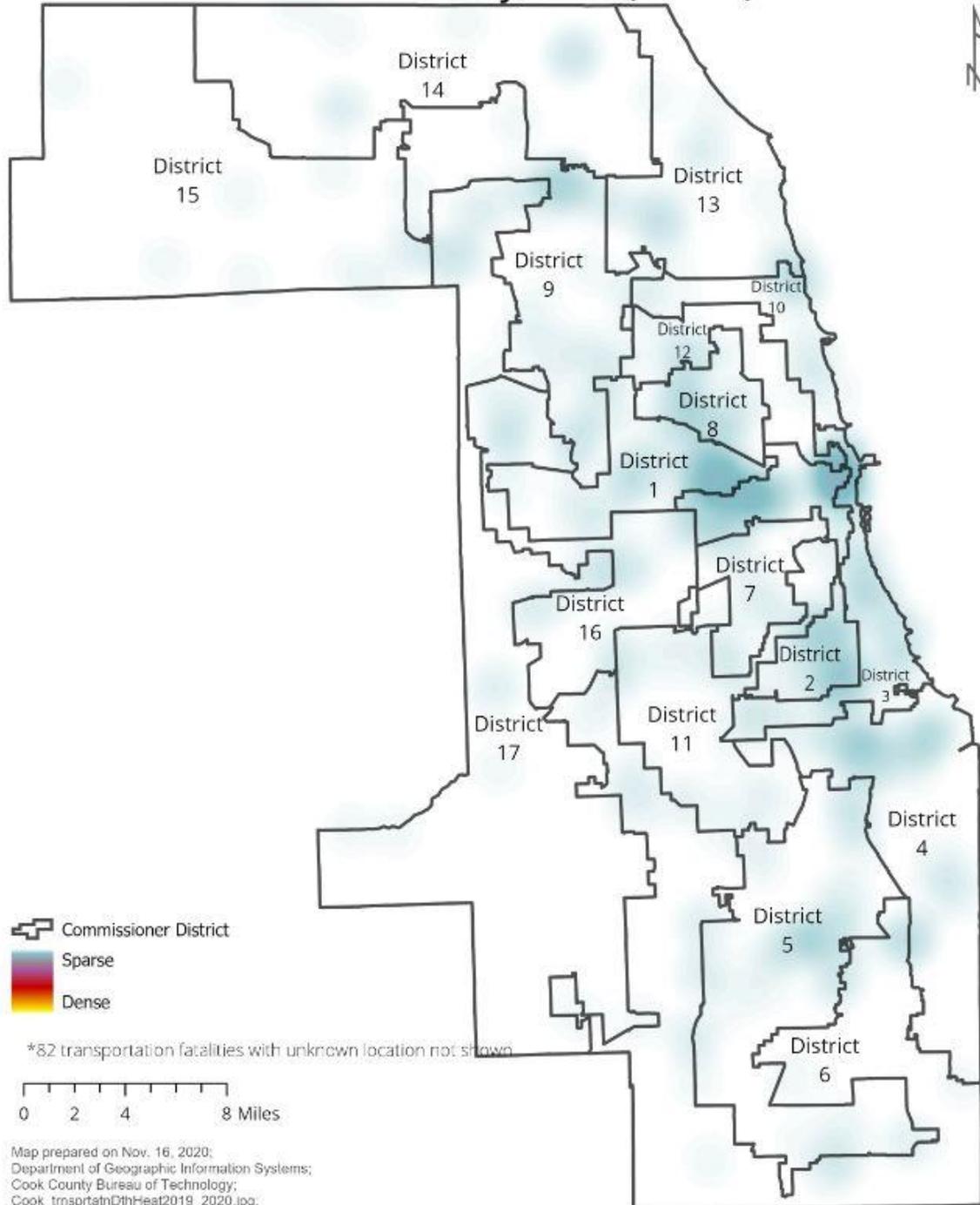
3. SPECIAL GROUPS

Transportation Fatality Incident Locations in Cook County, 2019 (N=366)



3. SPECIAL GROUPS

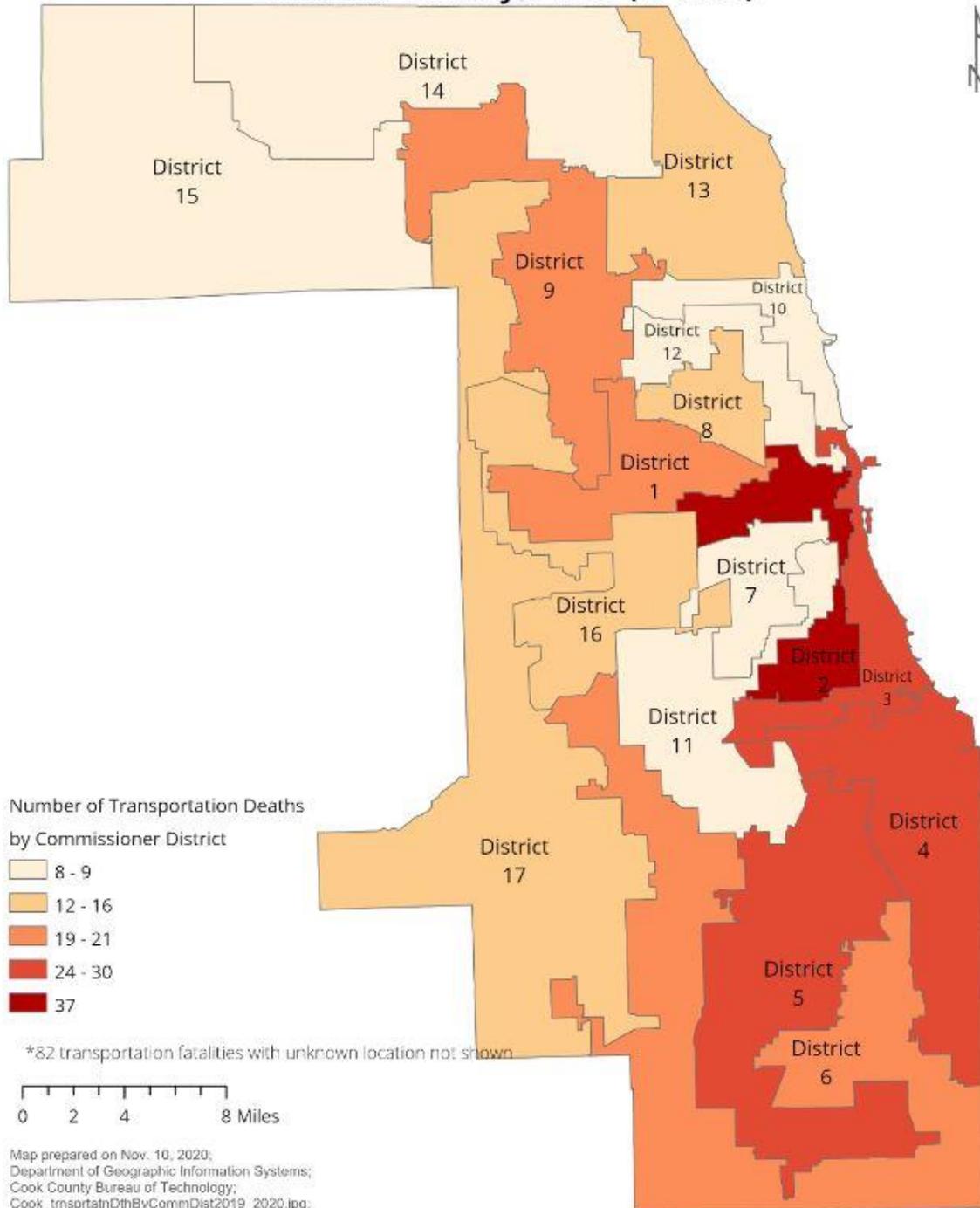
Transportation Fatality Concentration in Cook County, 2019 (N=366)



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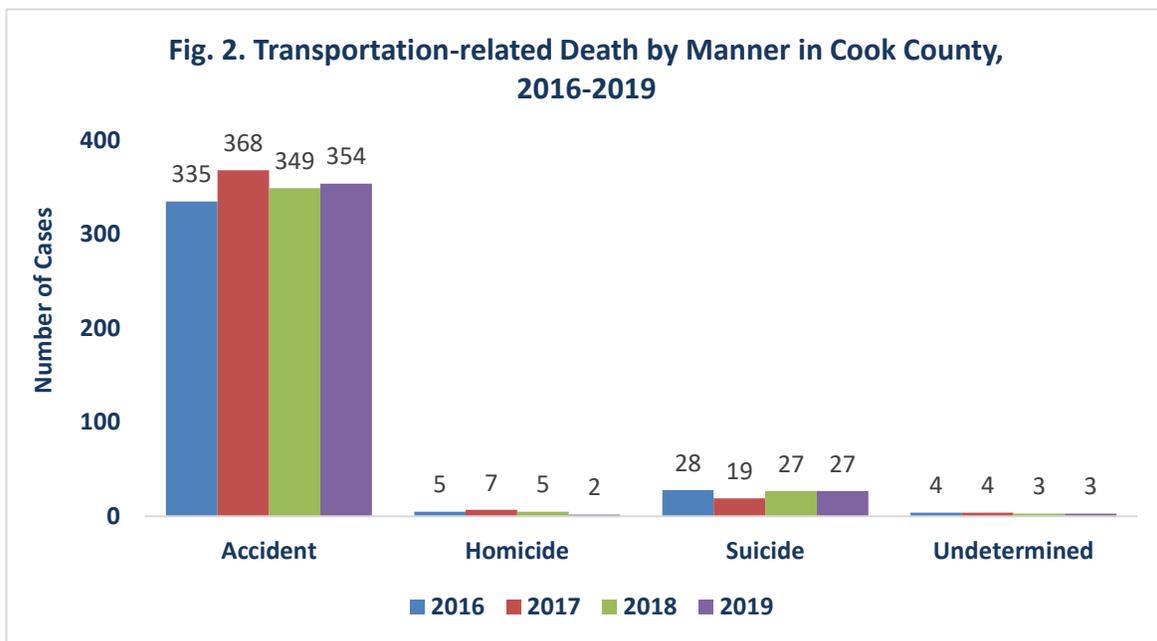
Transportation Fatalities by Commissioner District in Cook County, 2019 (N=366)



3. SPECIAL GROUPS

Table 1. Transportation-related Death by Manner in Cook County, 2016-2019

Manner of Death	2016	2017	2018	2019
Accident	335	368	349	354
Homicide	5	7	5	2
Suicide	28	19	27	27
Undetermined	4	4	3	3
Total	372	398	384	386

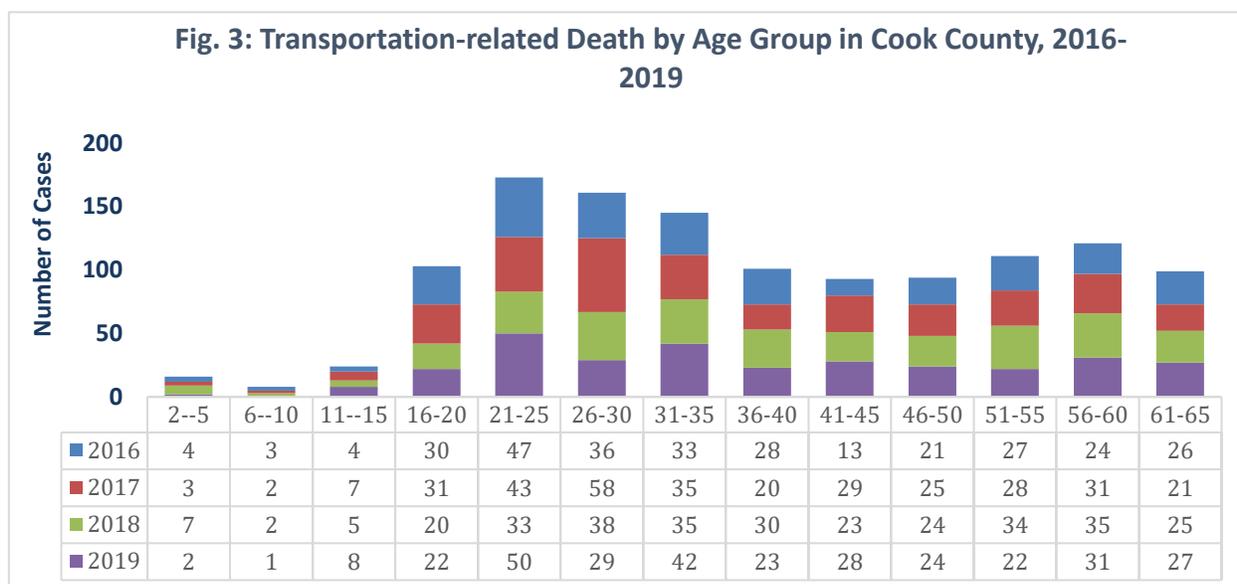


Accident and homicide manner of death showed a consistent decreasing trend from 2017 to 2019. Over the same period, accident and homicide manner of death decreased by 3.8 percent and 71.4 percent, respectively.

3. SPECIAL GROUPS

Table 2. Transportation-related Death by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 to 1	1	2	0	2
2 to 5	4	3	7	2
6 to 10	3	2	2	1
11 to 15	4	7	5	8
16 to 20	30	31	20	22
21 to 25	47	43	33	50
26 to 30	36	58	38	29
31 to 35	33	35	35	42
36 to 40	28	20	30	23
41 to 45	13	29	23	28
46 to 50	21	25	24	24
51 to 55	27	28	34	22
56 to 60	24	31	35	31
61 to 65	26	21	25	27
66 to 70	11	20	30	25
71 to 75	15	7	16	8
76 to 80	24	13	8	15
80+	25	23	19	27
Total	372	398	384	386



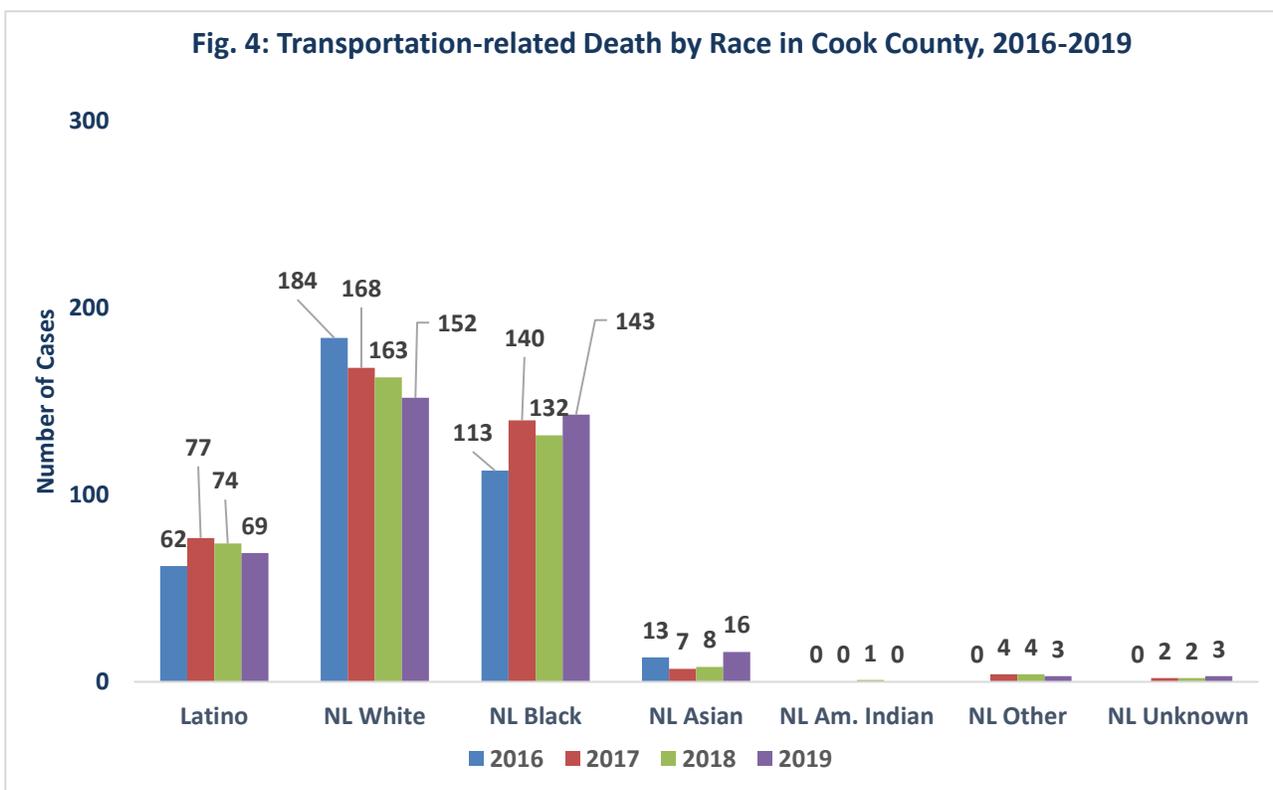
The majority of transportation-related deaths was observed in age group of 16-55-year-olds (56%-64%) from 2016 to 2019 (Fig. 5). Age group of 31-55-year-olds contributes the most to this number.

