CASE STUDY { **Cook County, Illinois** Publicly Releases
Opioid and Gun Homicide Data
to Help Combat Growing Epidemics

RESULTS
FOR AMERICA

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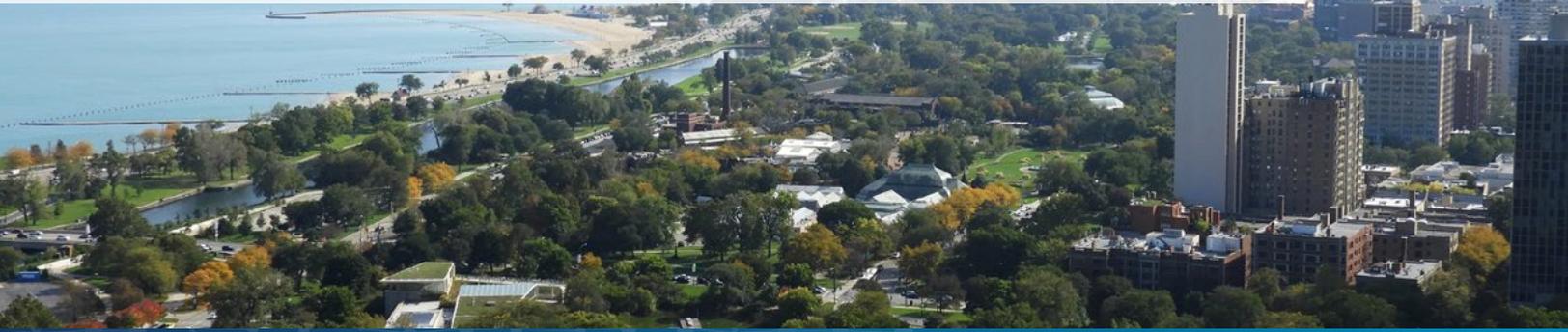
THE CHALLENGE: Between 2015 and 2016, Cook County, Illinois experienced a 70% increase in opioid-related deaths, up from 647 deaths to 1,081 deaths.[1] The County also experienced a growing number of gun homicide-related deaths during that same period, up from 525 deaths in 2015 to 805 deaths in 2016, a 50% increase.[2] Law enforcement agencies and public health advocates had been requesting data more frequently from the Cook County Medical Examiner's Office (MEO) to analyze cause of death trends and understand the scope of these crises. Although not often considered a traditional partner in public health prevention, the MEO recognized they had an important role to play in informing and curtailing the growing opioid and gun homicide-related deaths occurring in Cook County and across the country by providing real-time access to quality data on cause of death.

THE APPROACH: Through a partnership between the Cook County MEO and the Cook County Geographic Information Systems (GIS) office, the two teams developed timely, useful, and publicly available data files and maps of the opioid and gun homicide crises. Between February 2017 and December 2017, they worked together to determine which data would be the most useful to share publicly with entities engaged in addressing the crises. The teams prevailed through initial pushback to make the resulting data and maps available in January 2018.[3]

THE RESULTS: Publicly accessible data files and data visualization maps of the opioid and gun homicide-related deaths are now one of the top 10 most visited resources on the Cook County GIS website, with nearly 17,000 visits to date.[4] Law enforcement and public health officials can now independently access timely and useful information to better inform their work and contribute to data-informed solutions, which has sped up the timeline of law enforcement investigations and public health interventions. Time spent by MEO staff fulfilling intensive statistical data Freedom of Information Act (FOIA) requests has significantly decreased over time as well. The number of statistical data FOIA requests to the MEO has gone down more than 30% (from 46 to 31 requests) between January 1 and October 1, 2017 and 2018.[5]

INTRODUCTION

In 2016, Cook County, like many jurisdictions around the country, was experiencing a dramatic increase in opioid–related deaths. In addition, the County was also facing an increase in gun homicide–related deaths. That year, the Cook County Medical Examiner's Office (MEO) reported 1,081 opioid–related deaths compared to 647 deaths in 2015, an almost 70% increase.[6] In addition, there was a dramatic increase in gun homicide–related deaths, up from 525 deaths in 2015 to 805 deaths in 2016, a 50% increase.[7] Due to the nature of these deaths, multiple agencies such as public health and law enforcement were engaged in combatting the growing crises.

Given the type of cases that the MEO investigates – including sudden, violent, and unexpected deaths – their office was the source for authoritative data related to opioid and gun homicide–related deaths. However, an increasing number of Freedom of Information Act (FOIA) requests from the United States Drug Enforcement Administration (DEA) for opioid–related data and consistent requests from Cook County and local police offices regarding gun homicide deaths were creating a growing list of demands on the MEO team.

As a result, the MEO collaborated with the Cook County Geographic Information Systems (GIS) team to create a publicly available, nightly–updated dataset which could be used by law enforcement and public health officials as well as members of the public to track trends and analyze deaths across multiple characteristics, including geography. Available datasets include location–based heat maps and cause of death data which can help identify the multiple iterations of opioid–like substances which are leading to increases in overdose deaths.

Lanetta Haynes Turner, Cook County Chief of Staff and Results for America Local Government

> " *Our County, like many others, is facing gun violence and an opioid epidemic. I believe the Medical Examiner data portal will aid researchers, medical professionals, law enforcement, journalists and the public.* "
>
> — TONI PRECKWINKLE
> Board President
> of Cook County

Fellow, highlighted this ongoing project within Cook County as an exemplar of how the County is using data and evidence to identify trends and combat two devastating crises that span multiple policy arenas.

THE CHALLENGE

In 2016, the Cook County Medical Examiner's Office (MEO) reported 1,081 opioid–related deaths compared to 647 deaths in 2015, an almost 70% increase in opioid–related deaths[8] and a spike greater than at the peak of the HIV/AIDS epidemic in earlier decades. In addition, there was a dramatic increase in gun homicide–related deaths in Cook County, up from 525 deaths in 2015 to 805 deaths in 2016, a 50% increase.[9]

As a result, the Cook County MEO was receiving a steady increase of data requests from Chicago and Cook County Public Health departments, media sources, and researchers. Staff was also spending more time fulfilling Freedom of Information Act (FOIA) requests from the United States Drug Enforcement Administration (DEA). In 2017, the MEO received nearly 400 FOIA requests.[10] In just two months, from January 1

to March 1 of that year, the MEO had already received 51 requests — more than any other county department.[11] To effectively address these challenges and attempt to prevent future deaths, public officials, government staff, and community partners needed access to high quality, actionable, and up-to-date data.

Due to the nature of the types of cases the MEO oversees — including sudden, violent, and unexpected deaths — their office was the source for authoritative data on opioid and gun homicide-related deaths. Although they were not traditionally considered a central partner in addressing public health issues, Ponni Arunkumar, M.D., the Chief Medical Examiner of Cook County, firmly believed that her office could take the data they were collecting and create an informative and publicly available tool to shed light on trends that would help develop preventative strategies to address these crises.

However, the two teams encountered initial pushback from county government staff about concerns that the data would be too upsetting

or too graphic for the public. Additional concerns were also raised about how to ensure that all individually identifying information would be stripped from the data.

THE APPROACH

In 2017, the Cook County Medical Examiner's Office (MEO) team recognized that they could play a central role in informing and curtailing the increasingly deadly opioid and gun homicide crises. They started by having conversations with the government entities that regularly requested data such as the local public health agencies, the United States Drug Enforcement Administration (DEA), the Cook County State's Attorney Office, and the federally-mandated High Intensity Drug Trafficking Agency (HIDTA). These discussions helped clarify how cause of death data could be better analyzed and displayed in order to go beyond simply reporting, and instead, contribute to trend analysis and prevention.