3. SPECIAL GROUPS

Table 3. Transportation-related Death by Race in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	62	77	74	69
NH White	184	168	163	152
NH Black	113	140	132	143
NH Asian	13	7	8	16
NH American Indian	0	0	1	0
NH Other	0	4	4	3
NH Unknown	0	2	2	3
Total	372	398	384	386

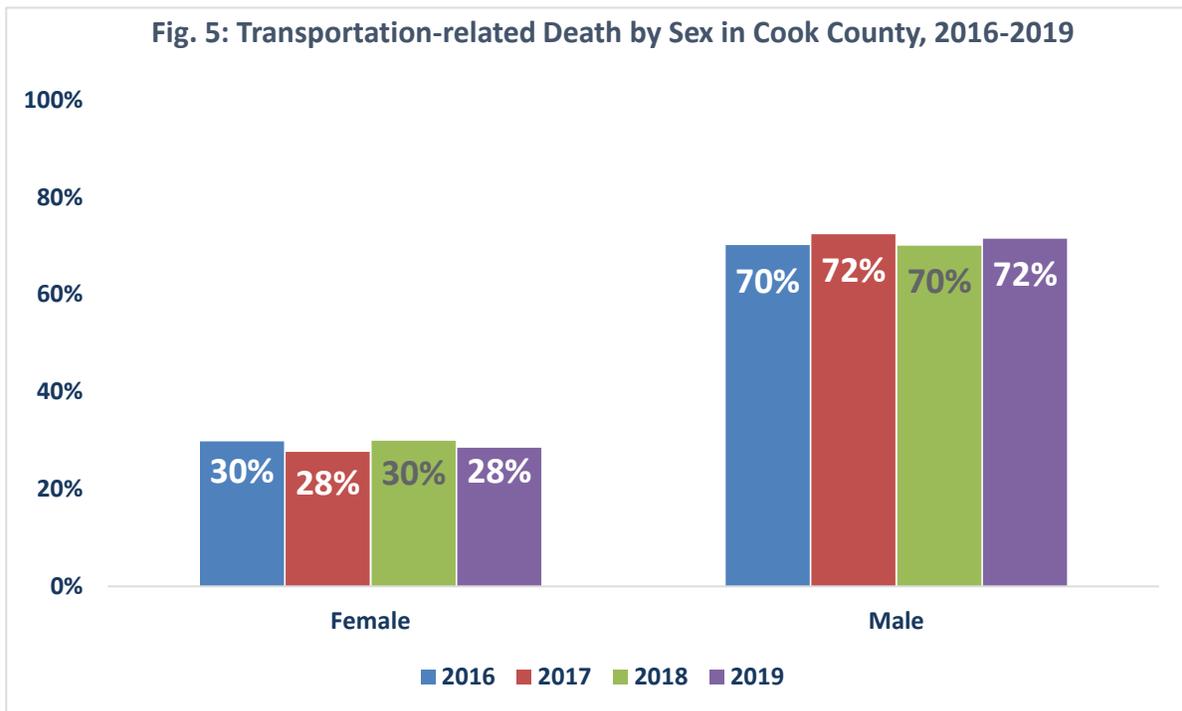
Fig. 4: Transportation-related Death by Race in Cook County, 2016-2019



3. SPECIAL GROUPS

Table 4. Transportation-related Death by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	111	110	115	110
Male	261	288	269	276
Total	372	398	384	386



As seen in Fig. 7, transportation-related death is higher among males (70-72%) than females (28-30%) over the last four years.

3. SPECIAL GROUPS

Fig. 6: Transportation-related Death by Sex, Race/Ethnicity, and Age Group in Cook County, 2019

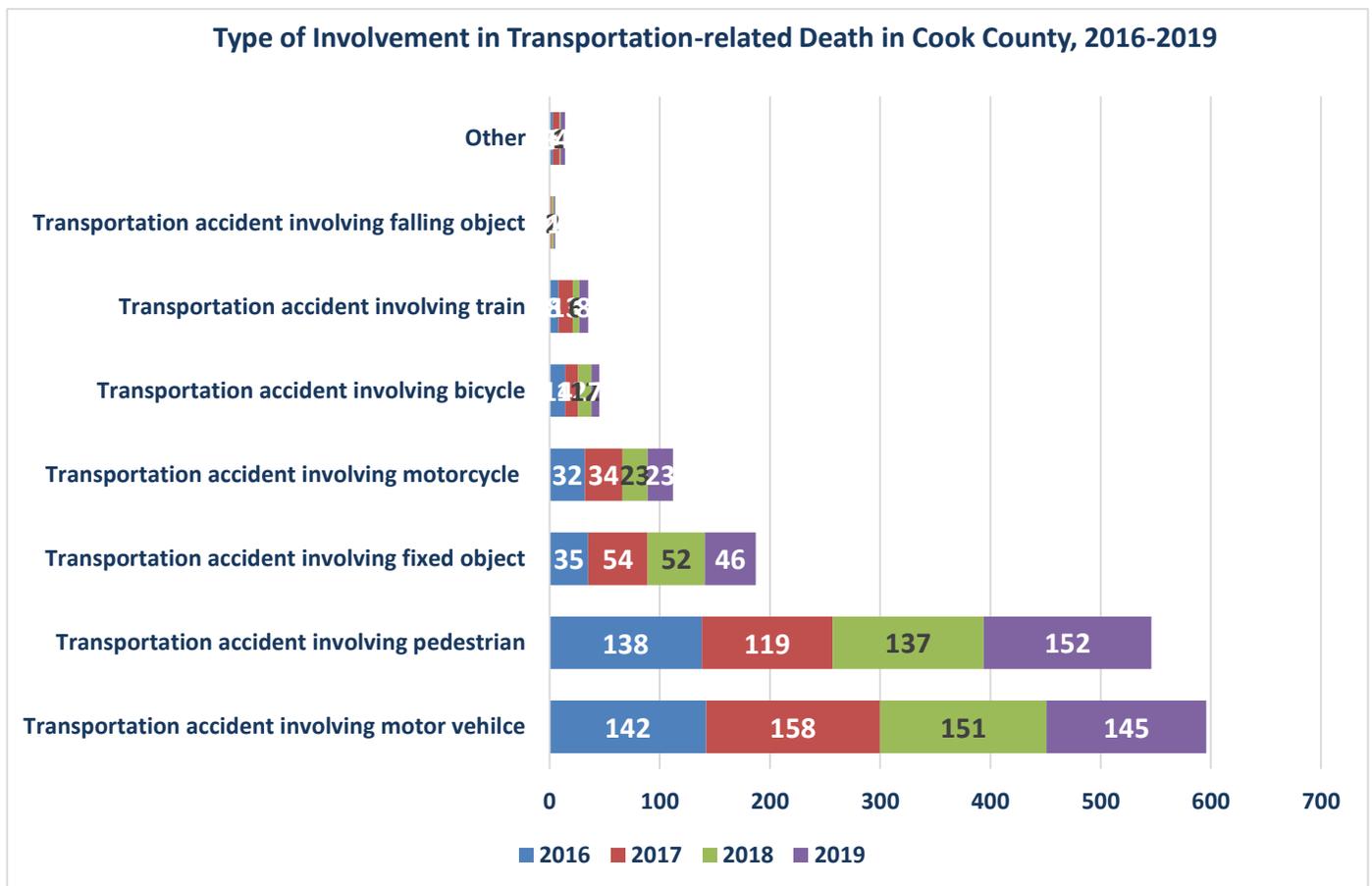


Figure 6 shows that transportation-related death is higher among males than females in all age groups. In males, transportation-related death was higher in age groups of 21-25, 31-35 and 56-60. In females, it was higher among age groups of 21-25, 31-35 and 80+. Number of transportation-related death was higher among NL Black males in age groups of 16-35. Among Latino males, the highest number of transportation-related deaths is in age group of 41-45.

3. SPECIAL GROUPS

Table 5. Type of Involvement in Transportation-related Death in Cook County, 2019

Type of Involvement	2016	2017	2018	2019
Transportation accident involving motor vehicle	142	158	151	145
Transportation accident involving pedestrian	138	119	137	152
Transportation accident involving fixed object	35	54	52	46
Transportation accident involving motorcycle	32	34	23	23
Transportation accident involving bicycle	14	12	12	7
Transportation accident involving train	8	13	6	8
Transportation accident involving falling object	0	2	2	1
Other	3	6	1	4
Total	369	398	384	386

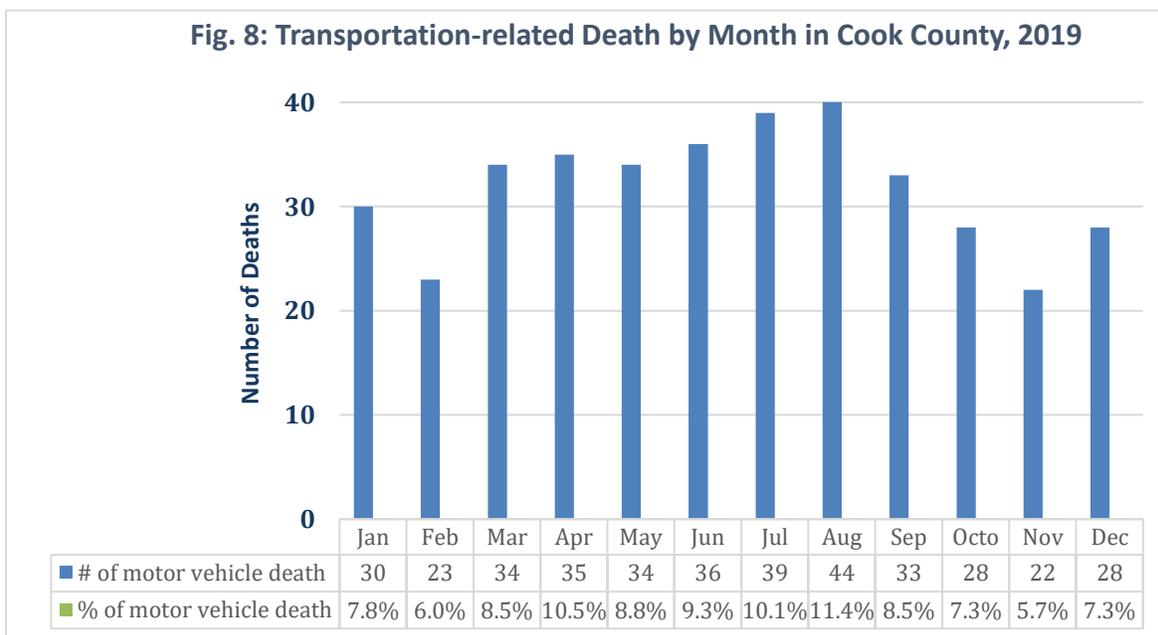


3. SPECIAL GROUPS

Table 6. Transportation-related Death by Month in Cook County, 2019

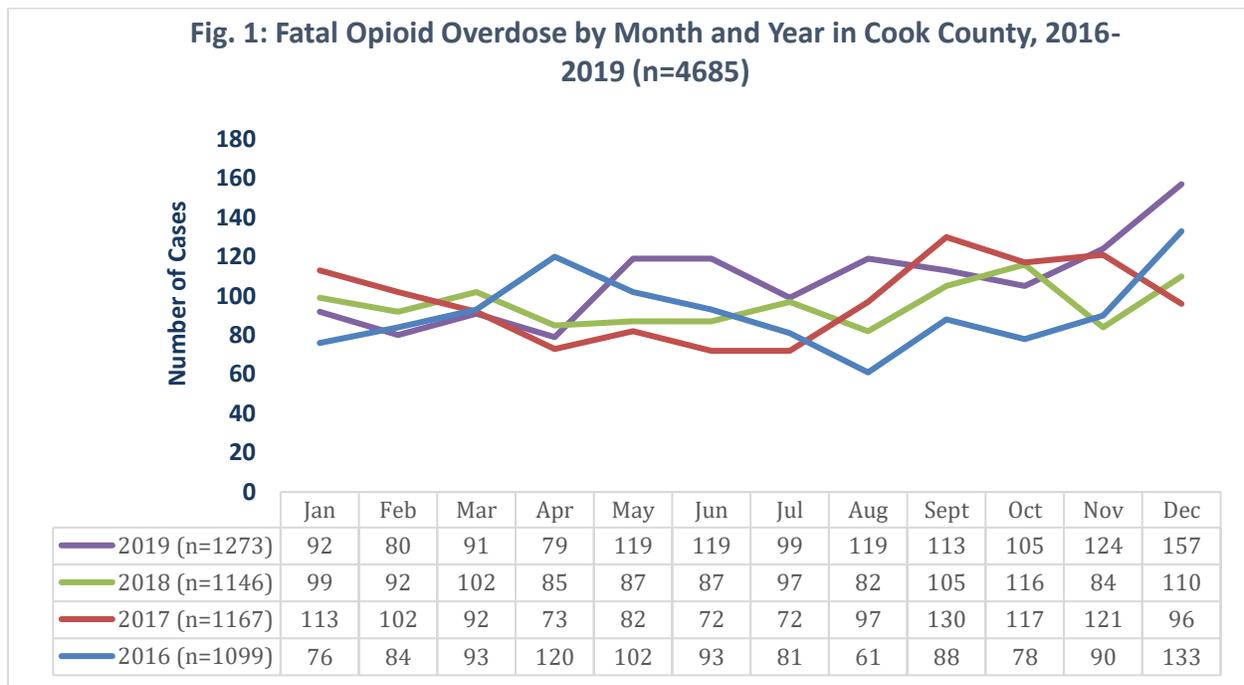
Month	Number of Transportation-related Death	% of Transportation-related Death
January	30	7.8%
February	23	6.0%
March	34	8.5%
April	35	10.5%
May	34	8.8%
June	36	9.3%
July	39	10.1%
August	44	11.4%
September	33	8.5%
October	28	7.3%
November	22	5.7%
December	28	7.3%
Total	386	100%