Internal resistance initially put the project in jeopardy. Concerns were raised about ensuring
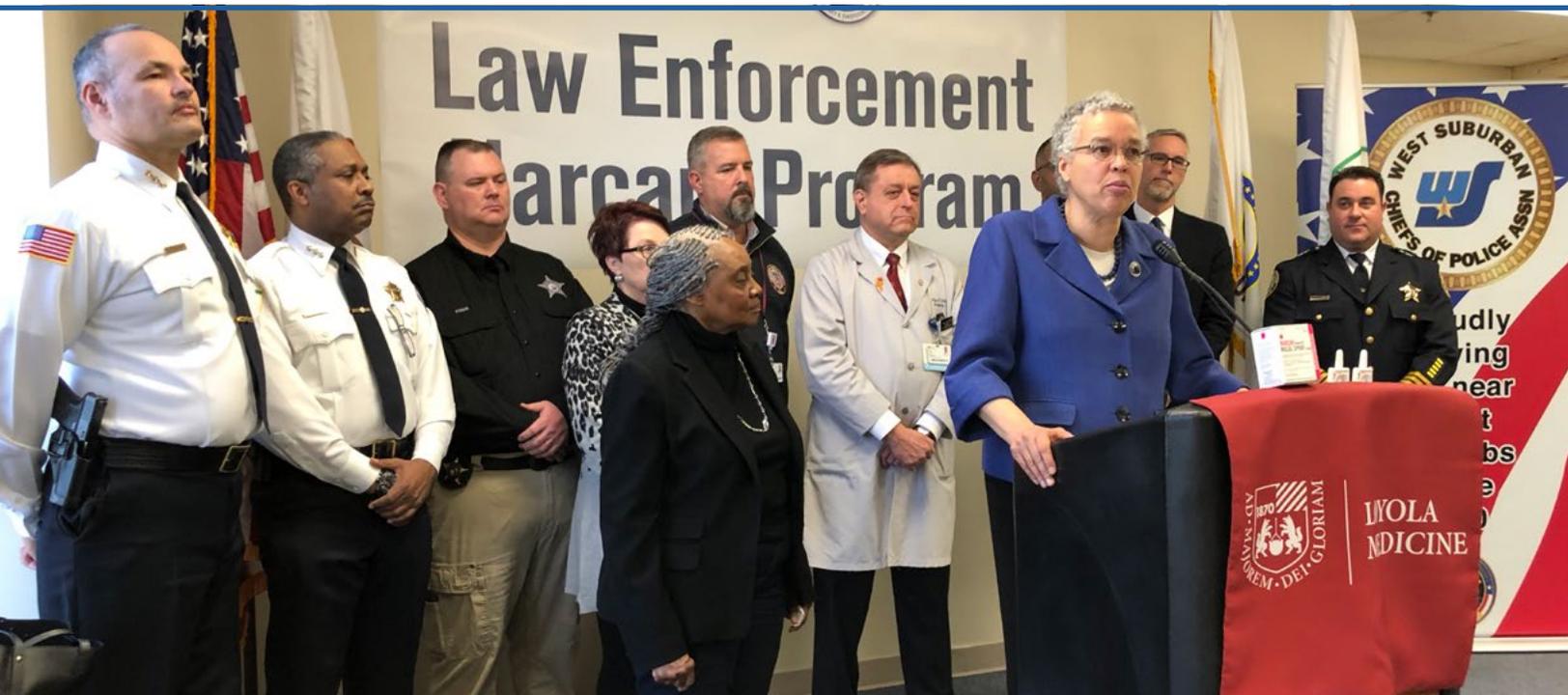
Cook County Board President Toni Preckwinkle with partners announcing an opioid overdose training program.

that all individually identifiable information be stripped from the data. There were also concerns that the data was too graphic and would be too upsetting for the public. However, in the end, all the stakeholders involved felt that these concerns could be mitigated, and it was better to be transparent and open with the public about the scale of the crises.

As a result of these conversations, the Open Data Coordinator with the Cook County Geographic and Information Systems (GIS) team began working with the Cook County MEO to publicly share the government's opioid and gun homicide–related death data. This led to an almost yearlong partnership, from February 2017 to December 2017, wherein the two teams discussed ideas, and tested and iterated tools. On January 1, 2018, Cook County publicly released its work – a regularly updated and useful data download and mapping portal that the public and government agencies alike can use to explore the MEO death data.

During the yearlong partnership, the GIS and MEO teams discussed how to make the most out of this tragic yet informative data. Early discussions centered around which data would be the most relevant to share. This step required the GIS team to understand the MEO case management software in order to better identify the important data fields. The two teams also worked to ensure compliance with federal Health Insurance Portability and Accountability Act (HIPAA) laws.

After relevant data fields were identified, individually identifiable data was stripped. Then the GIS team developed an automated application, which runs nightly and pulls all relevant data – catching any changes or new cases from the MEO case management software and including them in the online data and mapping portal. The application then geocodes

> " *Data-sharing is a critical piece that has been missing for too long in the Cook County criminal justice system, and has led to siloed approaches to combatting both the crises of opioid addiction and gun violence. In addition to helping to identify trends for a more targeted approach in the most impacted communities, hopefully this data can point to the fact that a public health approach to violence and addiction is the most effective method of saving lives.* "
>
> — LANETTA HAYNES TURNER
> Chief of Staff

the data, attaching an address locator to the data to plot a point on a map. Data is then automatically entered into the GIS database as a new GIS–enabled table and published to the Cook County GIS data portal. From there, visitors can explore specific maps of opioid and gun homicide–related deaths, all with the goal of raising public awareness and helping those involved with solving the crises make more data–informed decisions.

TIPS FOR REPLICATION

- **Champions Matter:** From the beginning, the Cook County Medical Examiner was a champion of this work. Her initial commitment to the project and dedication to the Medical Examiner Officer's role in combatting the deadly opioid and gun homicide crises enabled the project to move forward and create publicly useable data and maps.

- **Think Outside the Box:** A Medical Examiner's Office is not often considered a public health partner. Yet, their data is critical for informing effective strategies to the local public health crises because the office produces high quality, up-to-date and multi-faceted data with detailed information on cause and place of death.

- **Transparency Leads to New Opportunities:** By being transparent with government administrative data, new opportunities for unforeseen and positive partnerships can arise. For example, local public health agencies are interested in partnering with the Geographic Information Systems (GIS) team to create maps illustrating the location of hot and cold weather-related deaths in Cook County. This data can better inform their work and help to prevent these deaths in the future.

- **Continue to Iterate:** The work of making data publicly available is time consuming and it can be tempting to move on to the next project once a data project launches. However, there are often opportunities for further improvements. For example, in its current form, the opioid and gun homicide-related dataset and maps are re-geocoded each night, rather than just adding new changes. It is not the most efficient process considering the dataset will only continue to grow as more data is input. Therefore, the GIS team is looking forward to iterating and developing greater efficiencies in the future knowing that the data in its current form is so useful.

The Medical Examiner's Office celebrates its 40th anniversary.

THE RESULTS

Through the partnership between the [Cook County Medical Examiner's Office](#) (MEO) and the [Cook County Geographic Information Systems](#) (GIS) team, multiple stakeholders across law enforcement, public health, and the community at–large now have access to useful and timely opioid and gun homicide death data and maps. This information is used to develop more effective local intervention and prevention strategies for the growing opioid and gun homicide crises.

With the creation of these online and publicly available datasets and maps, stakeholders can undertake a more detailed investigation into recent trends. For example, the MEO's data reports the specific chemical composition of drugs which caused a drug overdose. The Cook County State's Attorney Office is particularly interested in this type of information, specifically analogue drugs, or drugs with a chemical makeup like federally classified schedule I and II drugs.[12] This information is now available online and gives the Cook County State's Attorney Office the tools to more quickly identify what new drugs are a threat and already on the streets.

The maps also indicate where, at what rate, and if deaths are occurring in jails or other specific trends among subpopulations or geographies, all in a timely and easy–to–use format. As such, it has helped to more quickly and accurately

Cook County President Toni Preckwinkle, Cardinal Cupich, and other elected officials and community members at the erection of a memorial for indigent burials, which include victims of gun homicide and opioid overdose.

quantify and map the opioid impact, which would have taken weeks without the data mapping collaboration. Therefore, the High Intensity Drug Trafficking Agency (HIDTA) threat assessment investigation is further along than it otherwise would have been, allowing public health and law enforcement agencies to more quickly respond to the crises.