Fig. 8: Transportation-related Death by Month in Cook County, 2019



3. SPECIAL GROUPS

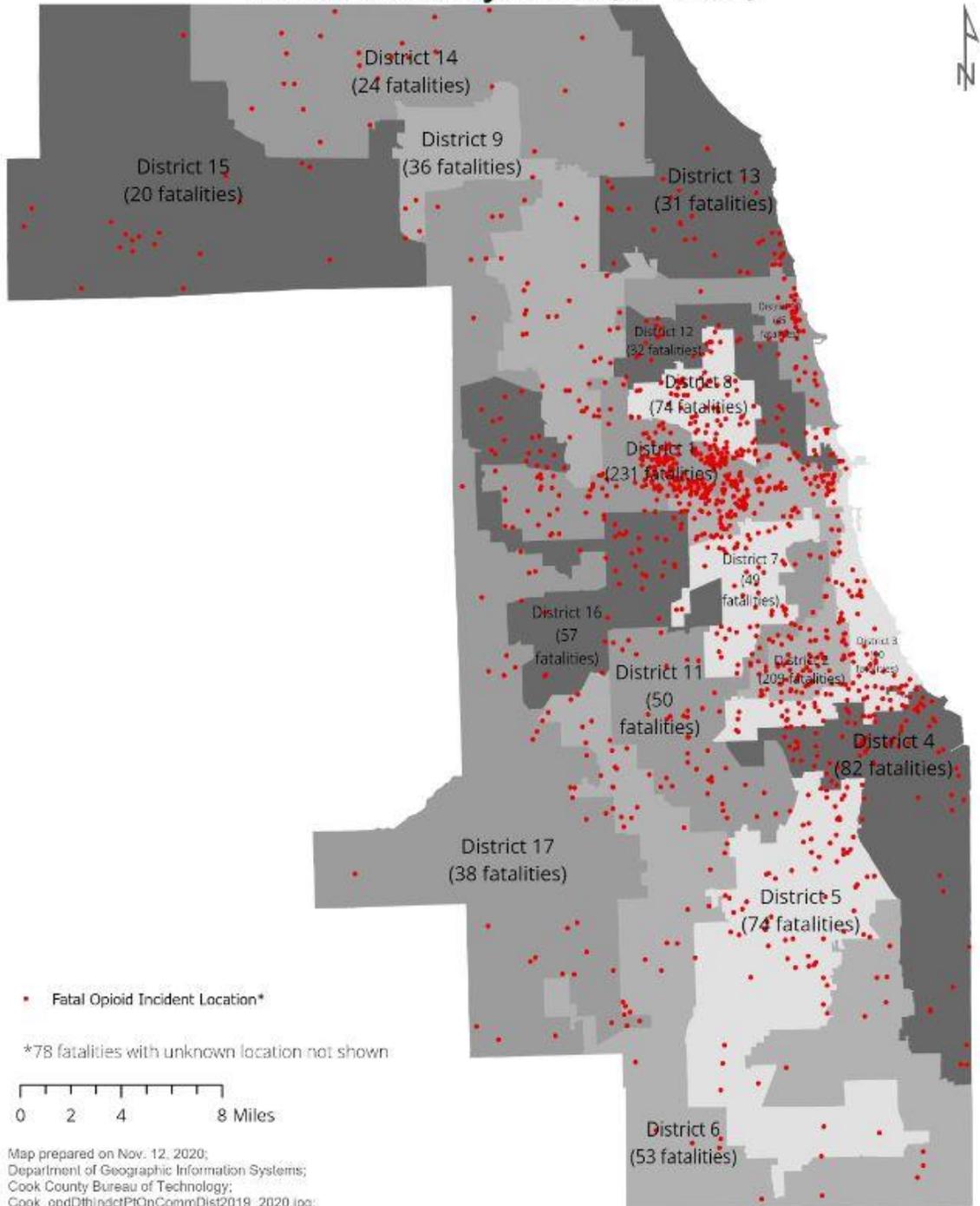
3.6. Fatal Opioid Overdose. CCMEO investigated a total of 1,273 fatal opioid overdoses from January 1, 2019 to December 31, 2019. The breakdown of fatal opioid overdoses by month and year is shown in Fig. 1. The number of fatal opioid overdoses in December 2019 (n=157) was higher than any other month over the last four years. Fatal opioid overdose increased by 15.8 percent from 2016 (n=1,099) to 2019 (n=1,273). In 2019, fatal opioid overdoses increased by 11 percent compared to the previous year.



Fatal opioid overdoses did not show a consistent trend in 2019. In 2019, the highest and lowest number of fatal opioid overdose was in December (n=157) and April (n=79), respectively.

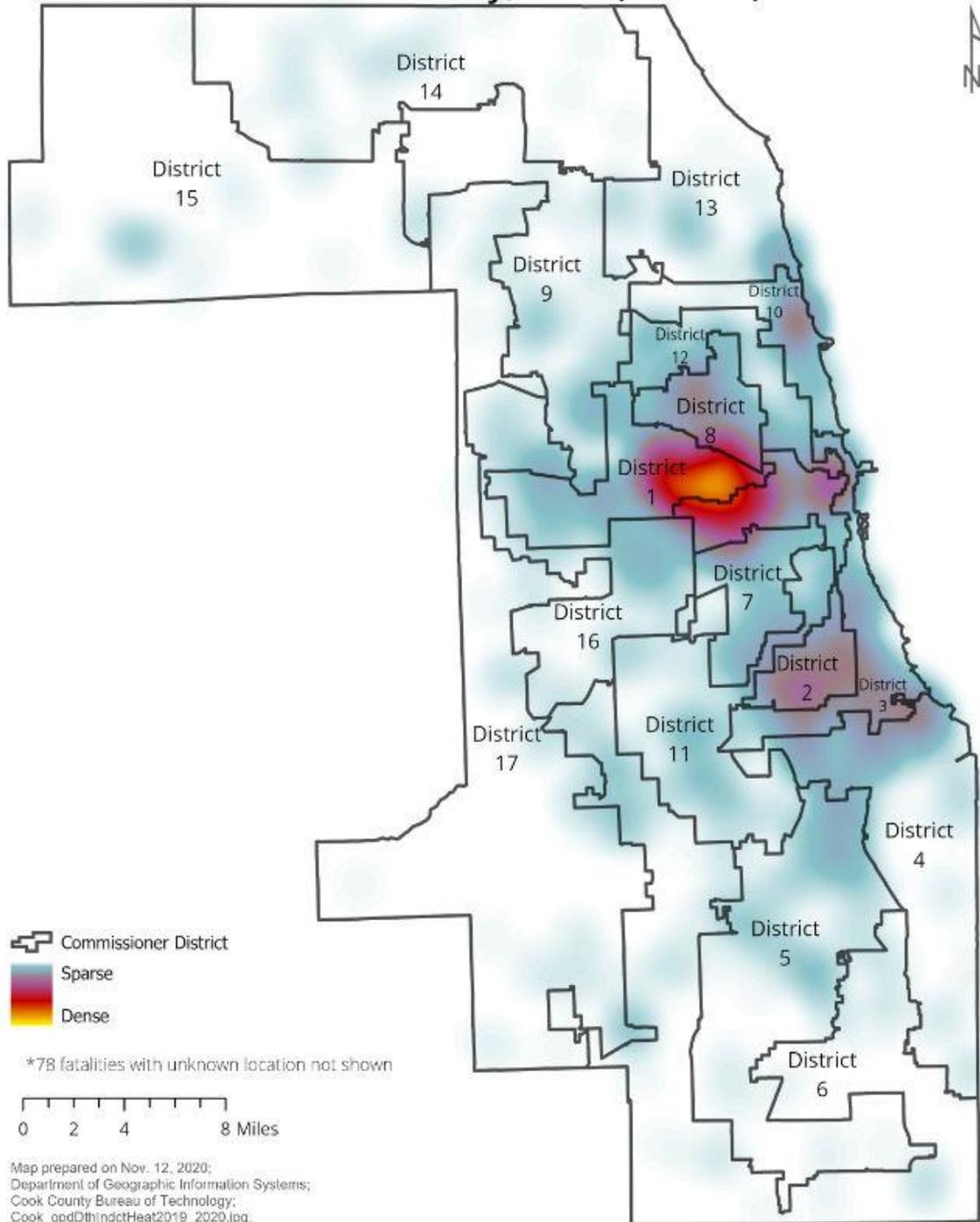
3. SPECIAL GROUPS

Opioid-Related Fatality Incident Locations in Cook County, 2019 (N=1273)



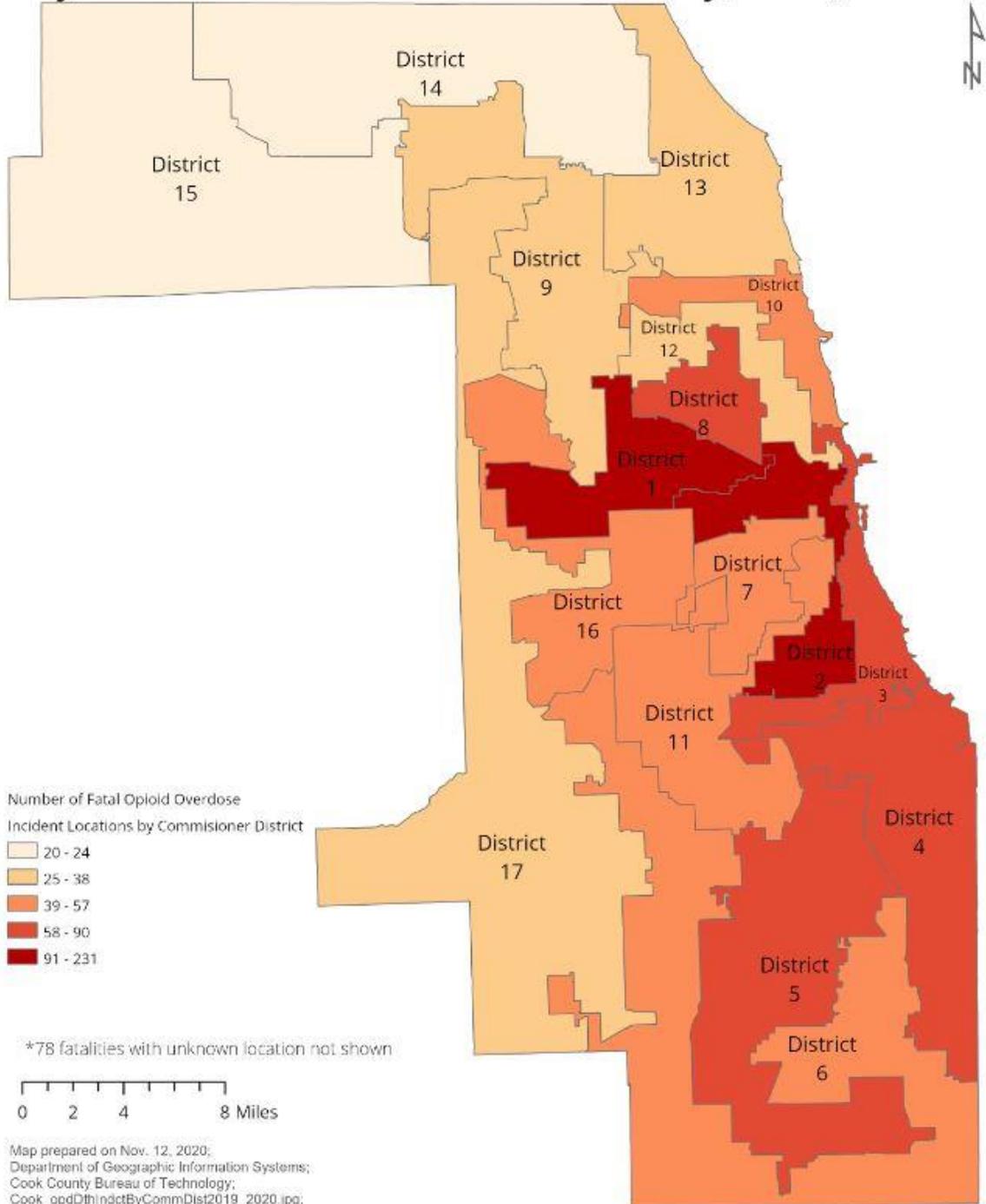
3. SPECIAL GROUPS

Opioid-Related Fatality Incident Concentration in Cook County, 2019 (N=1273)



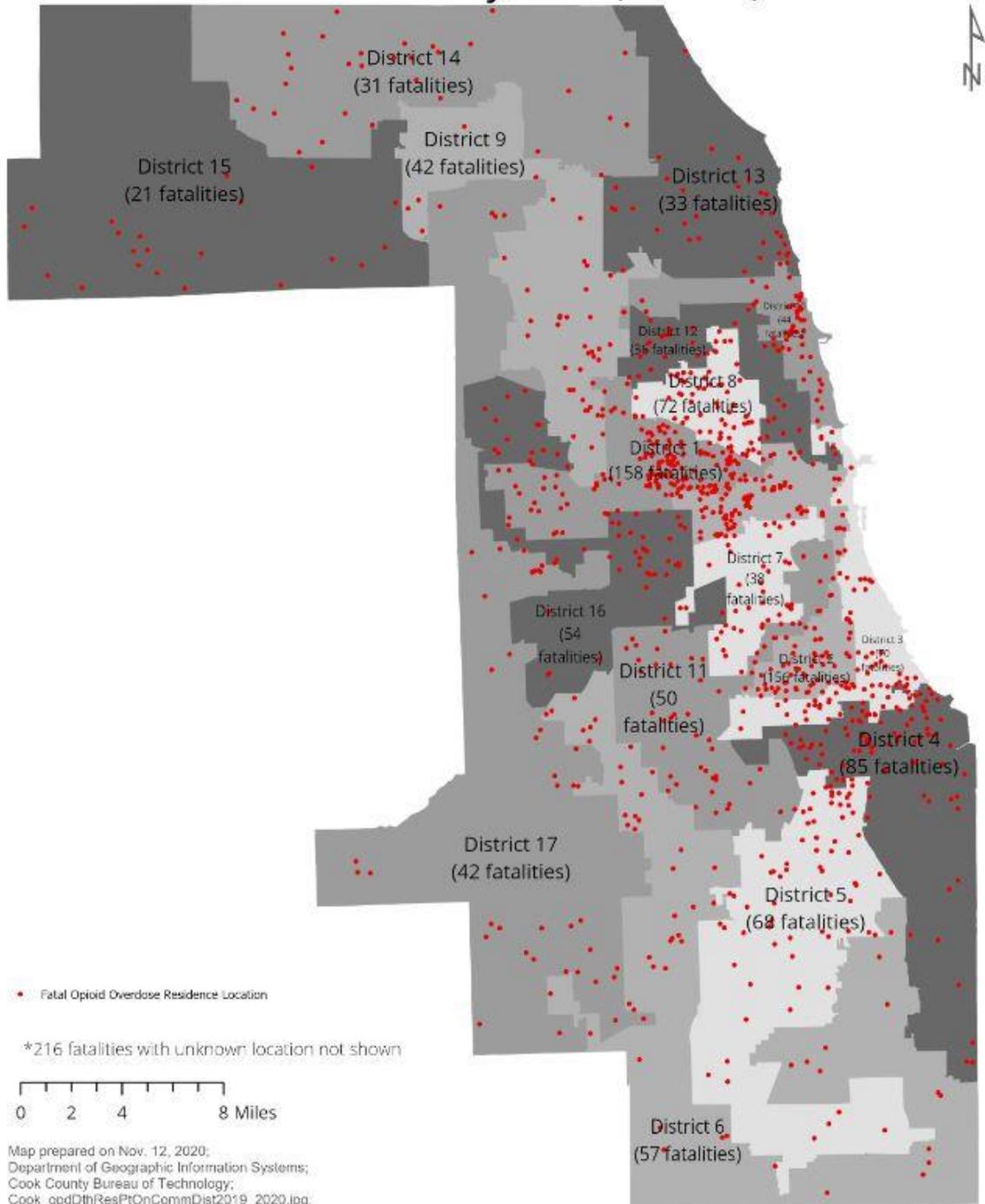
3. SPECIAL GROUPS

Opioid-Related Fatality Incident Locations by Commissioner District in Cook County, 2019 (N=1273)