Concerns about the data being too graphic or upsetting have diffused and instead the opioid and gun homicide dataset is now among the top 10 most visited resources on the Cook County GIS website, with approximately 17,000 views to date.[13] Public awareness about the extent of the crises has increased as well because news reporters can easily analyze and report on the available data and trends. For example, a local ABC 7 news segment detailed the available data and trends without additional assistance from the MEO.[14]

The data is also creating change outside Cook County government, informing suburban municipalities and police response to the opioid and gun homicide crisis. Armed with better data, suburban police departments have successfully used the MEO data to advocate for increased resources and now many suburban police vehicles are equipped with Narcan, an emergency drug used to block or reverse the effects of an opioid overdose.[15] The accessibility to gun homicide data has also produced positive results. Individual local police office data requests to the MEO have decreased because those offices can now access the relevant data and maps themselves and gather more timely information.

Cook County has become a regional leader as the first to publicly share and display this level and type of data. As such, the GIS team and MEO have both received recognition for their efforts.

In 2018, the GIS team was recognized for their technology advances by the Center for Digital Government, and the Medical Examiner's Office earned an URISA Exemplary System Recognition for the online portal.

The maps have also reduced the amount of Freedom of Information Act (FOIA) requests and staff time needed to fulfill those requests. In 2017, the MEO received nearly 400 FOIA requests from the public, including federal, state, and local agencies and the news media. Between January 1 and October 1, the number of statistical data FOIA requests to the MEO has decreased over 30% (from 46 to 31 requests) between 2017 and 2018.[16]

By reducing the number of data requests, Cook County government staff can have more proactive conversations about making the data more useful in the future. A proposed future project would layer prescription monitoring data to determine if a pain killer had been previously prescribed to an individual. This information would allow policymakers to better understand how to prevent opioid deaths as well as determine strategic locations for prescription disposal and treatment programs.

Through the innovative approach of two government partners, the Cook County MEO and GIS teams created a dataset and mapping application of death data for two meaningful and pressing public health issues — opioid abuse and gun homicides. This work has helped advance the notion that violence and substance abuse are public health issues, which is championed by the Cook County President's Office. By using data, Cook County is better equipped to tackle two local crises, with a national scope, more efficiently and effectively.

ABOUT RESULTS FOR AMERICA'S
LOCAL GOVERNMENT FELLOWSHIP PROGRAM

Results for America's Local Government Fellows program was founded in September 2014 to provide an advanced group of local government leaders in diverse and influential cities and counties across the country the knowledge and support to implement strategies that consistently use data and evidence to drive policy and budget decisions on major policy challenges.

With the support and guidance of Results for America, the Local Government Fellows lead their governments toward advanced stages of data-driven and evidence-based policymaking in order to address major policy challenges in their communities. The **16 cities** and counties

represented in the Fellowship collectively represent more than **28 million** people and **$148 billion** in local government spending.

RFA engages its local government Fellows in:

- Defining short- and long-term policy goals;
- Developing research partnerships with academics;
- Sharing best practices and demonstration projects;
- Problem solving among peers;
- Receiving individual feedback and coaching; and
- Participating in a national network and peer cohort.

ACKNOWLEDGEMENTS

ADDITIONAL RESOURCES

- Visit the Cook County GIS portal to explore opioid and gun homicide-related death datasets at https://maps.cookcountyil.gov/medexammaps/.

- Explore the GIS Open Data maps to visualize the data trends at https://hub-cookcountyil.opendata.arcgis.com/datasets/4f7cc9f13542463c89b2055afd4a6dc1_0.

- Watch the ABC 7 News story for a local take on the innovate data application at https://abc7chicago.com/death-by-numbers-medical-examiner-data-is-window-to-gruesome-stats/3008860/.

- Learn more about Results for America's **Local Government Fellowship** at http://results4america.org.

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