3. SPECIAL GROUPS

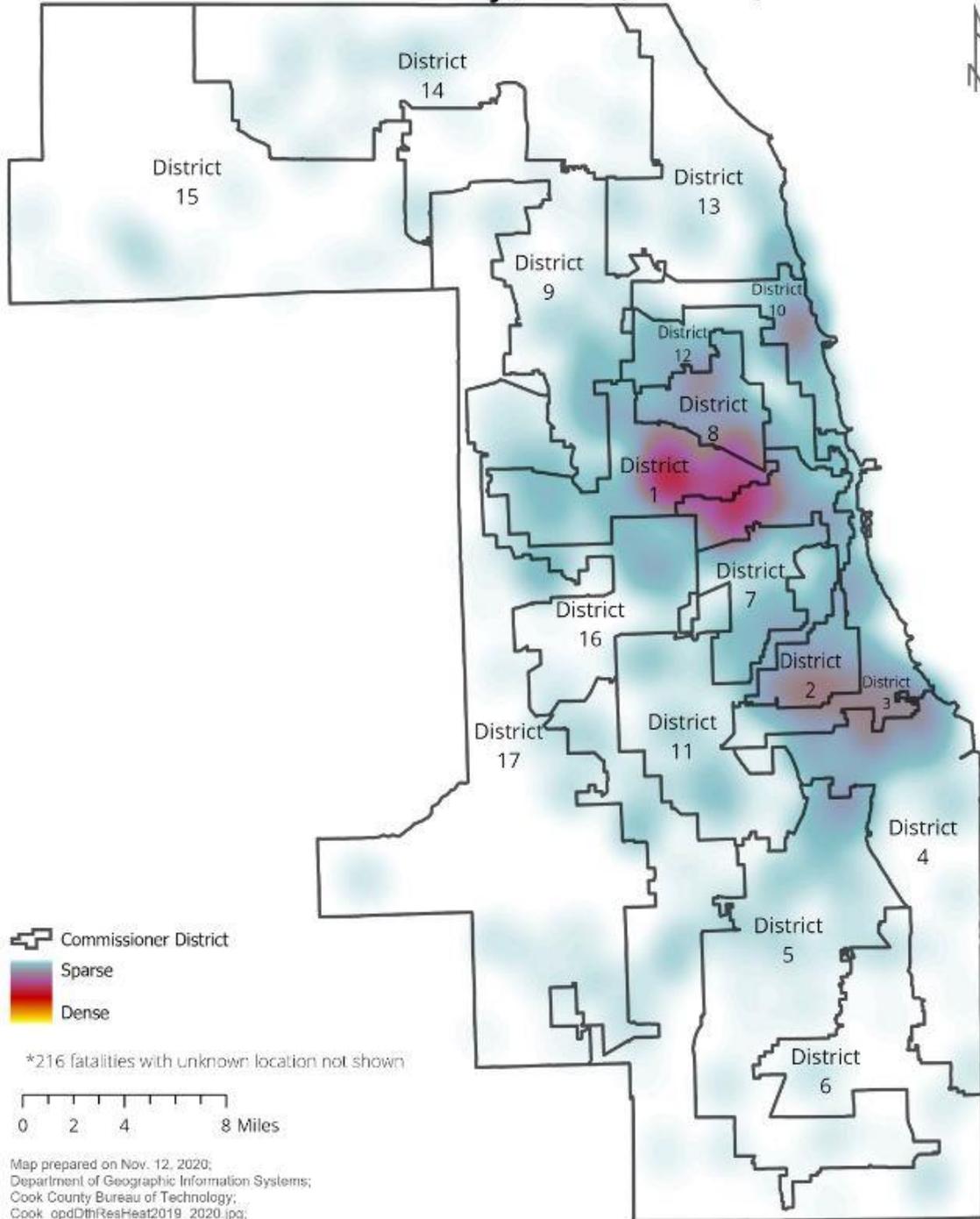
Opioid-Related Fatality Resident Locations in Cook County, 2019 (N=1273)



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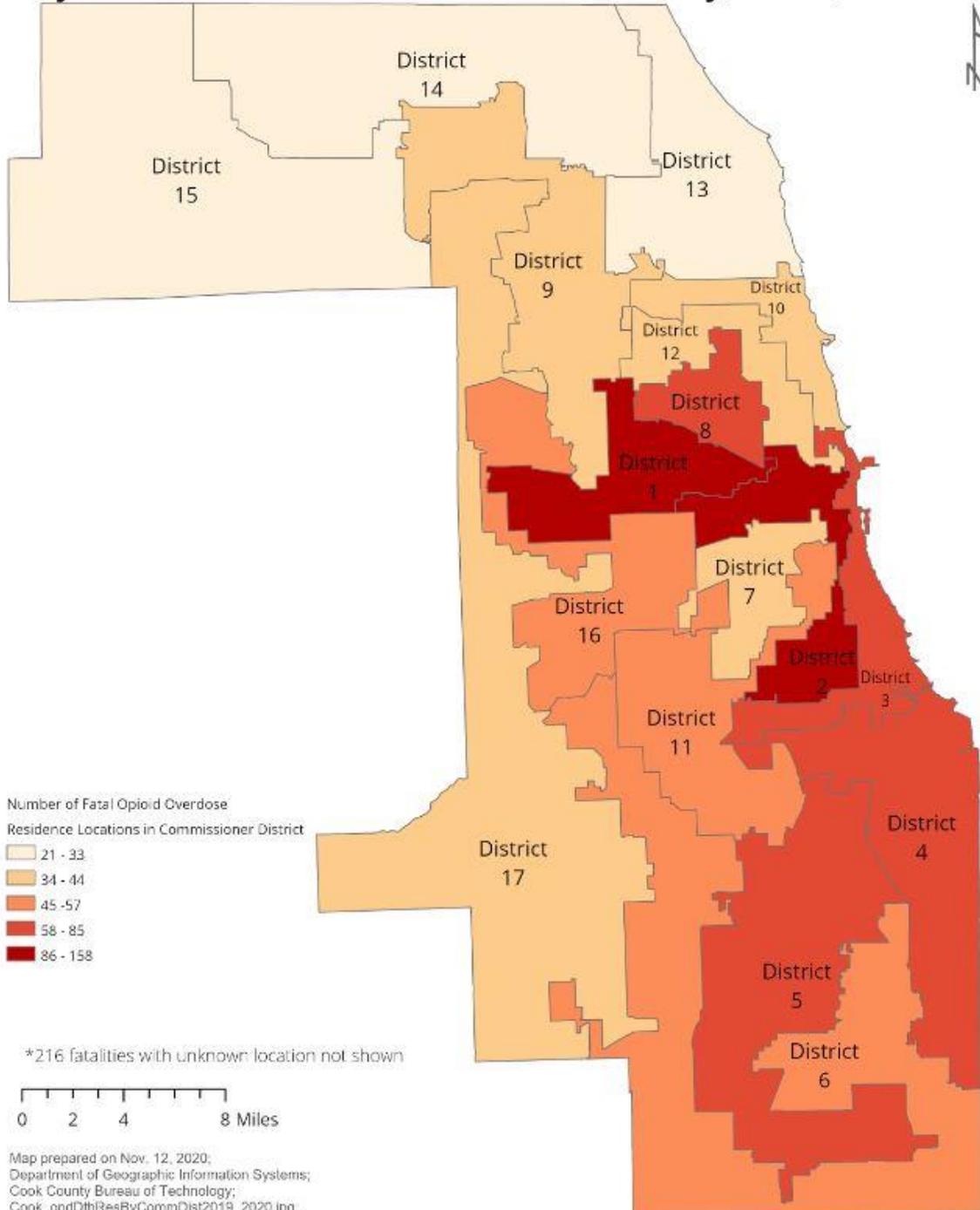
3. SPECIAL GROUPS

Opioid-Related Fatality Resident Concentration in Cook County, 2019 (N=1273)



3. SPECIAL GROUPS

Opioid-Related Fatality Resident Locations by Commissioner District in Cook County, 2019 (N=1273)

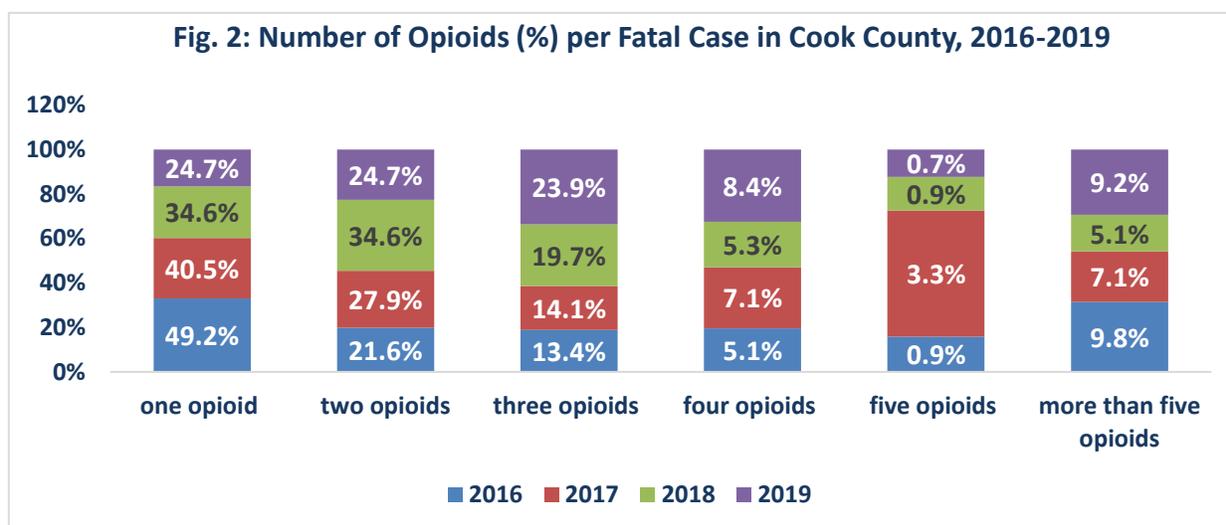


3. SPECIAL GROUPS

Number of Opioids per Fatal Case. The number of identified opioids²⁴ per fatal overdose case ranged from one to more than five. From 2016 to 2019, percent of opioid overdose cases with one and two opioids decreased by 25 percent and 3 percent, respectively. Despite this decrease, the percent of opioid overdose cases with three and four opioids per case showed an increasing trend over the same period. Percent of cases with three and four opioids per case increased by 10.5 percent and 3.3 percent, respectively. Such increase in the percent of opioids per case can be attributed to the increased percent of fentanyl and prescription opioids (Tables 2-3 and Figs. 3-4). Data revealed that percent of fatal overdose cases with two fentanyl increased from 2016 (30%) to 2019 (52%). Moreover, percent of cases with one prescription opioid increased over the same time (70% to 87%).

Table 1. Number of Opioids per Fatal Case in Cook County, 2016-2019

Number of Opioids	2016	2017	2018	2019
One Opioid (%)	49.2%	40.5%	34.6%	24.7%
Two Opioids (%)	21.6%	27.9%	34.6%	24.7%
Three Opioids (%)	13.4%	14.1%	19.7%	23.9%
Four Opioids (%)	5.1%	7.1%	5.3%	8.4%
Five Opioids (%)	0.9%	3.3%	0.9%	0.7%
More than Five Opioids (%)	9.8%	7.1%	5.1%	9.2%
Total	100%	100%	100%	100%

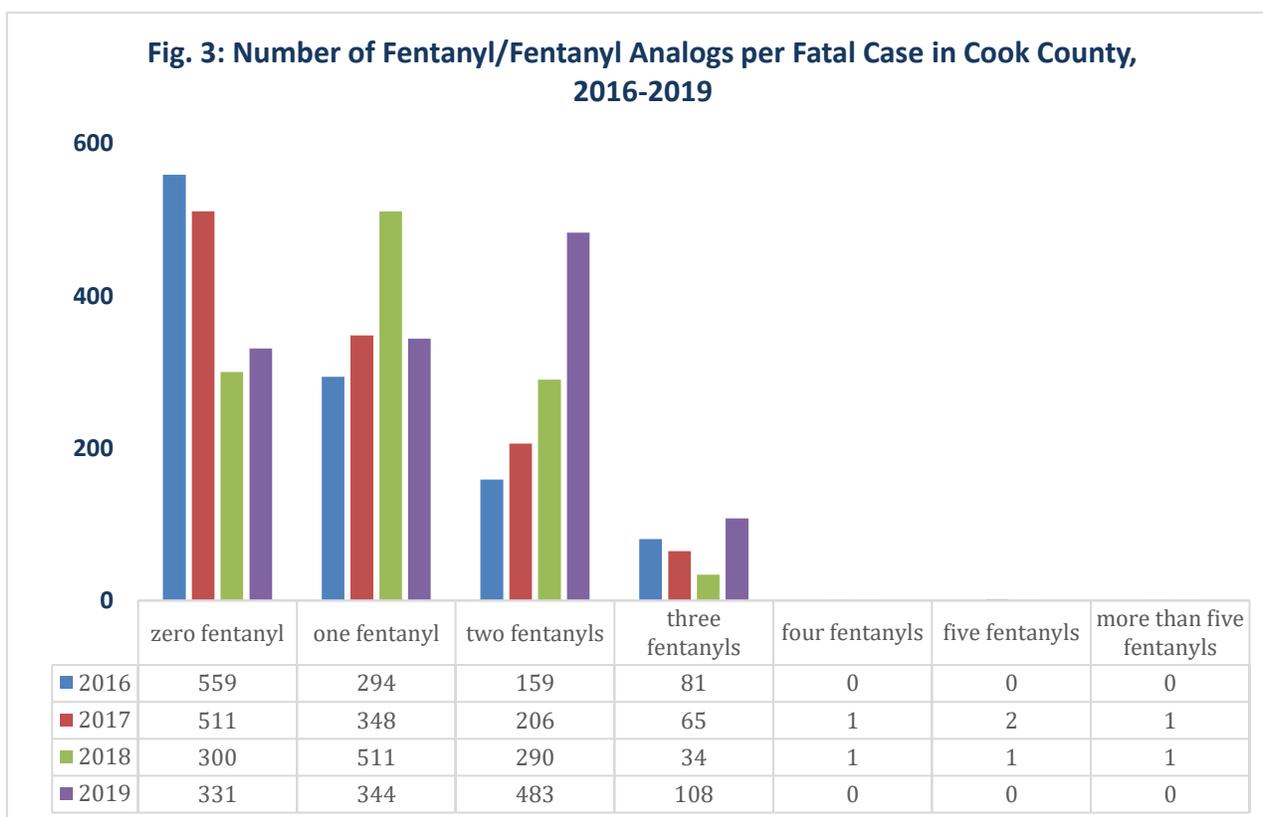


²⁴ Classification of Opioids into Fentanyl/Fentanyl Analogs, Prescription Opioids, and Other Opioids Groups is based on the following reference: National Institute on Drug Abuse. (2020, June). Retrieved from Commonly Abused Drugs Charts: <https://www.drugabuse.gov/drugs-abuse/commonly-abused-drugs-charts> on 2020

3. SPECIAL GROUPS

Table 2. Number of Fentanyl/Fentanyl Analogs²⁵ per Fatal Case in Cook County, 2016-

Number of Fentanyl/Fentanyl Analog	2016	2017	2018	2019
Zero Fentanyl	559	511	300	331
One Fentanyl	294	348	511	344
Two Fentanyls	159	206	290	483
Three Fentanyls	81	65	34	108
Four Fentanyls	0	1	1	0
Five Fentanyls	0	2	1	0
More than Five Fentanyls	0	1	1	0
# of Fatal Cases Involving Fentanyl	534	623	838	935
# of Opioid Overdose Cases	1,099	1,167	1,146	1,273



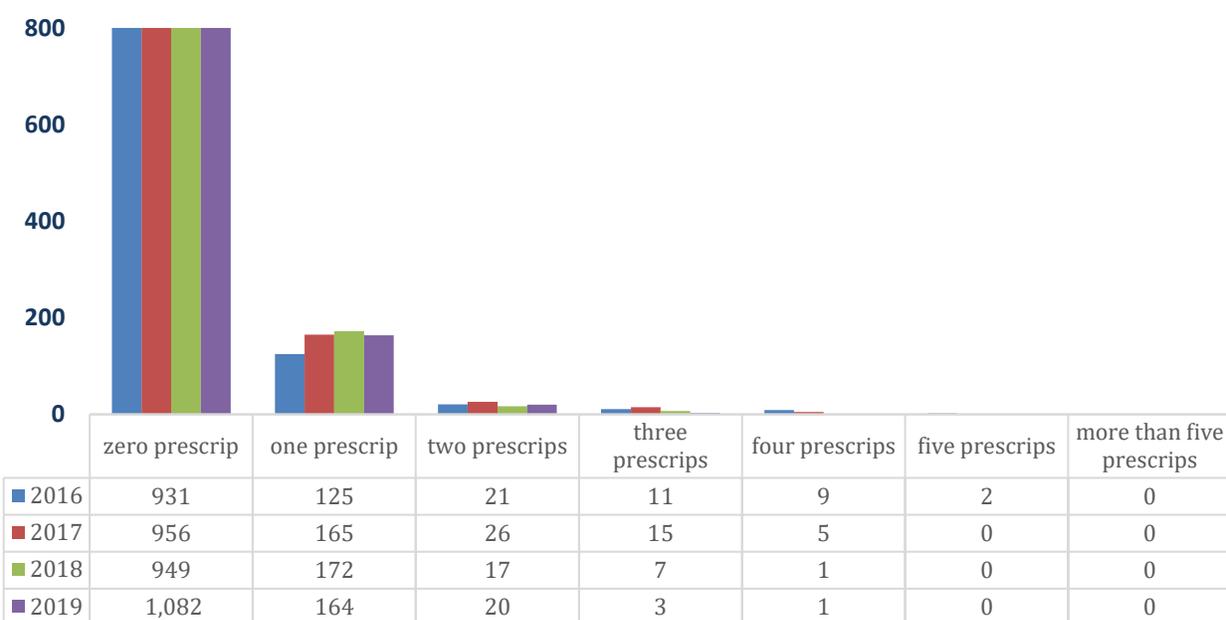
²⁵ acetyl fentanyl, acryl fentanyl, carfentanil, cyclopropyl fentanyl, despropionyl fentanyl, fentanyl, furanyl fentanyl, methoxyacetyl fentanyl, norfentanyl, valeryl fentanyl

3. SPECIAL GROUPS

Table 3. Number of Prescription Opioids²⁶ per Fatal Case in Cook County, 2016-

Number of Other Opioids	2016	2017	2018	2019
Zero Prescription	931	956	949	1,082
One Prescription	125	165	172	164
Two Prescriptions	21	26	17	20
Three Prescriptions	11	15	7	3
Four Prescriptions	9	5	1	1
Five Prescriptions	2	0	0	0
More than Five Prescriptions	0	0	0	0
# of Fatal Cases Involving Prescription Opioids	177	211	197	188
# of Opioid Overdose Cases	1,099	1,167	1,146	1,273

Fig. 4: Number of Prescription Opioids per Fatal Case in Cook County, 2016-2019



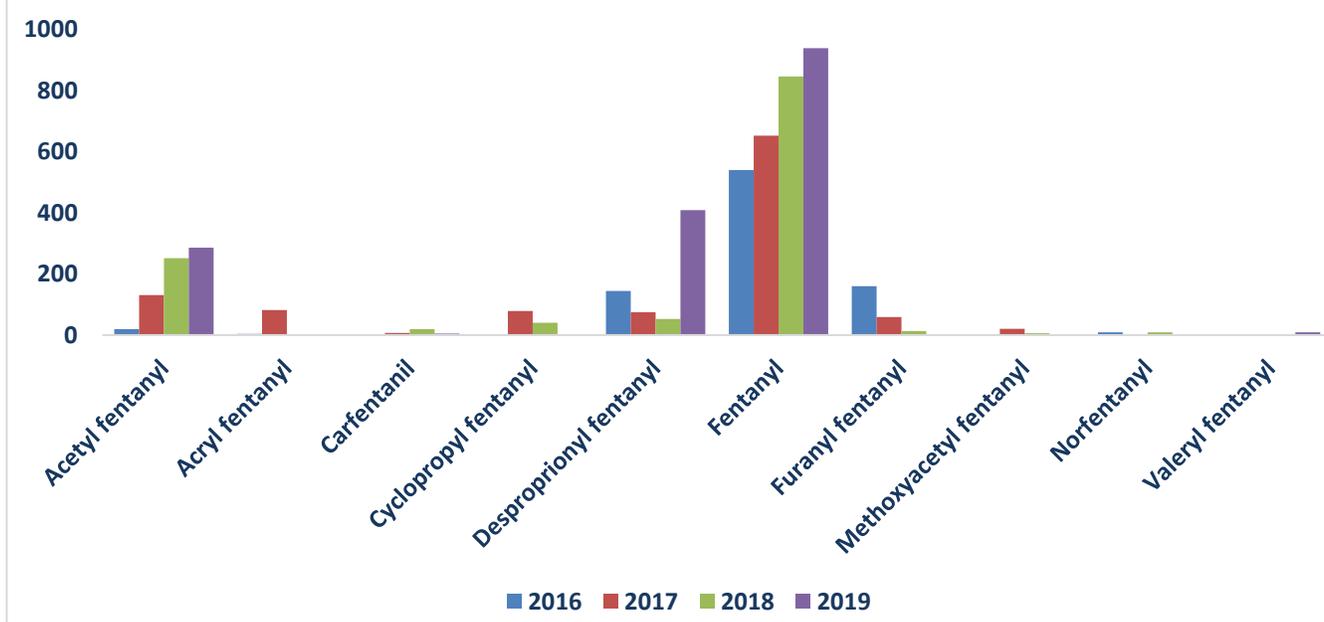
²⁶buprenorphine, codeine, hydrocodone, hydromorphone, methadone, morphine, oxycodone, oxymorphone

3. SPECIAL GROUPS

Table 4. Fatal Opioid Overdose Containing Fentanyl/Fentanyl Analogs in Cook County, 2016-2019

Fentanyl/Fentanyl Analog Group	2016	2017	2018	2019
Acetyl Fentanyl	19	131	251	286
Acryl Fentanyl	4	82	3	0
Carfentanil	3	7	19	5
Cyclopropyl Fentanyl	0	79	40	2
Despropionyl Fentanyl	144	75	53	409
Fentanyl	540	652	845	939
Furanyl Fentanyl	160	59	13	1
Methoxyacetyl Fentanyl	0	20	6	0
Norfentanyl	9	2	9	0
Valeryl Fentanyl	0	0	1	9
# of Opioid Overdose Cases Involving Fentanyl	879	1,107	1,240	1,651
# of Opioid Overdose Cases	1,099	1,167	1,146	1,273

Fig. 5: Fatal Opioid Cases involving Fentanyl/Fentanyl Analogs in Cook County, 2016-2019



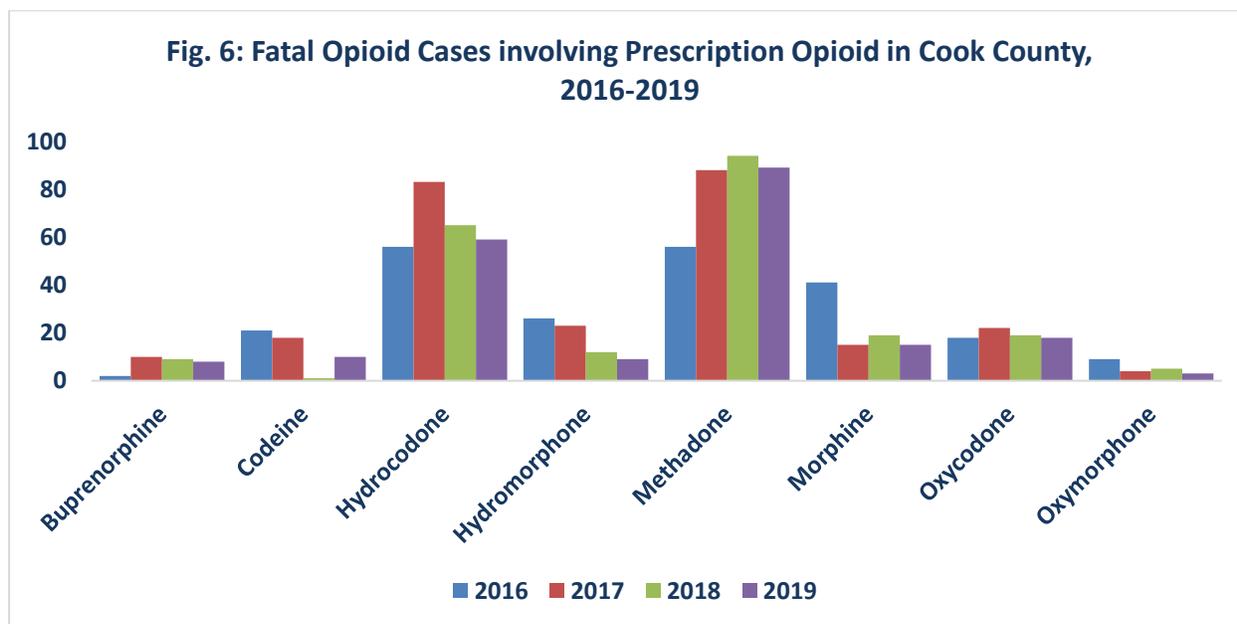
3. SPECIAL GROUPS

Figures 5-7 show the number of fatal opioid overdoses containing fentanyl/fentanyl analogs, prescription opioids and other opioids from 2016 to 2019. As shown in Fig. 6, the most used opioid in this class was fentanyl followed by despropionyl fentanyl and acetyl fentanyl. In 2019, the number of opioid overdose cases containing fentanyl increased by 11 percent compared to the previous year.

3. SPECIAL GROUPS

Table 5. Fatal Opioid Overdose Involving Prescription Opioids in Cook County, 2016-2019

Prescription Opioid Group	2016	2017	2018	2019
Buprenorphine	2	10	9	8
Codeine	21	18	1	10
Hydrocodone	56	83	65	59
Hydromorphone	26	23	12	9
Meperidine	56	88	94	89
Methadone	41	15	19	15
Morphine	18	22	19	18
Oxycodone	9	4	5	3
Oxymorphone	2	10	9	8
# of Opioid Overdose Cases Involving Prescription Opioids	229	263	224	211
# of Opioid Overdose Cases	1,099	1,167	1,146	1,273

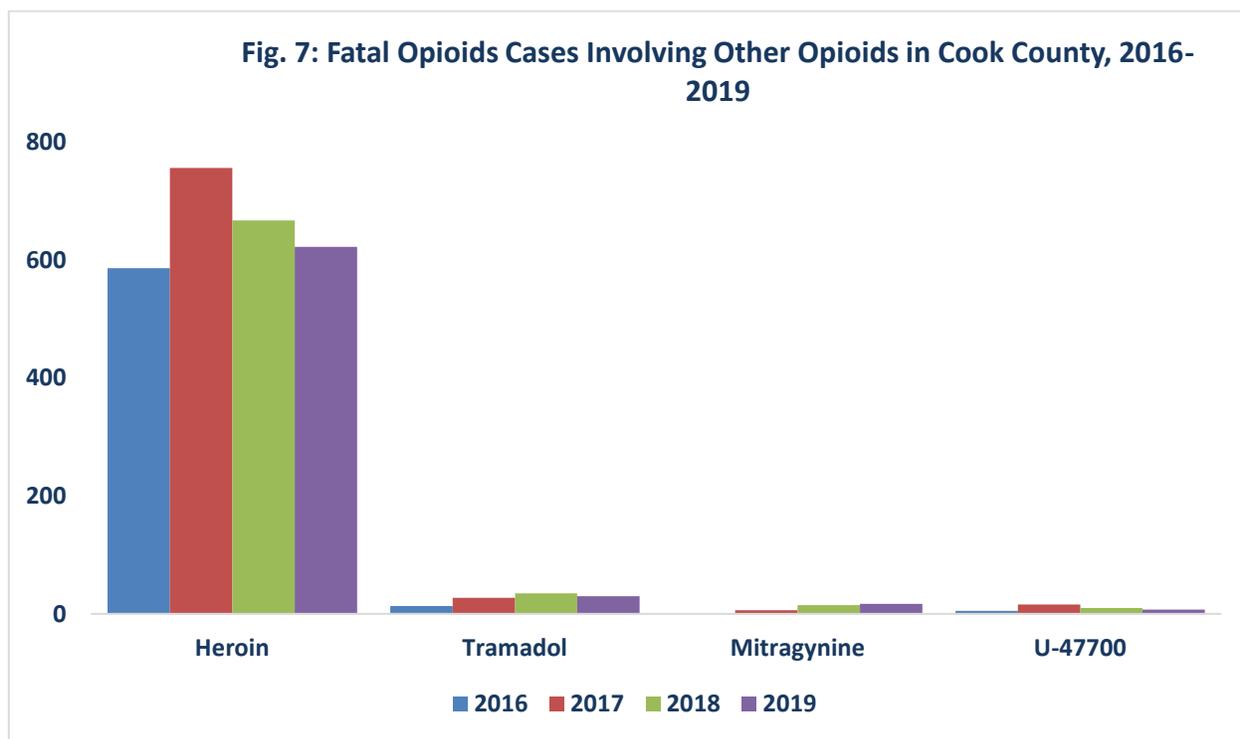


The total number of fatal overdoses containing prescription opioids decreased by 6 percent from 2018 (n=224) to 2019 (n=211). The most prevalent opioid in this class was methadone followed by hydrocodone. From 2018 to 2019, number of fatalities containing methadone and hydrocodone decreased by 5 percent and 9 percent, respectively.

3. SPECIAL GROUPS

Table 6. Fatal Opioid Overdose Containing Other Opioids in Cook County, 2016-2019

Other Opioids Group	2016	2017	2018	2019
Heroin	586	756	667	622
Tramadol	13	27	35	30
Mitragynine	1	6	15	17
U-47700	5	16	10	7
# of Opioid Overdose Cases Involving Other Opioids	605	805	727	676
# of Opioid Overdose Cases	1,099	1,167	1,146	1,273

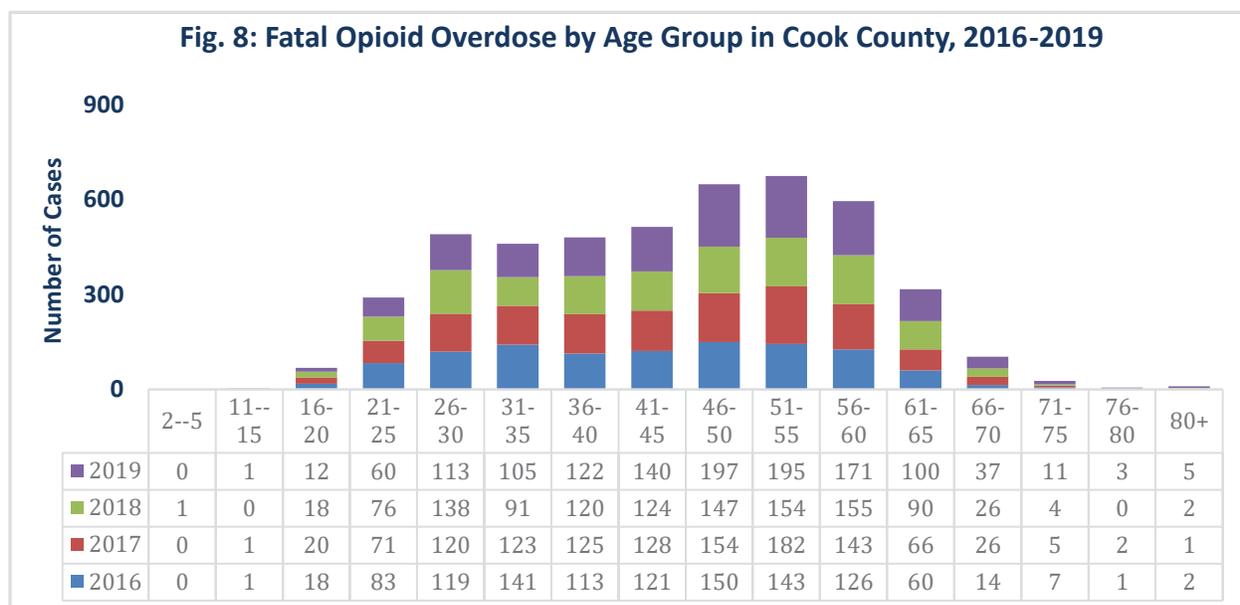


The most common opioid in this class is heroin followed by tramadol. The number of opioid overdose cases containing heroin decreased by 7 percent from 2018 (n=667) to 2019 (n=622). Moreover, the number of opioid cases containing tramadol decreased by 14 percent from 2018 to 2019.

3. SPECIAL GROUPS

Table 7. Fatal Opioid Overdose by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 to 1	0	0	0	0
2 to 5	0	0	1	0
6 to 10	1	1	0	1
11 to 15	18	20	18	12
16 to 20	83	71	76	60
21 to 25	119	120	138	113
26 to 30	141	123	91	105
31 to 35	113	125	120	122
36 to 40	121	128	124	140
41 to 45	150	154	147	197
46 to 50	143	182	154	196
51 to 55	126	143	155	171
56 to 60	60	66	90	100
61 to 65	14	26	26	37
66 to 70	7	5	4	11
71 to 75	1	2	0	3
76 to 80	2	1	2	5
80+	0	0	0	0
Total	1,099	1,167	1,146	1,273

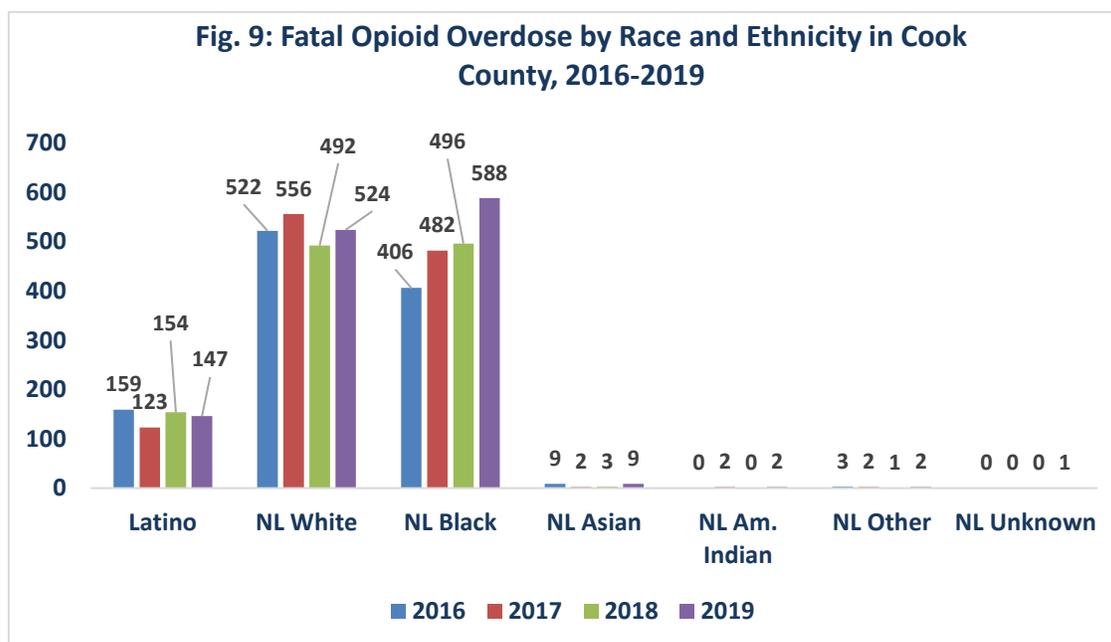


Most opioid overdose cases (59-65%) were observed in the age range of 36-60-year-olds (Fig. 8). Age group of 46-55 was the biggest contributor.

3. SPECIAL GROUPS

Table 8. Fatal Opioid Overdose by Race and Ethnicity in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	159	123	154	147
NL White	522	556	492	524
NL Black	406	482	496	588
NL Asian	9	2	3	9
NL American Indian	0	2	0	2
NL Other	3	2	1	2
NL Unknown	0	0	0	1
Total	1,099	1,167	1,146	1,273

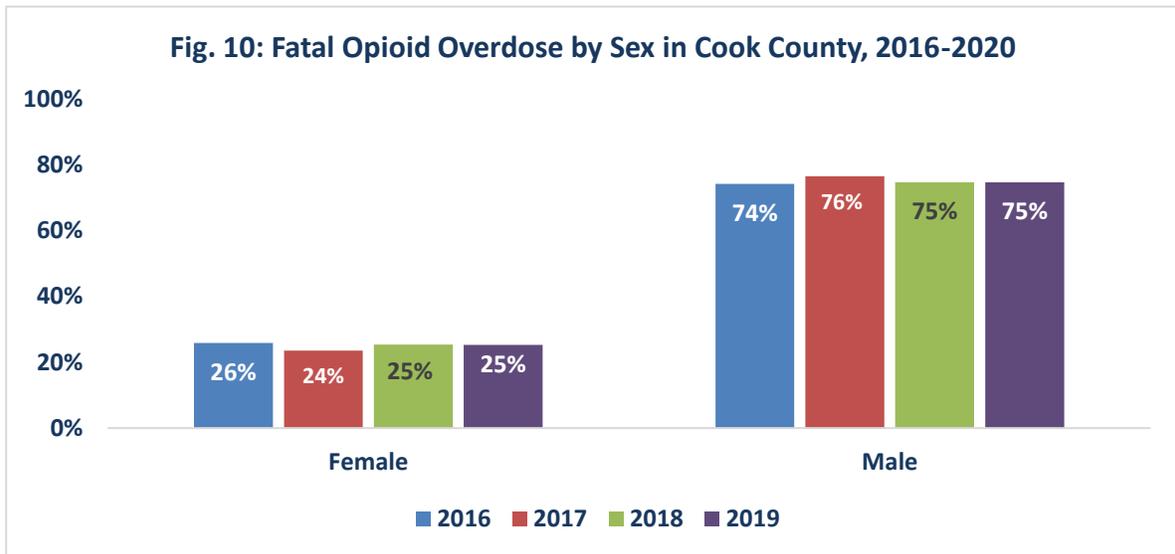


From 2016 to 2019, fatal opioid overdoses were higher in non-Latinos (86%-90%) than Latinos (11%-15%). Among non-Latinos, fatal opioid overdoses did not show a consistent pattern. It was higher among non-Latino Whites than Blacks in 2016 (48% vs. 37%) and 2017 (48% vs. 41%). There was a shift in percent of non-Latino Whites and Blacks in 2018 and 2019. Fatal opioid overdose became higher among non-Latino Blacks (37%-46%) than non-Latino Whites (41%-48%). Another notable finding is the 2.9 percent increase in fatal opioid overdoses among non-Latino Blacks.

3. SPECIAL GROUPS

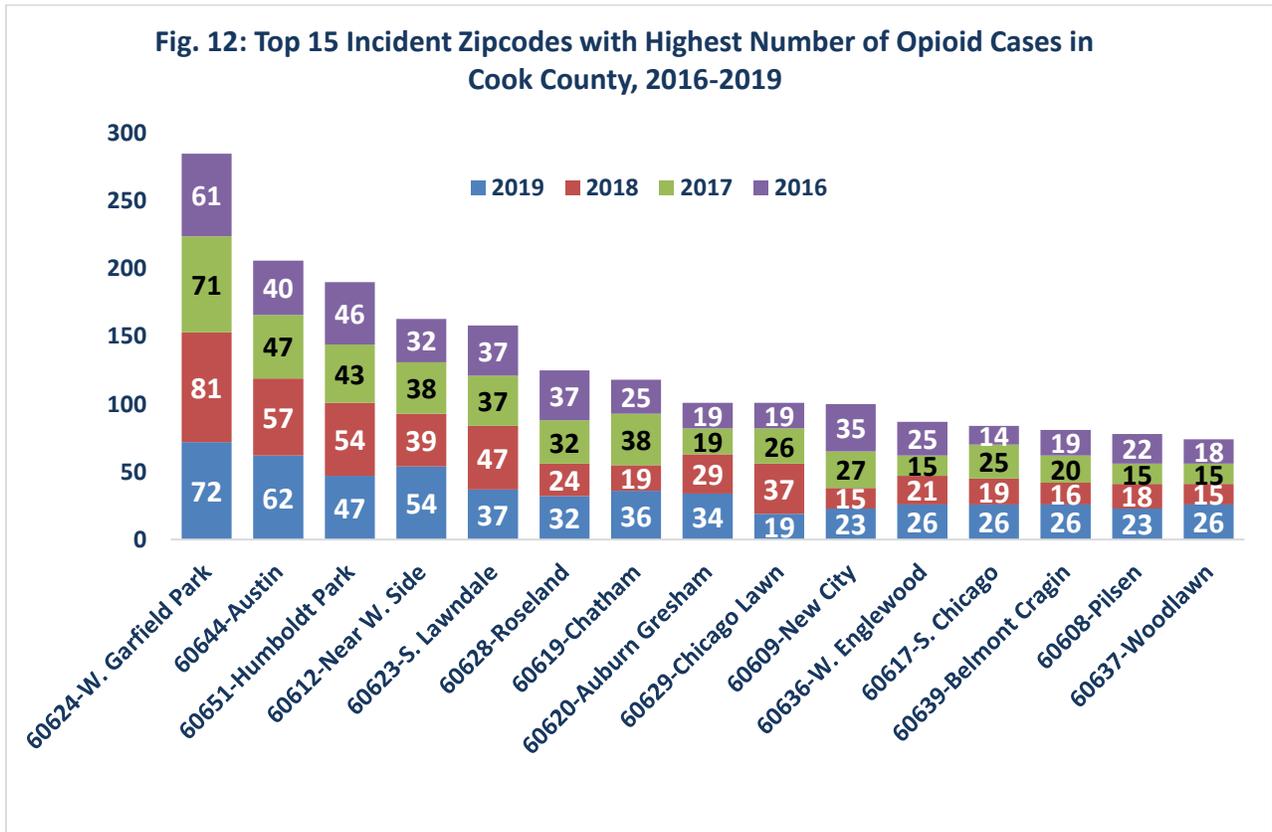
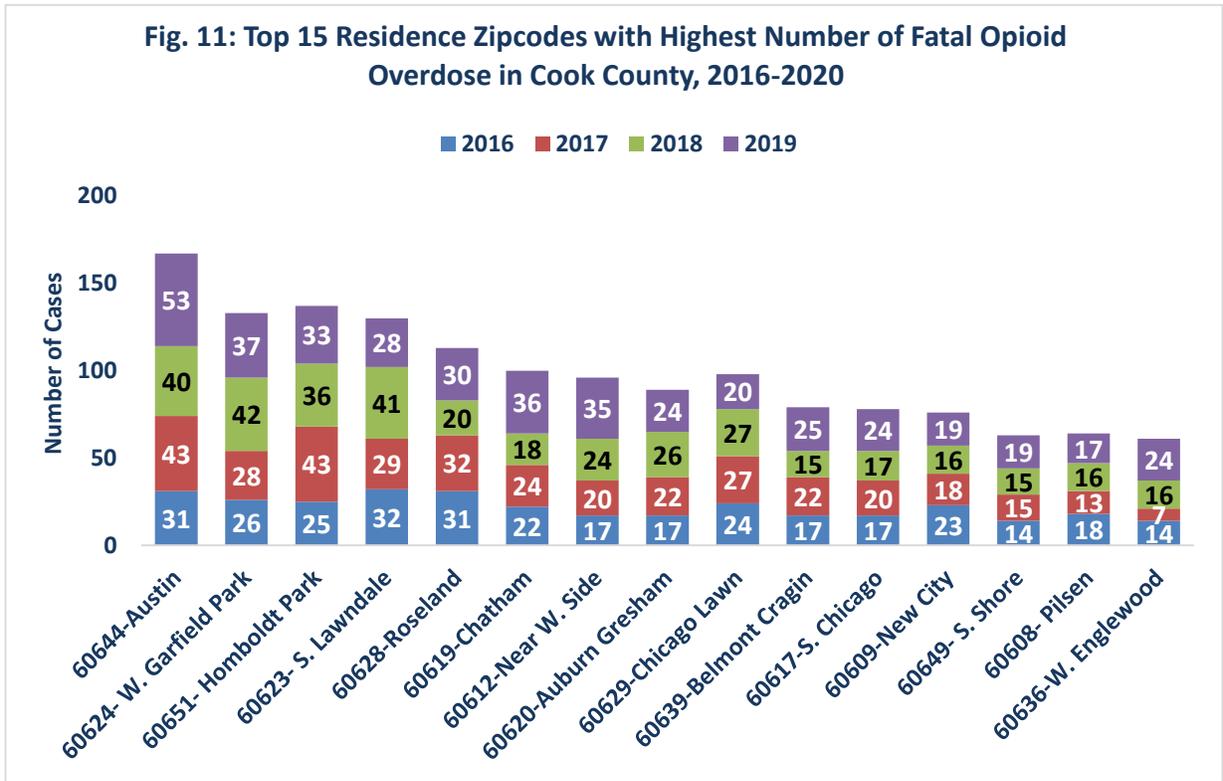
Table 9. Fatal Opioid Overdose by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	284	275	291	321
male	815	892	855	952
Total	1,099	1,167	1,146	1,273



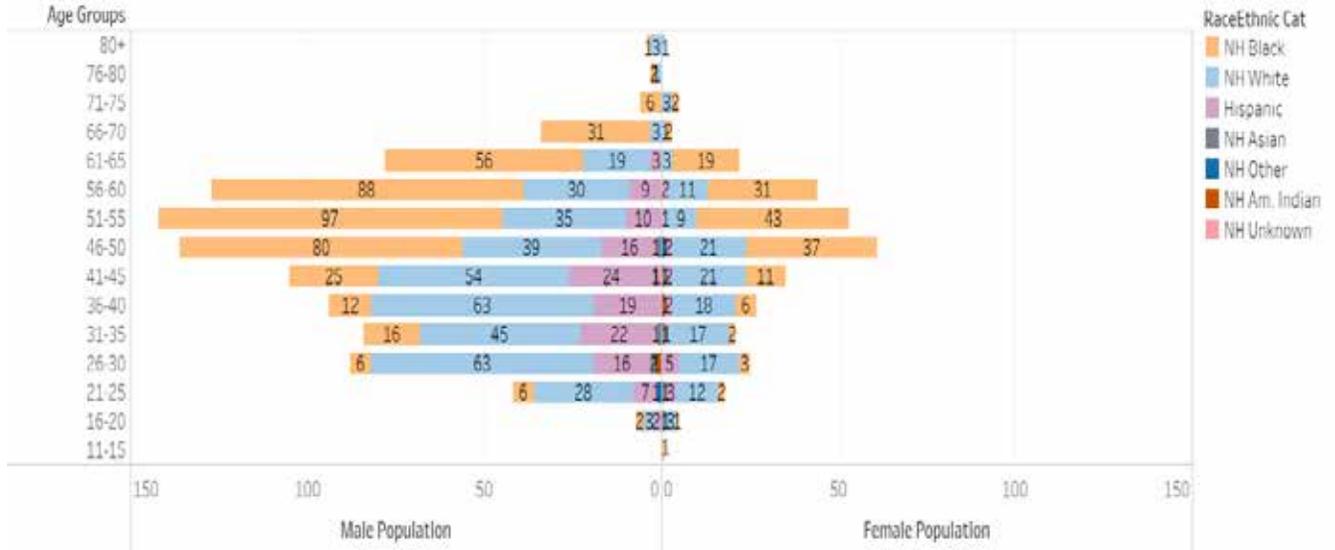
Opioid overdose was higher in males (76%-78%) than females (22%-24%) from 2016 to 2019 (Fig. 10). From 2018 to 2019, percent of males with fatal opioid overdose decreased by one percent while the percent of females increased by one percent over the same period.

3. SPECIAL GROUPS



3. SPECIAL GROUPS

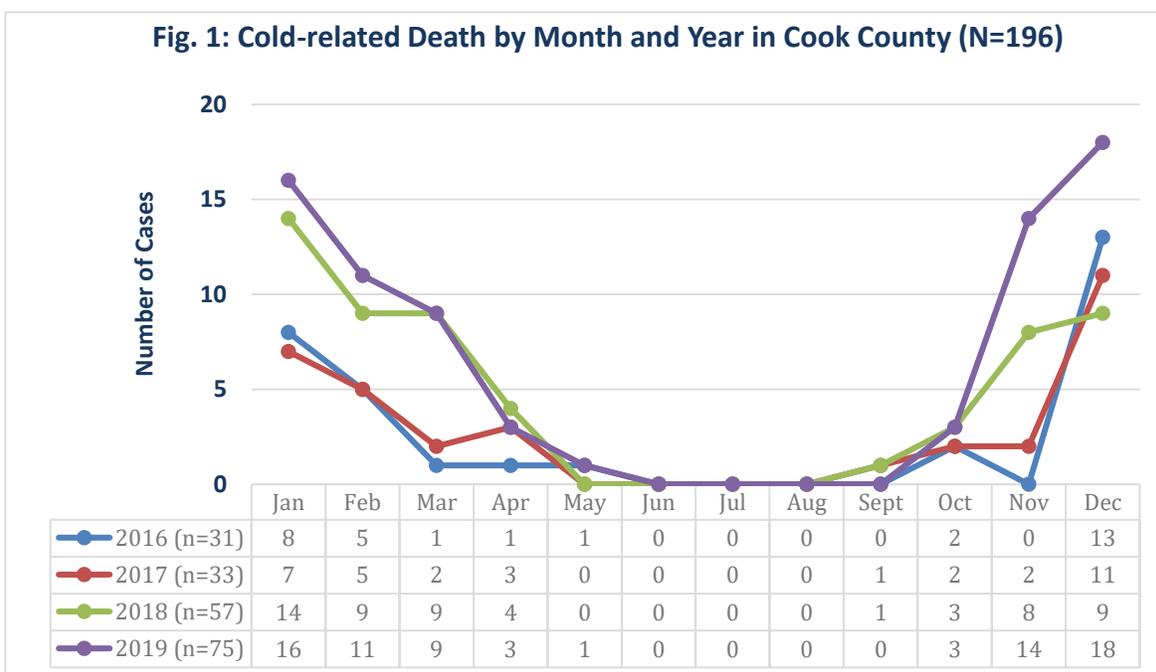
Fig. 13: Fatal Opioid Overdose by Sex, Race/Ethnicity and Age Groups in Cook County, 2019



Figures 8-10 have shown fatal opioid overdose trends by age group, race/ethnicity and sex from 2016 to 2019. Fig. 13 provides information on fatal opioid overdose disparity. As shown in Fig. 10, fatal opioid overdose is higher among males than females (75% vs. 25%). In both sexes, fatal opioid overdose is more prevalent among NL Whites in age groups of 21-45 and among NL Blacks in age groups of 46-75.

3. SPECIAL GROUPS

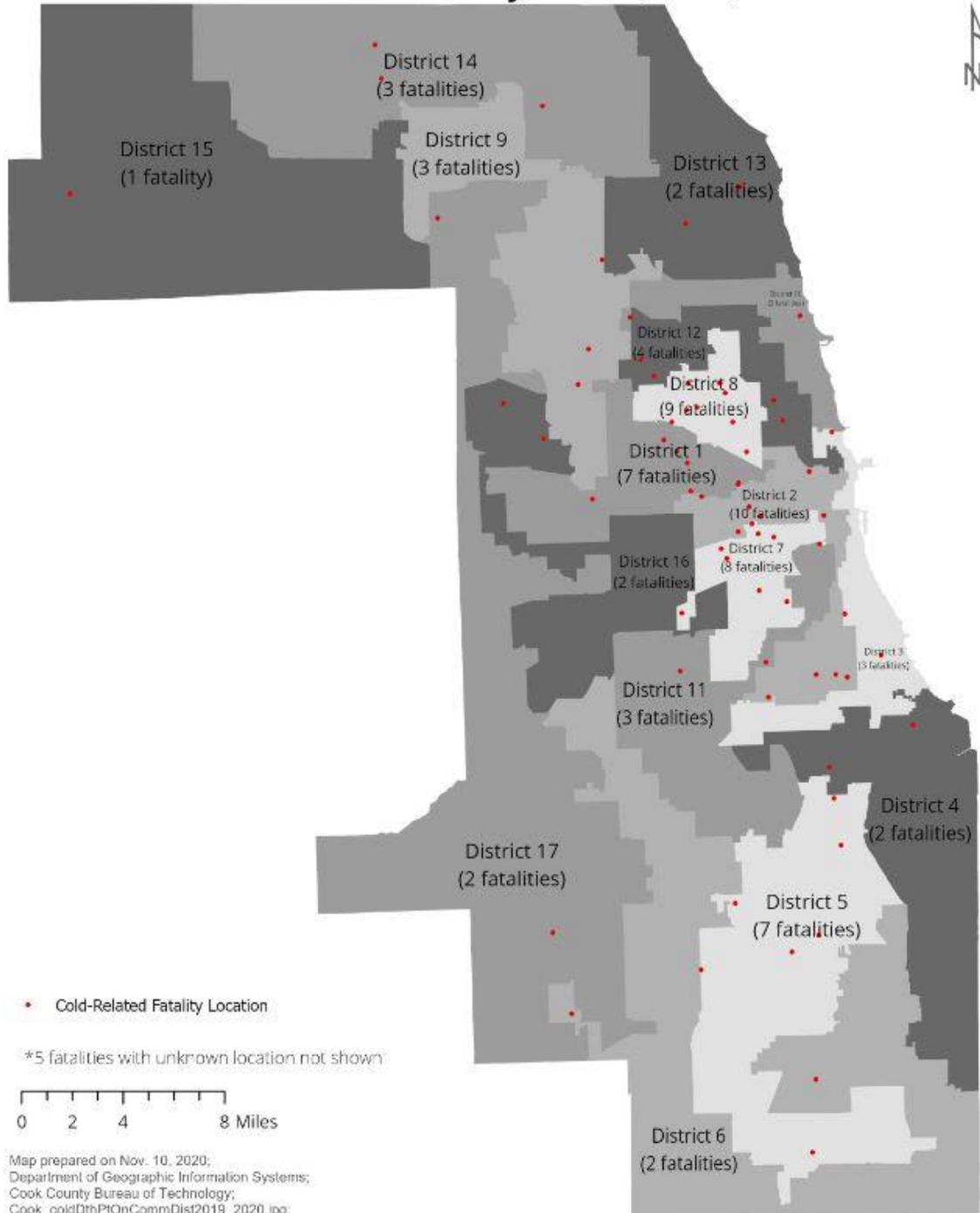
3.7. Cold-related Deaths. CCMEO investigated 75 cold-related deaths in 2019. Of the 75 cases investigated, 40 percent had drug and/or alcohol as the primary cause of death, 34 percent had thermal injuries as the primary cause of death, 20 percent had diseases of circulatory system as the primary cause of death, 2.7 percent had blunt force injuries as the primary cause of death and 2.7 percent had other as primary cause of death. The number of cold-related deaths in December 2019 (n=18) and February 2019 (n=15) was higher than any other month over the last four years. Cold-related death showed a consistent increasing trend from 2016 to 2019. There was an average of 3 cold-related deaths per month in 2016 and 2017, then increased to an average number of 5 per month in 2018 and reached to 6 per month in 2019. Cold-related deaths increased by 141 percent from 2016 (n=31) to 2019 (n=75).



Cold-related deaths did not show a consistent trend in 2019. It was highest in December (n=18) and lowest in June, July, August and September (n=0).

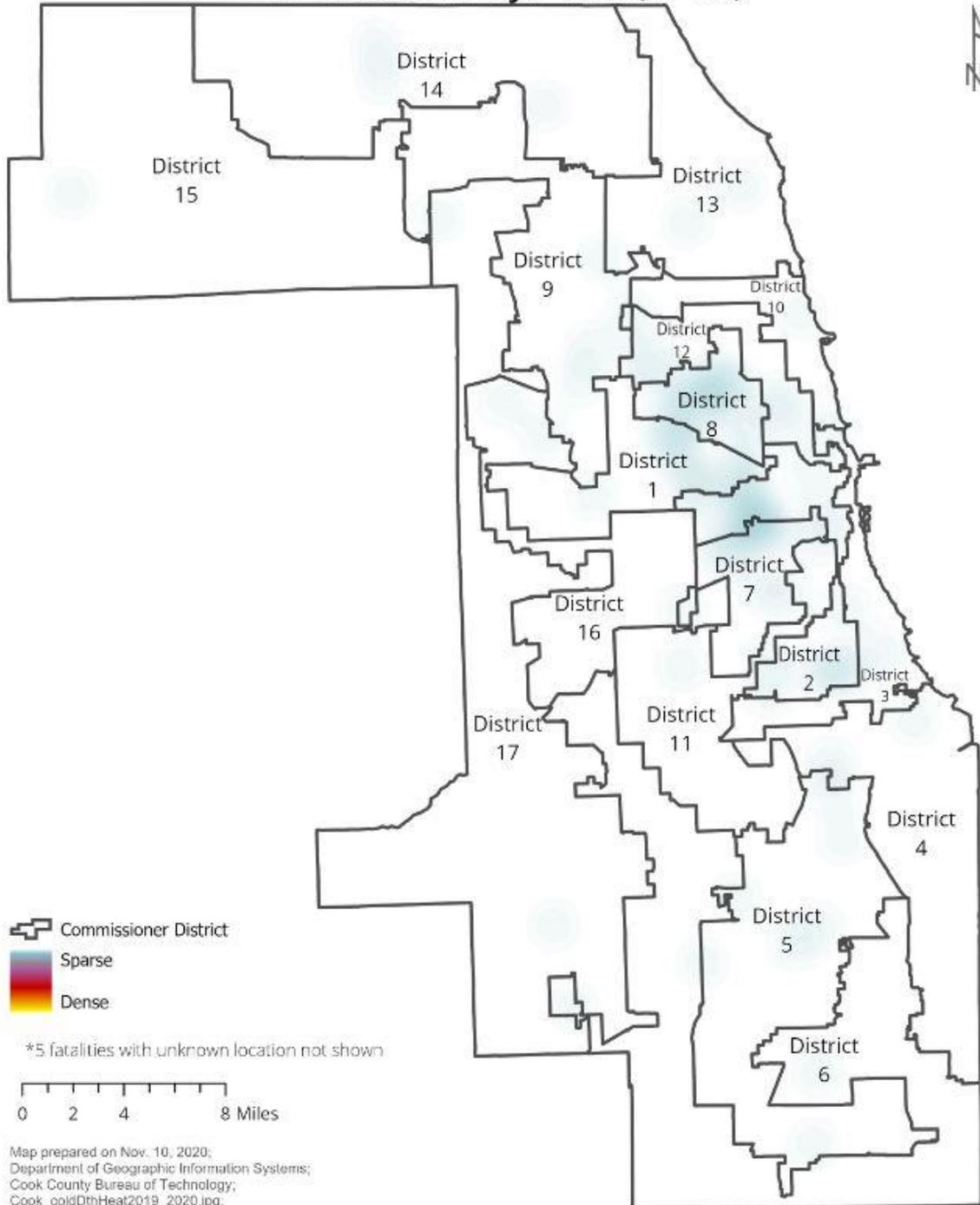
3. SPECIAL GROUPS

Cold-Related Fatality Incident Locations in Cook County, 2019 (N=75)



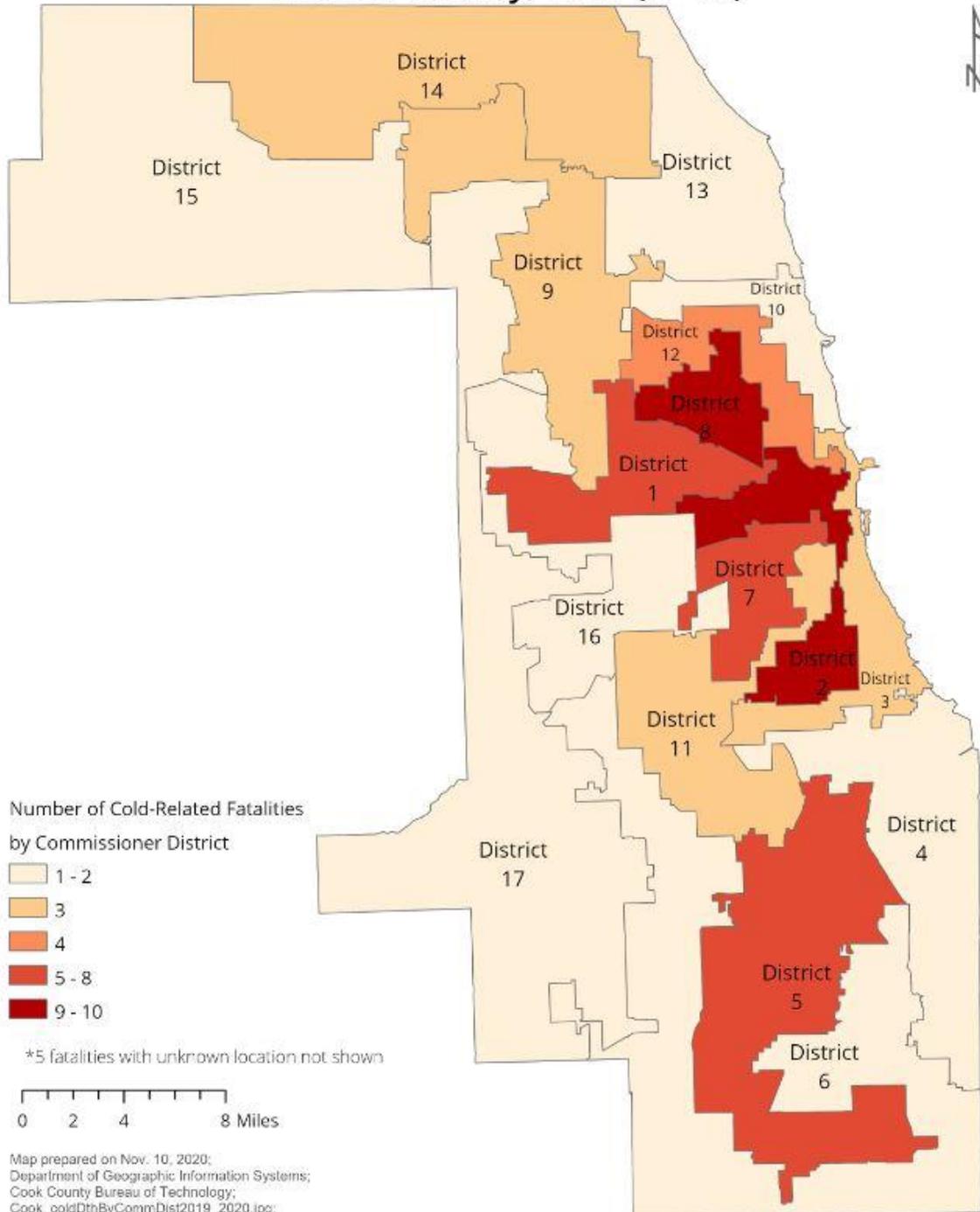
3. SPECIAL GROUPS

Cold-Related Fatality Concentration in Cook County, 2019 (N=75)



3. SPECIAL GROUPS

Cold-Related Fatalities by Commissioner District in Cook County, 2019 (N=75)



Number of Cold-Related Fatalities by Commissioner District

- 1 - 2
- 3
- 4
- 5 - 8
- 9 - 10

*5 fatalities with unknown location not shown

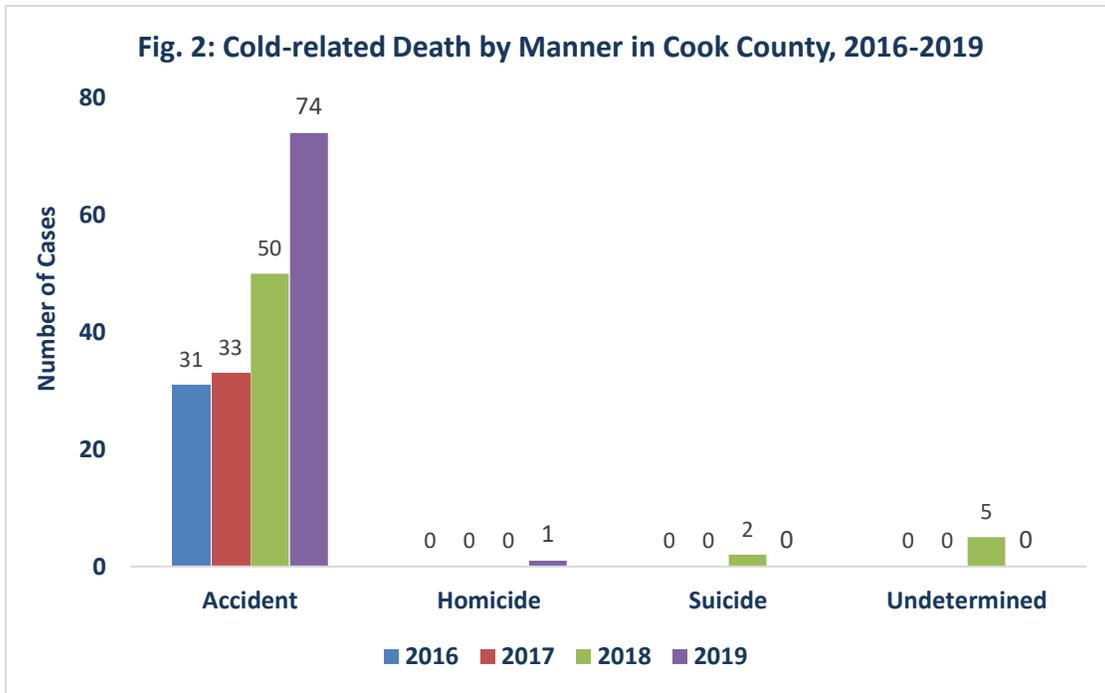
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3. SPECIAL GROUPS

Table 1. Cold-related Death by Manner in Cook County, 2016-2019

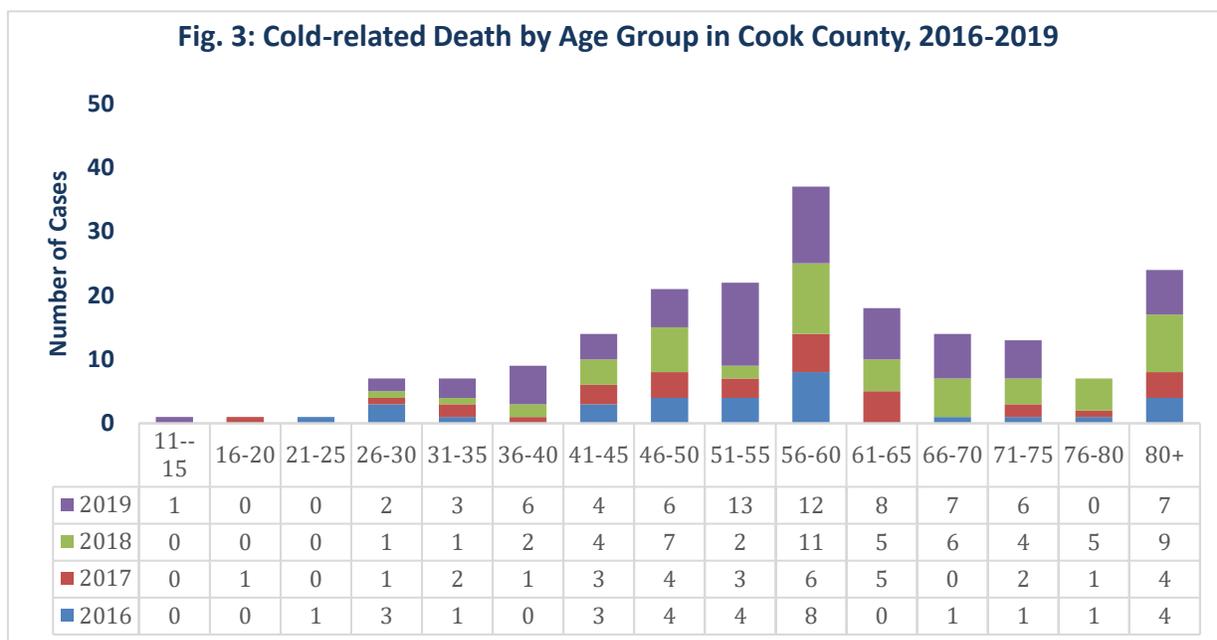
Manner of Death	2016	2017	2018	2019
Accident	31	33	50	74
Homicide	0	0	0	1
Suicide	0	0	2	0
Undetermined	0	0	5	0
Total	31	33	57	75



3. SPECIAL GROUPS

Table 2. Cold-related Death by Age Group in Cook County, 2016-2019

Age Group	2016	2017	2018	2019
0 to 1	0	0	0	0
2 to 5	0	0	0	0
6 to 10	0	0	0	0
11 to 15	0	0	0	1
16 to 20	0	1	0	0
21 to 25	1	0	0	0
26 to 30	3	1	1	2
31 to 35	1	2	1	3
36 to 40	0	1	2	6
41 to 45	3	3	4	4
46 to 50	4	4	7	6
51 to 55	4	3	2	13
56 to 60	8	6	11	12
61 to 65	0	5	5	8
66 to 70	1	0	6	7
71 to 75	1	2	4	6
76 to 80	1	1	5	0
80+	4	4	9	7
Total	31	33	57	75

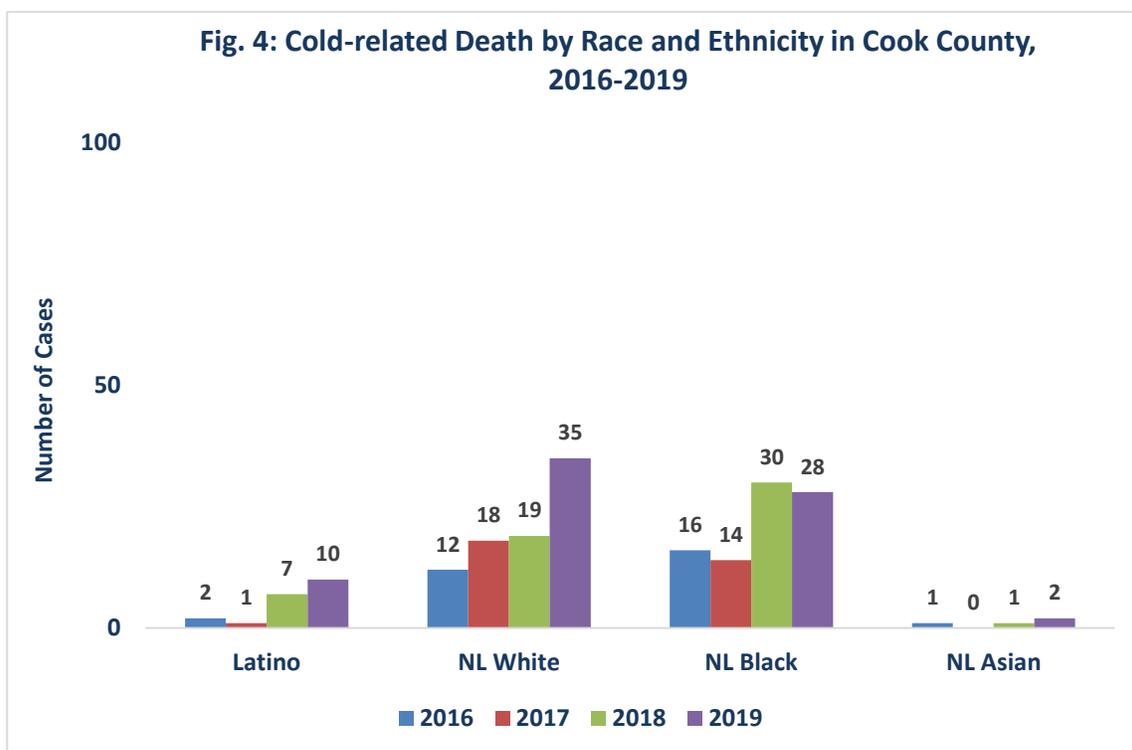


Most cold-related death observed in age group of 51-80+ year-olds (58%-71%) from 2016 to 2019 (Fig. 3). Age group of 56-60-year-olds contributes the most to this number.

3. SPECIAL GROUPS

Table 3. Cold-related Death by Race in Cook County, 2016-2019

Race	2016	2017	2018	2019
Latino	2	1	7	10
NL White	12	18	19	35
NL Black	16	14	30	28
NL Asian	1	0	1	2
Total	31	33	57	75

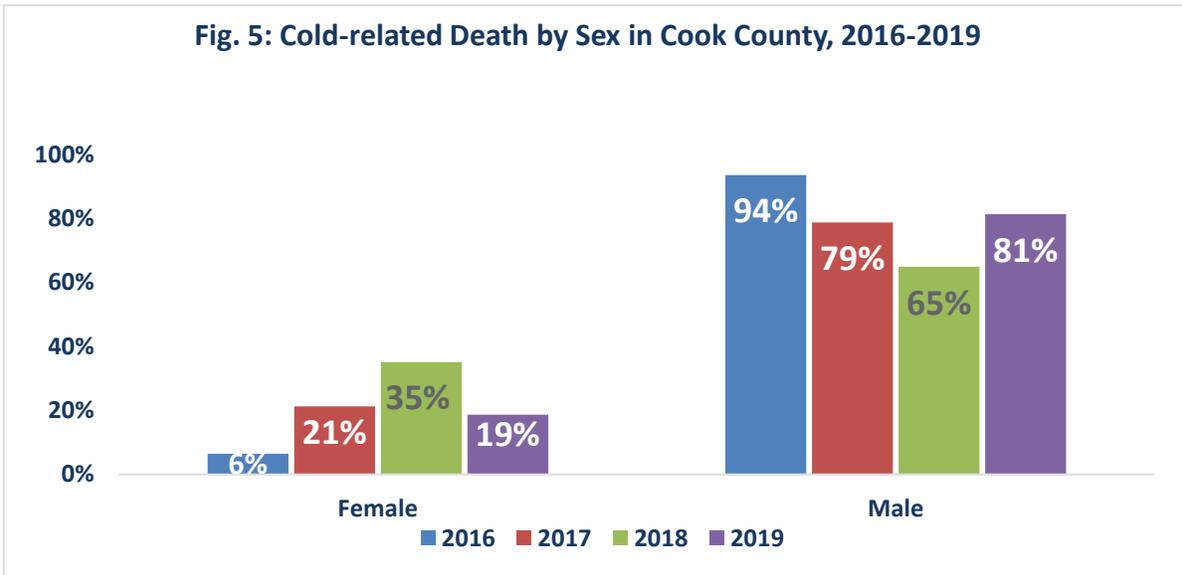


Cold-related deaths were higher among non-Latinos (88%-97%) than Latinos (3%-13%) from 2016 to 2019. Among non-Latinos, cold-related deaths did not show a consistent trend. Cold-related deaths were higher in Whites than Blacks in 2017 (55% vs. 42%) and 2019 (47% vs. 37%). Percent of NL Blacks was higher than Whites in 2016 (52% vs. 39%) and 2018 (53% vs. 33%). Another notable finding is the increasing trend of Latinos over the same period (7% to 13%).

3. SPECIAL GROUPS

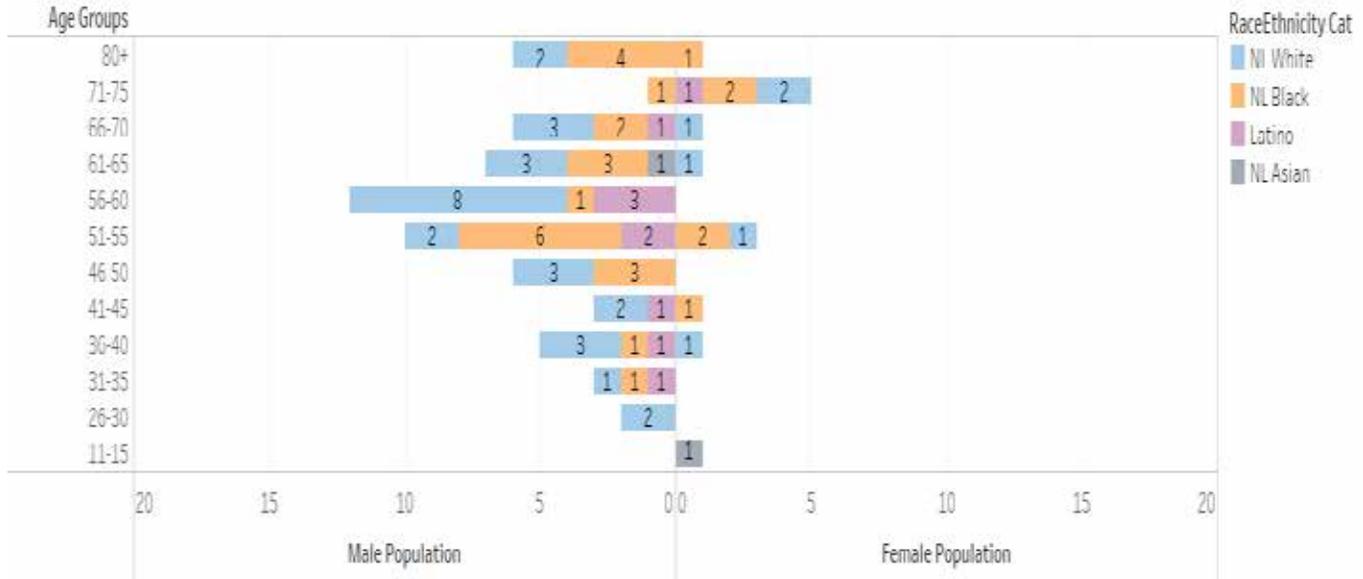
Table 4. Cold-related Death by Sex in Cook County, 2016-2019

Sex	2016	2017	2018	2019
Female	2	7	20	14
male	29	26	37	61
Total	31	33	57	75



3. SPECIAL GROUPS

Fig. 6: Cold-related Death by Sex, Race/Ethnicity and Age Group in Cook County, 2019

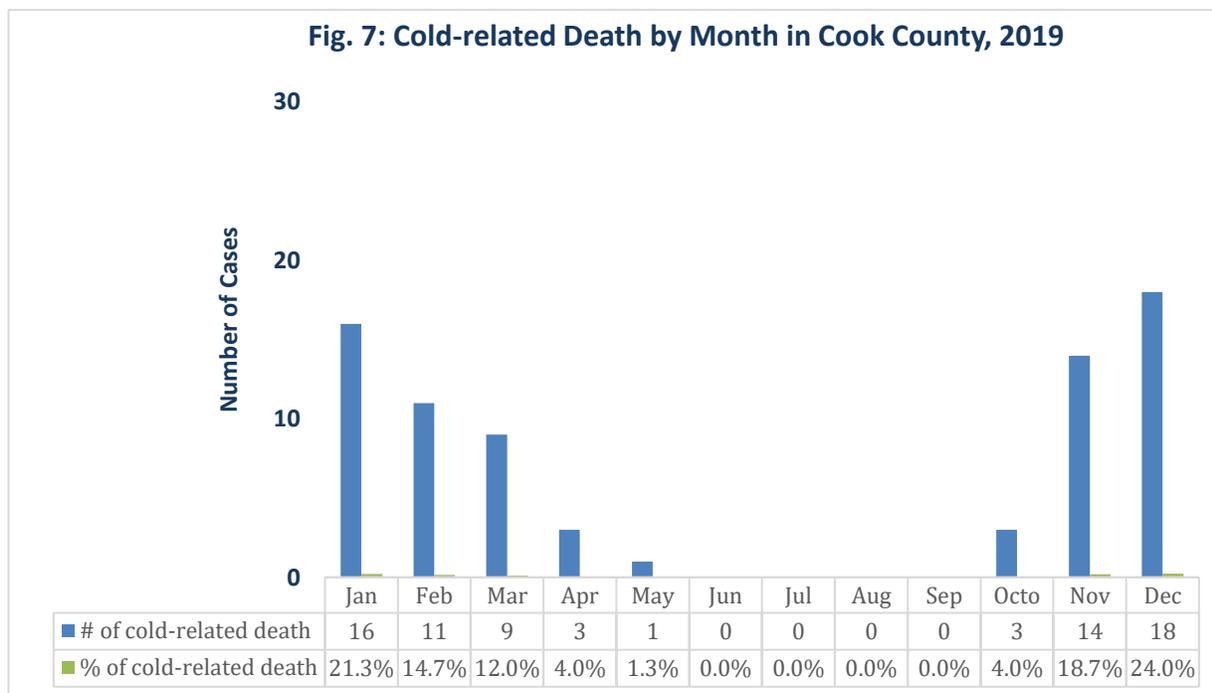


Figures 1-5 show trend of cold-related death and cold-related death by age, race and sex from 2016 to 2019. Fig. 6 focuses on cold-related death in 2019 and provides information on its disparity. As shown in Fig. 5, the number of cold-related deaths was higher among males (63) than females (15). Figure 6 shows that cold-related death is higher among males than females in almost all age groups. Two notable findings are: 1) most of cold-related death was in the age group of 56-60-year-olds 2) number of cold-related deaths was higher among White males from 26-70-year-olds.

3. SPECIAL GROUPS

Table 5. Cold-related Death by Month in Cook County, 2019

Month	Number Cold-related Death	% of Cold-related Death
January	16	21.3%
February	11	14.7%
March	9	12.0%
April	3	4.0%
May	1	1.3%
June	0	0.0%
July	0	0.0%
August	0	0.0%
September	0	0.0%
October	3	4.0%
November	14	18.7%
December	18	24.0%
Total	75	100%



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ACKNOWLEDGEMENTS

REPORT PREPARED BY:

Mojde Mirarefin

Epidemiologist

Cook County Medical Examiner Office

David Arfa

System Analyst III

Department of Geographic Information Systems

Cook County Bureau of Technology

Martin Burciaga

Graphic Designer

Cook County Bureau of Administration

EDITING, REVIEW, AND COMMENTS:

Dr. Ponni Arunkumar

Chief Medical Examiner

Cook County Medical Examiner Office

Rebeca Perrone

Indigent Coordinator

Cook County Medical Examiner's Office

Todd Schuble

Manager

Department of Geographic Information Systems

Cook County Bureau of Technology

Natalia Derevyanny

Director of Communications

Cook County Bureau of Administration

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Donna Miller
6th District

Alma E. Anaya
7th District

Luis Arroyo Jr.
8th District

Peter N. Silvestri
9th District

Bridget Gainer
10th District

John P. Daley
11th District

Bridget Degnen
12th District

Larry Suffredin
13th District

Scott R. Britton
14th District

Kevin B. Morrison
15th District

Frank J. Aguilar
16th District

Sean Morrison
17th District

